

H₂ 1800, 600, 831 1n/mm gratings
Windowing, Focus and Efficiency compared.

Apr 23-25/92

Encoder Tests June 7/8/92

No flexure Tests in this volume.

13

Spect. T.

Focus

Spect. T.

Ex. Mir.

Transparency Conditions

Spectr. Temp.

Dome Temp./Hum.

Exp. Mir.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
DAVID DUNLOP OBSERVATORY											
74" Logbook											
Vol. 70											
Plate No. 6220 - 8773											
April 1992 - July 1992											

5 pg2 Thurs/Fri
Continued From previous Book!

Date 1992 APR. 9/10..... Observers [KK] Tn/Fbr.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6220	BIAS (4)			00 58					
6221	Comp							FeNe Clear	40s
6222	HD 147379	16 16 36	67 28	01 06	01 52	01 27 E			
6223	Comp							FeNe Clear	40s.
6224	Comp							FeNe Clear	40s.
6225	HD 158633	17 25 18	67 24	02 09 30	02 19 30	02 08 E			
6226	Comp							FeNe Clear	40s.
6227	Comp							FeNe Clear	40s
6228	BD +68° 946	17 37 00	68 27 00	02 37	03 22	01 16 E			
6229	Comp							FeNe Clear	40s
6230	Comp							"	"
FMO0429.15 6230	A, B, C, D HD 144579	16 01 30	39 24		03 34	00 27 W	+39°	67m sec	Int
CC06231	HD 144579	16 01 30	39 24	03 36	03 42	00 35 W			
6232	Comp							FeNe Clear	40s
6233	Comp							"	"

Spectr. Te.
Focus.
Spectr. T.

Exp. Mtr.

2255

3000

1270

44m sec

600

Spectr. Temp.

Dome Temp./Hum. $\pm 5.2^{\circ}\text{C}$

* 60% H

Transparency Conditions

Fine... s/hazy... 6

Focus... 6.75

A rapid drop from earlier!

Spectr. Temp.

Dome Temp./Hum.

C Lambda

90CGAIN

CCOT $\approx -100^{\circ}\text{C}$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=4983 1800 l/mm	200u Full Length	5140Å				
2255		V 8.63	MOI			10ci			KK Pam	DOME T = 4.7°C 700 ADU MAX	
3000		B 7.09	dk1 G9I			10ci			KK Pam	DOME T = 4.4°C 1500 ADU MAX.	
1270	4"	V 9.22	MS			11ci			KK Pam	DOME T = 4.1°C max 500 ADU Fld clcks out fine	
44frames		V 6.66	dG8	Drown SW		Light SW breeze			STO. VEL. SEEING TEST.	DOME T = 4.1°C HUM = 65% SEEING TEST.	
2600	2.4"	V 6.66	dG8			12ci		12ci	STO. VEL.		

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Emulsion Batches:

Date 1992... APRIL 9/10... Observers [KKJ] T. / Fbr.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6234	HO 8890B	01 22 36	88 46 00	03 55	04 07	09 18 E			
6235	Comp							FENE CLEAR	40s
6236	Comp							-H-	"
6237	NOVA Cyg 92	20 27 43	52 17 39	04 25	04 34	02 58 E			
6238	Comp.							FENE CLEAR	40s
6239	FLAT							TUNG CLEAR	20s
6240	FLAT							"	"
6241	FLAT							"	"
6242	Comp							FENE CLEAR	50s
6243	NOVA Cyg 92	20 27 43	52 17 39	04 47	04 51	02 41 E			
6244	"			04 52	04 57				
6245	Comp							FENE CLEAR	50s
6246	BINS(4)								
6248	HD177724	19 00 49	+13 43	05 07	05 09		CC06247	FENE	50
6250							CC06249	CLEAR	50
6252	FLATS x3							TUNG CLEAR	4

Spectr. T.

Focus.

Spectr. T.

Exp. Mtr.

925

1100

630

650

1900

Spectr. Temp. Dome Temp./Hum. ... 6.7% 20345 Transparency Conditions ... CLEAR 8

Focus ... 6.75

Spectr. Temp. Dome Temp./Hum. +3.5°C ... 66% H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
925		28	F	CASS CCD	$\lambda = 4983$ 1800 l./mm	200 μ Full Length	5140 Å	13ci	KK Pac	POLARIS A VISIBLE ON LOWER RIGHT UPPER spectral image perhaps is POLARIS A spectrum	
1100								14ci		DOME T = 3.7°C HUM = 66%	
								15ci		13 K MAX ADU/pixel	
										"	
										"	
					$\lambda = 6000$ 1800 l./mm		6550 Å	16ci			
630								16ci		MAX 7K ADU	
650								16ci			
										DOME T = +3.3°C	
19000								17ci	Telluric Std	2K max	
								19ci			
										All now to Perseus & WORM	

9 pg #1 summary

Emulsion Batches:

Date 1992 Apr 12/13..... Observers ... Hdy. / Tn.....

Note - Header Times $\approx$ 1 min ahead for $\approx$ 30 min. - Then exact

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
C06253	BIAS(4)								
6254	Comp							Fair clear	120s
6255	BW Dra	15 0950	+62 1404	21 46 20	21 53 20				
6256	FLAT							TUNG A=1/4	33s
6257	HD 135421	15 0951	+62 1346	22 01 20	22 08 20				
6258	"			22 09 50	22 18 08				
6259	"			22 19 04	22 27 14				
6260	"			22 28 03	22 36 03				
6261	"			22 36 51					480s
6262	"			22 46 00					480s
6263	Comp					Fair clear	double fired		$\approx$ 120s
6264	FLAT								
6265	BIAS(4)								
6266	BW Dra			23 01 47					480s
6267	HD 135421			23 10 56					

10

Spectr. Temp.

Dome Temp./Hum. C LAMBDI

90 C Gain $T \rightarrow -100\%$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=5505 1800 λ /mm	200 μ Full Length	5880A				
205								4ci	Hdy pgm		
										MAX 10K ADY	
660	6"							6ci			
680								7ci			
650								8ci			
610								9ci			
610											
								3ci			
								5ci		10 K MAX	
315								4ci	Hdy pgm		
480	4-6"							9ci			

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Emulsion Batches:

Date 1992 Apr 12/13.... Observers Hdy... T.n.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 06268	H0135421	45 0951	+62 1346	23 19 23		using "Repat"	Star 8m, but	4"	8min
6269	"			23 27 35					
70	"			23 35 47					
71	"			23 43 59					
72	"			23 52 38		02 00 E			
73	Comp							Fear clap	120
74	FLAT								
75	BIAS(4)								
76	BW Dra	15 09 50	+62 14 04	00 10 18					8min
77	H0135421			00 19 13	(repat 8m x 6)				"
78	"			00 27 25					"
79	"			00 35 37					"
80	"			00 43 49					"
81	"			00 52 02					"
82	"			01 00 14		00 55 E			"

Spectr. Temp. Dome Temp./Hum. -3.1°C 56% Transparency Conditions $S. / \text{hazy}$ 12

Focus ... $6.8.3$

Spectr. Temp. Dome Temp./Hum. $C \text{ LAMBDA}$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
537	$4''$	7.88 8.48	$F7V$	CASS CCD	$B = 5505$ 1800 l/n/mm	200μ Full/L	$5880A$	$9ci$	Hely pgm	South & Brighter one	
512											
490											
470											
470											
								$3ci$			
								$5ci$			
								$1ci$			
268		8.61 9.08						$4ci$			
520		7.88 8.48	$F7V$					$9ci$			
sum of 2											
<u>1130</u>											
580											
000											
650	$3''$										

Dome $T = -3.5^{\circ}\text{C}$
CCD3
(Bad Command prompt?)

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Emulsion Batches:

Date 1992 Apr. 12/13... Observers Hdg. / Tg.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06283	Comp								
6284	FLAT								
6285	BIAS(4)								
6286	BW Dra	15 0950	+62 14 04	01 15	01 2430				
6287	HD 135421	15 0951	+62 13 46	01 2534					8 min
88	"			01 3346					
89	"			01 41 58					
90	"			01 50 10					
91	"			01 58 22					
92	"			02 06 35					
93	Comp							Feltr clark	120
94	FLAT							Tung H=1/4	33
95	BIAS(4)								
96	Comp								
97	HD 177749 FLAT								

14

Spectr. Temp.

Dome Temp./Hum.

C L A M B D A

[illegible]

15 pg #4

Date 1992 Apr 12/13 Observers Hdy / Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mir.
CC06298	HD 177724	19 00 49	+13 43	02 45	02 47 20	03 08 E				15 min
6299	HD 177724	"	"	02 48	02 52 40					30 min
6300	Comp at BW Dra posh							FeAr clear	120s	
6301	FLAT							TUNG A=1/4	33s	
6302	BW Dra	15 09 50	+62 14 04	03 06 18	03 14 18	W			8 min	390
6303	HD 135421	15 09 51	+62 13 46	03 14 54	(using Repeat 8 min exp x 6)				8 min	660
6304	"			03 23 06					"	657
6305	"			03 31 18					"	600
6306	"			03 39 31					"	560
6307	"			03 47 43					"	498
6308	"			03 55 55		2 02 W			"	487
6309	BIAS(4)									
6310	FLAT							TUNG A=1/4	33s	
6311	comp							FeAr clear	120s	
6312	BW Dia			04 10 30	04 18 30				480s	260

Spectr. Temp. Dome Temp./Hum. -4.2°C 64% Transparency Conditions *Sl. hazy* 16

Focus 6.83

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
15000		✓ 2.99	AOI	CASS m CCD	G=5505 1800 1/4 mm	200μ	5880A	12ci	Telluric Std	<i>guided</i> MAX ≈ 3000 ADU	
30100								12ci	"	6 K MAX	
								3ci			
								5ci		10 K MAX	
290	3"							13ci	Hyd pgm		
660								14ci	"		
657											
600											
560											
498											
467											
										Dome T = -4.7°C	
								5ci		10 K MAX	
								3ci			
260								13ci			

17

pg#5

Date 1992 Apr. 12/13....

Observers *Hdy./Tn*

Emulsion Batches:

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[illegible]

Spectr. Temp. Dome Temp./Hum. -45°C 67% Transparency Conditions ... Fine ... sl/hazy ... 18
 Focus 6.83
 Spectr. Temp. Dome Temp./Hum. -51.0°C 70%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
513	4"			CASS CCD	1800 l/n/mm	200u Full Length		14ci	Hdy pgm		
549							5880A				
593											
635											
800											
1400								15ci		pushing down	
								3ci			
								5ci			
J = -4.9°C Set 6.83					G-5505 1800 l/n/mm	200u	5880A	16ci	Focus test		
								17ci			
				All to Perseus & WORM					After UT's Date edits of C06253-58		

19 pg #1

Mon - Tues

Date 1992 Apr 13/14..... Observers Hdy... I.T.η.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
CC06324	BIAS(4)								
6325	Comp								
6326	HD 87901	10 0303	+12 27	19 5230	19 5300				
6327	"			19 5445	19 5546				
6328	FLAT ↑							Tung A=1/4	33
6329	Comp ↓							Fe Ar Clear	90
6330	BW Dra	15 09 50	+62 14 04	20 10 50	20 18 50	E		480	DBS
6331	HD 135421	15 09 51	+62 13 46	20 19 32				480	51
6332	"			20 27 44					
6333	"			20 35 46					
6334	"			20 44 08					
6335	"			20 52 20					
6336	"			20 00 32					
6337	Comp							Fe Ar Clear	120s
6338	FLAT							Tung A=1/4	33

Spectr. Te

Focus.

Spectr. T

Exp. Mir

30K

5450

354

Sumo

1189

436

570

440

164

Spectr. Temp. Dome Temp./Hum.

[illegible]

21 pg #2

Date 1992 Apr 13/14..... Observers ..Hdy-Ty/SC visiting

Emulsion Batches:

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[illegible]

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ... *Cloudy* ... *North* ... *half* ... ²²

90°C Gain Tonight CcDT = -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
33s				CASS CCD		200u Full Length	G=6026 6563A				
40 60						200u Full	6563	16ci 17ci	Focus test	Dome T = -00.2°C red emul. Right on Blue emul. ~ 0.6 pixel/blue	
								18ci 19ci		Top up finished 5 min before	
									Dome T = 0.0°C		

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pg #1 Tues/Wed

Emulsion Batches:

Date 1992 Apr. 14/15.... Observers Hdy... Tn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mir.
CC 06346 6347	Focus Test	Comp/Stellar Hartman posn's				00 04W	+29°	FeAr Clear	40/5s	Set 6
6348	BIAS(4)									
6349	Comp							FeAr Clear	120s	
6350	HD FLAT							TUNG A=1/4	33s	
6351	HD135421	15 09 51	+62 13 46	19 43 14	19 51 34	06 04 E			500s	770
6352	"	"	"	19 51 47					"	800
6353	"	"	"	20 01 18					"	720
6354	"	} Repeat 4		20 09 52						727
6355	"			20 18 25						760
6356	"			20 27 00	20 35 20					850
6357	BIAS(4)									
6358	FLAT							TUNG A=1/4	33s	
6359	Comp							FeAr Clear	110s	210
6360	HD135421 (Comp)	15 09 51	+62 13 46	20 41 47	(using Repeat 500 OBS 7)					600
6361	"	"	"	20 50 21						830

Spectr. Temp. Dome Temp./Hum. $+3^{\circ}\text{C}$ 55% Transparency Conditions .. thin cloud

Focus ... 6.83

Spectr. Temp. Dome Temp./Hum. $\lambda\lambda\text{MBDA}$ 90 CGAIN Topup of 19 EST

Exp. Mir.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/50	Set 6.83	$T = +3.0^{\circ}\text{C}$		CASS CCD	G=5505	200u Full Length	5880A	16ci 17ci 1ci		stellar $\lambda\lambda$ pixel Red	
120s								3ci			
33s								5ci		10 K max ADU	
500s	770	$\checkmark$ 7.88 - 8.48						4ci	Hdy pgn	Using Repeat SS star 8m. BAT	
	800	3" 7.88 - 8.48	F7V					4ci	Info for	only 13 secs between end and starts	
	720							6ci	Shen $\rightarrow$	2858 done end time too	
	727										
	760										
	850										
										Dome T = $+10.5^{\circ}\text{C}$	
33s								5ci		10 K max ADU	
110s	2110 (secs due to restart)							3ci	H0135421	is sl Brighter of	
	660	3" 5"						7ci	pair and	southern one	
	830							7ci			

25

Pg #2

Emulsion Batches:

Date 1992 Apr. 14/15..... Observers Hdy. Jn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
C06362	HD 135421	15 09 51	+62 13 46	20 58 55	21 07 15	04 48 E			
6363	"			21 07 28					
6364	"			21 16 02					
6365	"			21 24 36					
6366	"			21 33 09	21 41 29				
6367	BIAS(4)								
6368	Comp							FeAr clear	120s
6369	FLAT							TUNG H=1/4	33s
6370	Comp							FeAr clear	120s
6371	BIAS(4)								
6372	HD 87901			21 58 51	21 57				
6373	"			21 58 42	21 59 30				
6374	FLAT							TUNG H=1/4	38s
6375	Comp at H2							FeAr clear	90s
6376	HD 87901			22 08 40	22 09 50				

Spectr. Te

Focus.

Spectr. T

Exp. Mir.

810

770

600

770

740

44k

54k

38k

Spectr. Temp. Dome Temp./Hum. ^{+00.4°C} 578 Transparency Conditions ... *PART Cloudy* 26

Focus ... *6.83*

Spectr. Temp. Dome Temp./Hum.

CCT → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
810	3.6"			CASS CCD	G5505 1800/n/mm	200 μ Full	5880A	7ci	Hdy pgm	1.41 AIR MASS clear in this part of sky	
770	2.7"										
800											
770											
740	3"							7ci			
								1ci		Dome T = -00.1°C	
								3ci			
								5ci			
								3ci			
44K								8ci	Telluric	8800 ADU	
54K								8ci	"	10K MAX	
								5ci		11K max	
					G 6020 1800/n/mm		6563A	3ci			
38K					n			8ci	Telluric std	5.8K MAX	

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pg #3

Date 1992 Apr. 14/15.... Observers ... Hdy.. Jn... M/Ki.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6377	HD 87901	10 0303	+12 27	22 11	³ 22 13	01 22W			
6378	FLAT							Tung A-14	33s
6379	BIAS								
6380	FLAT w/ HD 135421 posn							Tung A-14	33
* 6388	Comp "	"		(* Written after following Batch)			90sec	Fedr clear	500s
6381	HD 135421	15 0951	+62 1346	22 2624	22 3444	(repeat 500 obs 7)			500s
6382	"			22 3457	22 43 17				
6383	"			22 43 31	22 51 51				
6384	"			22 52 05	23 00 26				
6385	"			23 00 39	23 08 59				
6386	"			23 09 13	23 17 33				
6387	"			23 17 48	23 26 08				
6389	BW DRq	15 0950	+62 1404	23 5715	23 5535				
6391	B14S(4)	done after comp							
6390	Comp			23 46				Fedr clear	

Spectr. T.

Focus

Spectr. T.

Exp. Mtr.

50K

T.

Sym
of 2

130

930

910

81010

1000

990

490

Spectr. Temp. Dome Temp./Hum. 0°C 57.8/89 Transparency Conditions 51 Hazy 28
 Focus ... 6.83
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
$\approx 50K$		136	B7n	CAS CCD	G 6020 1800 l/mm	300u FULL	6563A	8ci	Telluric Std	7100 MAX	
										13K MAX	
								5ci			
This comp done before following batch but written later									3ci		
Sym of 2	3"-4"	7.82V 8.48	F7V					9ci	Hdy pgm		
1300											
930											
910											
81010											
1000											
940	4"							9ci			
490	3"-4"							10ci		Fainter to North	
										Dome T = -00.2°C	
								3ci			

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Date 1992 Apr 14/15... Observers Hdy..... Tn.....

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mir.
CC06392	FLAT							Tung A=1/4	33sec	
6393	HD 135421	15 09 51	+62 13 46	23 42 15	* when star reached slit using (Repeat 500 OBS 7)				500s	930
6394	"		36	23 50 18	23 58 51	01 57 E			500s	880
6395	"			23 58 52						935
6396	"			00 07 26						790
6397	"			00 16 00						900
6398	"			00 24 34						890
6399	"			00 33 08						780
6400	BW DRA			00 42 57	00 51 17	01 04 E			500	390
6401	BIAS(4)									
6402	FLAT							Tung A-1/4	33s	
6403	Comp							Fe Ar Clear	90sec	
6404	HD 135421			00 57 50						870
6405	"			01 08	01 16 20					840
6406	* IYNE of HD 135421	* 15 09 52	* +62 14 22	01 17 49	01 40 15				1343s	75

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C 455 CCD	G 6020 1800 μ /mm	200x	6563A	5ci			
930								11ci	Hdy pgrm		
880	4"									AIR MASS = 1.10	
935											
790	4-6"										
900											
890											
780								11ci			
390								12ci			
										Pore T = -00.8°C	
								5ci		12.4 K MAX	
								3ci			
870	3"							13ci			
840								14ci			
25	3-4"	12.6	V	(measured by Hdy with photometer)	318 msec Int on Guide needed			15ci	* very accurate calc of 1900 coord's from encoders.	* ~ 300 photos obs'd by gel	

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pg 45

Date 1992 Apr 14/15..... Observers H. J. on twin photometers T₁

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06407	HD135421	15 09 54	+62 13 46	01 45 00					500s
6408	"	"	"	01 54 00	02 02 27				507s
6409	BIAS (4)								
6410	Comp							FeAr Clear	90s
6411	FLAT							TUNG H=1/4	33s
Fm00431	FT Center on BW Dra. (Fm00432 of BW Dra. and Faint one)			02 12					
6412	HD 135421			02 13 24					500s
6413	"	Repeat 4		02 27 30					500s
6414	"			02 31 04	02 39 24				
6415	"			02 39 38					
6416	"			02 48 12					
6417	BW Dra	15 09 50	+62 14 04	02 57 26					
6418	BIAS (4)								
6419	FLAT							TUNG A=1/4	33 sec
6420	Comp							FeAr Clear	90s

Spectr. Te

Focus.

Spectr. T

Exp. Mir.

815

191x191p

700

770

810

Sum of
East 2

1620

590

Spectr. Temp.

Dome Temp./Hum. ... -1.0°C 65%

Transparency Conditions . S1. 1242g

32

Focus ... 6-83

Spectr. Temp.

Dome Temp./Hum. CLIMBDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
815				CASS CCD	G 6020		6563A	18ci	Hdy pgm	Brt component	
	4"							18ci			
								3ci			
								5ci		13K max	
191x191 pixels						200u Head	EEV Camera	Slit head Scale use		3 stars v faint one at bottom	
700	3"							19ci	Hdy pgm		
770	2.4"							20ci			
810											
Sum of last 2								20ci			
1620								21ci			
590								21ci		Dome T = -01.0°C	
								21ci			
								345ci		14 K max	
								3ci			

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Thurs - wed

Emulsion Batches:

Date 1992 Apr 14/15 Observers Hely... Tg.....

Header Times.

0 clock now 2-3 secs behind Astro and WWV

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
Cc06421	HD135421	15 09 51	+62 13 46	03 12 26	03 20 46				500 Sec
6422	"	"	"	03 30 25	03 38 45	01 44 W			
6423	"	"	"	03 39 00	03 47 20				
6424	"			03 47 31					
6425	"			03 56 07	04 04 27				
6426	BW BIAS(4) DRA			04 05 20					508
6427	BIAS(4)								
6428	Comp							FeAr clear	90 sec
6429	FLAT							TUNG A=1/4	33 sec
6430	HD 135421			04 19 32					500
6431	"			04 28 05	04 36 25				
6432	"			04 36 40	04 45	02 51 W		FeAr clear	90 s
6435	HD 177724 Comp	19 00 49	+13 43	04 53 00	~4 mins			cc00433 cc00436	90 sec
6434	Bias(4) before stellar.								
6437	FLAT (at posn of HD 177724)			04 58	05 01			TUNG A=1/4	33 s

Spectr. Te

Focus.

Spectr. Te

Exp. Mtr.

1100

sumat

800

1942

1030

1050

400

920

1000

1150

35K

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ... *Fine - incr. haze* 34Focus *6.83*

Spectr. Temp.

Dome Temp./Hum. *-1.0°C* *63%*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>1100</i>	<i>2-4"</i>					<i>200μ</i>	<i>6563A</i>	<i>22ci</i>	<i>Hdy pgm</i>		
<i>sum of 2</i>								<i>23ci</i>	<i>repeat started here 4x)</i>	<i>9 min lost here</i>	
<i>1942</i>								<i>23ci</i>	<i>Repeat 4</i>		
<i>1030</i>											
<i>1050</i>								<i>23ci</i>			
<i>400</i>		<i>8.61</i> <i>9.08</i>						<i>24ci</i>		<i>Dome T = -01.0°C</i>	
								<i>3ci</i>			
								<i>5ci</i>		<i>14.5 K AOU max</i>	
<i>920</i>	<i>3-5"</i>	<i>7.58</i> <i>8.48</i>	<i>F7V</i>					<i>25ci</i>	<i>Hdy pgm</i>		
<i>1000</i>											
<i>1150</i>								<i>25ci</i>		<i>AIR MASS 1.16</i>	
<i>35 K</i>		<i>2.99</i>	<i>AOU_{nn}</i>					<i>26ci</i>	<i>Telluric Std</i>	<i>1.18 Air mass</i> <i>7.5 K max</i>	
								<i>5ci</i>			

35

Tests for Hely

Emulsion Batches:

Date 1992 Apr 23/24... Observers Hely, Tn, F6r

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Ex
CC 06438	Focus Test	(Comp/stellar HARTMAN)		23 00		0 0	+27°	FeAr	45/45
CC 06439								clear	
CC 06440	Comp			23 23		0 0	v	FeAr	90s
CC 06441	BIAS(1) x10	10 Bias single		23 02		0 0	v		
CC 06450									
6451	FLAT x10		FIRST	23 15	23 28,30	0 0	v	TUNG	33s
6460				23 20				A=1/4	
6461	FLAT x10		NINE	23 34		0 0	v	n	15s
6470									
6471	BIAS(1) x10			23 45		0 0	v		
6480									
6481	Comp			23 51		0 0	v	FeAr	90s
CC 06482	Comp	Apr 24/25 Tests		CCAIN = 90 CCD Temp = -100°C		0 0	+30°	FeAr	30s
6483	Focus Test	Comp/stellar HARTMAN posns.				0 0	n	FeAr	10/15
6484								clear	
6485	FLAT					0 0	n	TUNG	11sec
6486	FLAT					0 0	-UV filter GG 385	TUNG	11sec
6485	Comp	with filter in		not written.		0 0	n	FeAr	30s
6486	Comp	no filter				0 0	no filter	FeAr	30s
6487	Focus Test	Comp/stellar HARTMAN posns				0 0	n	n	10/15
6488									
6489	FLAT					0 0	n	TUNG	11s
	Comp							A=1/4	

Spectr. Temp.

Dome Temp./Hum.

+10.5°C 68%

Transparency Conditions

Rain

36

Focus ... 6.74

T_{CCD} = -100.3

Lightning (distant)

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/5				CASS CCD	G=6020 1800 l/mm	200μ Full	6583A	1ci 2ci	Set=6.74	T=10.3°C	Lightning
9/5								3ci		LIGHTS ON	
								4ci		LIGHTS OFF	
3/3								5ci		12.6 K ADU MAX	
1/5								6ci		5.2 K ADU MAX	
								7ci			
9/5					G=6020 1800/56.1°			8ci	6583A°		
3/5					G=3606 831/34.3°	200μ Full/Length		10ci	6583A°	CCD PMT 300 0 60 1024 4 1	
10/15	T=+9.8°C				"	"		11ci	"	CCD FMT for Focus	
1/15					"	"		12ci	"	120 0 12 1024 40 1	
1/15					"	"		13ci	"	stellar 2.4 pixel Res	
1/15					"	"		14ci	"	12.4 K MAX ADU	
3/5					"	"		15ci	"	14.7 K → Red end	
3/5	T=+8.6°C				G=3085 600/	"		16ci	"	11 K ADU typical max	
1/15	"				"	"		17ci	"	(No difference noted with or without filter)	
1/15					"	"		18ci	"	520 0 60 1024 4 1	
					"	"		19ci	"	Red .4 pixel 380 0 12 1024 4 1	
					1800		6583A			12 K max at Hα	
										not written 2.5 shift Res	

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pg #1

Sun - mon

Date 1992 Apr 26/27 Observers Hdg. / T.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
cc 06490 6491				² 18 40						
6492	SKY (FLAT)		-10	19 14		00 00	-10°	None	60sec	51K
6493	Comp						-10	Fe Ar Clear	70sec	
6494	FLAT Regular			18			-10	TUNG A=1/4	33sec	
6495	SKY (FLAT)			19 24 07	19 30 24	00 00	-25°			4550
6496	Comp						-25		70sec	
6497	FLAT						-25	TUNG A=1/4	33s	
6498	SKY (Flat)			19 37 42	19 50 03		+10°			4980
6499	HD 87901	10 03 03	+12 27	19 54	20 14					2021
6500	BIAS (4) AT START			(19 07)						
6501	Comp			20 15				Fe Ar Clear	70sec	
6502	FLAT			20 17 ⁺				TUNG A=1/4	33sec	
6503	BIAS (4) AT END			20 19						
6504	DARK			20 28 10	20 40 10	00 00	-18 25		12 min	
6505	DARK			21 54					225s	
6506	DARK			22 00					225s	
6507	BIAS (4)			22 06						

Spectr. Temp. *9.5°C Done*...Dome Temp./Hum. *9.5°C 57%*...Transparency Conditions *Part. Cloudy*.....

38

Focus *6.80*.....*T_{ccd} = -100.5°C FANS ON*

Spectr. Temp.

Dome Temp./Hum.

90 CGAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6020 1800/l/mm	200a Full Length	6563A		.3 Pixel/Row @ 14x	360 0 10 1024 40 1 CCDFMT	VSI Red
60s	51K					"		3ci	SKY Flat Hdg test	480 0 50 1024 4 1 PORT cloudy	2200 MAX
70s						"		4ci			
37s						"		5ci		13K MAX	
	45500					"		6ci			
70s								4ci			
33s								7ci			
	4980							8ci		WEAK	
	2021	✓ 1.36	B7n					9ci	Telluric Std	too cloudy	
								1ci		DONE AT BEGINNING	
70s								10ci			
37s								11ci			
								1ci		T = +0.8°C	
12s								12ci		ON PLATFORM	
22s								15ci		225 sec. dark is max. duration	
25s								16ci		without saturating hot pixel	
								1ci			

Transparency Conditions ... clearing from NNE ⁴⁰

Focus .. G. 80

Dome Temp./Hum. 76.4°C 54.8%

CCDT $\approx -101^{\circ}\text{C}$ 90 CGain

[illegible]

41
pg # 3

Emulsion Batches:

Date ..1992 Apr 26/27..... Observers ..Hdg. - Tn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
CC06524	HD135421	15 09 51	+62 13 46	00 43 20					69/s	620
6525	"			00 55 56					503	300
6526	BIAS(4)									
6527	Comp							FeAr clear	70s	
6528	FLAT							TUNG A-1/4	33s	
6529	HD135421			01 12	01 20				480s	40
6530	HD 135421			01 22	01 30				500s	850
6531	HD 135421			01 31 01					490s	
6532	HD 135421			01 40 36	01 48 15				483s	320
6533	"			01 50 08	01 58 28				500s	380
6534	.			01 58 34	02 06 54				500s	730
6535				02 07 50					500s	830
6536	BIAS(4)									
6537	FLAT							TUNG A-1/4	33s	
6538	Comp							FeAr clear	70s	

Spectr. Temp.

Dome Temp./Hum. $+6.3^{\circ}\text{C}$ 55.5% Transparency Conditions $\dots$ mostly cloudy $\dots$ clearing $\dots$ Focus $\dots 6.80 \dots$

from the EAST!

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
600	4"			CASS CCD	G = 6020 1800 lines/mm	200 μ Full Length	6563A	22ci	Hdg pgm	in/out of cloud	
300								23ci		cloud ahead	
								10ci			
410								24ci			
} 850								25ci			
								26ci			
								27ci			
320	6"							28ci			
380								29ci			
730								30ci		Clear again	
880											
										Dome T = $+5.7^{\circ}\text{C}$	
								11ci			
								10			

43 pg 04

Date 1992 Apr 26/27... Observers Hdy./Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06538	HD135421	15 09 51	+62 13 46	02 22				500secs	
6540				02 30 33					
6541				02 39 09					
6542				02 49 53					
6543				02 58 28					
6544				03 07 04	03 15 24				
6545	BIAS(4)								
6546	Comp							FeAr Clear	70s
6547	FLAT							TUNG A=1/4	
6548	HD135421			03 21 50					~550 Sec
6549									
6550	DARKS x 2			03 34				each	225 sec
6551	Comp							FeAr Clear	70
6552	HD177124	19 00 49	+13 43	03 55 50	04 01 43				
6553	BIAS(4)								
6554	FLAT								
6555								TUNG A=1/4	33

Spectr. Temp. Dome Temp./Hum. $+5.6^{\circ}\text{C}$ 57.8% Transparency Conditions *South clear* 44
 Focus ... 6.80 ...
 Spectr. Temp. Dome Temp./Hum.
clouding in near dawn,

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800	6"				G=6020	200 μ	6563R		Hdy pgm		
800											
780								26ci		Using (Repeat SSTARS in BAT 3)	
720										↓ " " "	
800											
733								26ci			
										Dome T = $+5.2^{\circ}\text{C}$	
600								30ci		Cloud again	
								31ci	Batch 2 DARK. BAT		
								10ci			
18770		2.99	AD					31ci	Telluric std	some cloud Air mass 1.19	
								11ci			

45

pg #5

Date 1992 Apr 26/27 Observers Hdg. & Jn

Emulsion Batches:

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[illegible]

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

Focus 6-80

Spectr. Temp. Dome Temp./Hum. $+5.0^{\circ}\text{C}$ 57%

Transparency Conditions 40

[illegible]

47 pg 1

Mon - Tues

Date 1992 Apr. 27/28. Observers Hdy.. Jn... Fbr.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06561	BIAS(4)								
6562	SKY			19 2540	19 40	0 0	+30°		883s
6563	FLAT							TUNG A=1/4	33s
6564	Comp							FeAr Clear	120s
6565	Comp for Regulus							"	"
6566	HD87901	10 0303	+12 27	00 5707					94s
6567	Comp							FeAr Clear	120s
6568	FLAT							TUNG A=1/4	36s
6569	FLAT wt HD135421 posn							"	38s
6570	Comp							FeAr Clear	120s
6571	HD135421	15 0951	+62 13 46	20 20 30	20 28 50				500s
6572	BIAS(4)								
6573	HD135421			20 31 32					500s
6574	"			20 40 06					"
6575	"			20 48 40					"

Spectr. T.

Focus

Spectr. T.

Exp. Mtr.

4300

240K

480

450

420

390

48

90CG4in CCDT = -101.0 °C

[illegible]

49

Py 42

Date 1992 Apr 27/28.. Observers (Hdy. on 29. 19. photometers) Tn / Fbr

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06576	HD 135421	15 09 51	+62 13 46	20 57 14					500s
6577	— " —			21 05 48					500s
6578	— " —			21 14 22	21 22 50				500s
6579	BIAS (4)								
6580	COMP							FedR Clear	120s
6581	FLAT							Tung A=1/4	33s
6582	HD 135421	15 09 51	+62 13 46	21 31 27					
6583	— " —			21 40 01					
6584	— " —			21 46 35					
6585	— " —			21 57 09					
6586	— " —			22 05 43					
6587	— " —			22 14 17					
6588	— " —			22 22 51					
6589	BIAS								
6590	COMP							FedR Clear	130s

Spectr. Te

Focus.

Spectr. Te

Exp. Mtr.

270

200

190

Sum of
0 exp.

1000

Sum of

320

701

710

685

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion λ	P.H.	Program	Remarks	Quality
270				CASS CCD	G 5505 1800 l/m	200 μ FULL	5880A	8ci	Hdy pgm	Dome T = 5.6°C / Hum = 45%	
200											
190								8ci			
sum of 0 exps								9ci		Clear Again	
1000											
sum of											
1320											
701											
710											
685											
								5ci			

51

pg #3

Date . 92 - Apr. 27/28... Observers . Hdg. (24") . Tr. / Fbr.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6591	FLAT	(NOT WRITTEN) ⇒ Camera problem						Tung A=14	38
6591	HD 135421	15 09 51	62 13 46	22 44 28					
6592	— " —			22 53 02					
6593	— " —			23 01 36					
6594	— " —			23 10 10					
6595	— " —			23 18 44					
6596	— " —			23 27 18					
6597	— " —			23 35 52					
6598	BIAS FLAT.							Tung A=14	38s
6599	Comp							FeAr Coar	120s
6600	FLAT BIAS (4)				23 59 40				
6601	HD 135421			23 51 20	00 08 20				500
6602	"	(USE PREVIOUS COMP ONLY)			00 08 20				
6603	"	(USE NEXT COMP ONLY)			00 08 28	00 16 48			500s
6604	"			00 17 02					

Occasional cloud patch

Power glitch @ 0007 EST

Exact @ 00 OF 44 EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
38				CHSS CCD	G=5505		5880A	4ci			
800								4ci	Hdy Pgm.	Done T = 4.4°C / Hum = 95%	
798											
802										<u>note</u> Around HEST	
803											
648											
785											
760											
383											
1203											
500	680 x							9ci		Repeat 7 *	
501s	450				*				Grating Back @ 00 ^h 10 ^m		
	630									This exp had grating back from Home to Reg posn. →	

53pg#4

Emulsion Batches:

Date 1992. Apr 27/28... Observers Hdy. (24")... Fbr./Tr...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06605	HD 135421	15 09 51	+62 13 46	00 25 36		00 30 E			
6606	—————"————			00 34 10					
6607	—————"————			00 42 44					
6608	COMP							FeAr Clear	120s
6609	FLAT							Tung A=14	38s.
6610	BIAS (4)								
6611	HD 135421			01 00 51					500s
6612	—————"————			01 09 25					520s
6613	—————"————			01 17 59					500s
6614	—————"————			01 27 55					500s
6615	—————"————			01 36 29					500s
6616	—————"————			01 45 03					500s
6617	COMP							FeAr Clear	120s
6618	FLAT							Tung A=14	38s
6619	BIAS								

54

Spectr. Temp. Dome Temp./Hum.

[illegible]

55
Py #5

Date 1992 Apr 27/28... Observers Hdy. (24") Pbr./Tn.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6620	HD135421	15 09 51	+62 13 46	02 02 26					500s
6621	—" —"			02 11 00					500s
6622	—" —"			02 19 34	02 19 36				500s
6623	Comp							FeAr CBr	120s
6624	Tung							Tung A=1/4	38s
6625	BIAS(4)								
6626	HD135421	15 09 51	+62 13 46	02 35 25				500s	
6627	"			02 44	02 52 20				
6628	"			02 52 33					
6629	"			03 02	03 10 20				
6630	"			03 10 33					
6631	"			03 19 07					
6632	COMO							FeAr CBr	120s
6633	FLAT							Tung A=1/4	38s
6634	BIAS								

Spectr. T

Focus

Spectr. T

Exp. Mir.

520

550

700

875

920

950

860

57

50

57
pg #6

Date ... 1992 April 27/28 Observers ... Hbly. (24") F.Br./Tn.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6635	HD135421	15 09 51	+62 13 46	03 34 56					500s
6636	— " —			03 43 30					500s
6637	— " —			03 52 04					500s
6638	— " —			04 00 52					500s
6639	— " —			04 09 35					500s
6640	COMP							F.Br Clear	120s
6641	FLAT							Turn A = 14	38s
6642	BIAS(4)								
6643	HD177724	19 00 49	+13 43	04 29 54	04 35				241s
6644	COMP							F.Br Clear	120s
6645	FLAT								
6646	BIAS								
6647	HD177724			04 40 19	04 43				
6648	DARK								225s
6649	DARK								225s

Spectr. Te

Focus. /

Spectr. Te

Exp. Mir.

750

650

660

670

730

32034

4.000

Dome Temp./Hum.

58

Dome Temp./Hum.

Spectr. Temp.

Exp.	Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
70's	750	3"		V 7.88 → 8.48 ←	F7V	G=5505 1800 l/m/mm	200 μ	λ = 5880 Å	11ci	Hdy Pgm		
80's	650											
90's	660											
50's	670											
70's	730											
60's									5ci			
38									4ci			
									1ci			
24's	37034										8800 ADU max,	
120's	750											
	40,000											
22.5's												
22.5's												

All to Rivers and Corbett

59_{#1}

Date .. 9.2. - Apr. 28/29

Observers

Hdy. / For. (24")

90 cgain

Dene T = -101°C

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6650	BIAS (4)								
6651	Comp							FeAr Clear	90s
6652	FLAT							Tung A = 1/4	33s
6653	HD 135421	15 09 51	+62 13 46	20 01 17					500s
6654	—— " ——			20 09 51					500s
6655	—— " ——			20 18 24					500s
6656	—— " ——			20 26 58					500s
6657	—— " ——			20 35 32					500s
6658	—— " ——			20 44 06					500s
6659	—— " ——			20 52 40	21 01 00				500s
6660	Comp							FeAr Clear	90s
6661	FLAT							Tung A = 1/4	33s
6662	BIAS (4)								
6663	HD 135421	15 09 51	+62 13 46	21 07 53					500s
6664	—— " ——			21 16 27					500s

Spectr. Te

Focus.

Spectr. Te

Exp. Mtr.

730

830

875

740

1000

850

840

750

260

~~200~~ 480 0 50 1024 41

[illegible]

61

*2

Emulsion Batches:

Date 92: April 28/29... Observers ... Hdy. (24") / Fbr.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc06665	HD 135421	15 09 51	+62 13 46	21 25 00					500s
6666	— " —			21 33 34					500s
6667	— " —			21 42 07					500s
6668	— " —			21 50 41					500s
6669	— " —			21 59 15	22 07 35				500s
6670	Comp							FeAr	90s
6671	FLAT							Clear	
6672	BIAS (4)							TUNG A = 1/4	33s
6673	HD 135421	15 09 51	+62 13 46	22 22 15 18					500s
6674	— " —			22 23 52					500s
6675	— " —			22 32 25					500s
6676	— " —			22 40 59					500s
6677	— " —			22 49 33					500s
6678	— " —			22 58 07					500s
6679	— " —			23 06 41	23 15 15				500s

Spectr. Temp. Dome Temp./Hum. $8.6^{\circ}\text{C}/41.0$

Transparency Conditions Clear 62

Focus 6:80

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
920		$7.88 \rightarrow 8.48$	F7 V	Cass CCD	1800 lines/mm $G=6020$	200μ	$\lambda_c = 6563 \text{ \AA}$	Sci	Hdy Pam		
860								Sci			
770								Sci			
430								Sci			
745								Sci			
								Sci			
								Sci			
								Sci			
820		$7.88 \rightarrow 8.48$	F7 V					Sci	Hdy Pam	Dome T: 8.1°C / H = 42.7%	
930								Sci		Done moving along x-axis?	
830								Sci			
960								Sci		Done T = 7.3°C / Hum = 47.7%	
670								Sci		NOTE: LOST STAR FOR A MINUTE. DEC. JUMPED OUT 2'	
890	1"-2"							Sci			
980								Sci			

63
#3

Emulsion Batches:

Date 92 - APRIL 28/29... Observers Hdy (24") / Fbr (Mki for a couple of hrs)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6680	COMP							FeAr Clear	90s
6681	FLAT							Tung A = 1/4	33s
6682	BIAS (4)								
6683	HD135421	15 09 51	62 13 46	23 22 20	23 27				280s
6684	—"—"	15 09 51	62 13 46	23 27 14	23 30 33				200s
6685	COMP (at $\lambda = 6563 \text{ \AA}$)							FeAr Clear	90s
6686	BIAS (4)		{ Na D }						
6687	COMP							FeAr Clear	120s
6688	FLAT							Tung A = 1/4	33s
6689	HD135421 (NaD)	15 09 51	62 13 46	23 42 00					
6690	—"—"			23 50 33					
6691	—"—"			23 59 07					
6692	—"—"			00 07 41					
6693	—"—"			00 16 15					
6694	—"—"			00 24 48	00 33 08				

Spectr. T

Focus

Spectr. T

Exp. Mir.

350

300

180

330

100

300

60

50

Dome Temp./Hum.

CLEAR ... 64
... VERY CLEAR ...

[illegible]

65
#4

Date 92 - APRIL 28/29 Observers Hdg. (24") / Fbr (Mk2)

Emulsion Batches:

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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6695	COMP (BY Drex NaD)							FeAr Clear	120s
6696	FLAT (BY Drex NaD)							Tung A=1/4	33s
6697	COMP (FOR HD 87901)							FeAr Clear	120s
6698	FLAT (no 87901)							Tung A=1/4	33s
6699	HD 87901 ($\lambda=5890$)	10 03 03	+12 27	01 07 44	01 10				
6700	HD 87901 ($\lambda=5890$)	10 03 03	+12 27	01 11 58	01 14 30				
6701	HD 87901 (H_{α})	10 03 03	+12 27	01 19 04	01 28 30				
6702	HD 87901 (H_{α})	10 03 03	+12 27	01 22 24	01 25 00				
6703	COMP							FeAr Clear	90s
6704	FLAT							Tung A=1/4	33s
6705	BIAS (4)								
6706	HD 135421	15 09 51	+62 13 46	02 11 55					500s
6707	— " —			02 20 29					500s
6708	— ' —			02 29 03					500s
6709	— " —			02 37 37		1 47 W			500s

Spectr. Te

Focus.

Spectr. Te

Exp. Mir.

40,000

0,000

26,000

675

600

350

630

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions *C'est Bon!* 66

Focus 6.80

Spectr. Temp.

Dome Temp./Hum.

[illegible]

67
#5

Date .. 92 - April 28/29.. Observers ... Hdj. (24") / Fbr

90 again

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6710	H0135421	15 09 51	⁺ 62 13 46	02 46 11		0156 W			500s
6711	— " —			02 54 45	3 03	02 0437 W			500s
6712	Comp							FeAr clear	70s
6713	FLAT							Tag A=1/2	33s
6714	Bias (4)								
6715	H0135421	15 09 51	62 13 46	03 10 20					500s
6716	— " —	15 09 51	⁺ 62 13 46	03 18 54					500s
6717	— " —			03 27 28					500s
6718	— " —			03 36 02					500s
6719	— " —			03 45					500s
6720	— " —			03 53 10					500s
6721	Comp							FeAr clear	70s
6722	FLAT							Tag A=1/2	33s
6723	Bias (4)								
6724	H0135421	15 09 51	⁺ 62 13 46	04 08 06					500s

Spectr. Te.

Focus.

Spectr. Te.

Exp. Mtr.

750

920

900

920

600

5090

1185

1004

300

Spectr. Temp. Dome Temp./Hum. $6.2^{\circ}\text{C}/41\%$ Transparency Conditions Clear 68

Focus 6.80

Spectr. Temp. Dome Temp./Hum.

480 0 50 1024 4 1 ucd cm t

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
750		7.8 → 8.48	F7 V	Cass CCP	1800 l/mm G = 6000	200 μ	$\lambda = 6563 \text{ \AA}$	H ₂	Hdy Pgm		
920											
900								34i	Hdy Program	Dome T = 5.3°C Hum = 45%	
920											
600										clambda = 6563 Å	
1,090											
1,185											
1,004											
1,300											

(DON'T QUITE KNOW WHAT HAPPENED HERE)

#6

Emulsion Batches:

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[illegible]

Spectr. Te

Focus . . .

Spectr. Te

Exp. Mr.

1130

1104

Spectr. Temp. Dome Temp./Hum.

[illegible]

71

Date 1992 Apr 29/30

Observers Hdy / Fbr 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	Exp.
CCD 6734.fts	BIAS (4)								
6735	Sky			19 11 39		0 ^h	+30°		28 sec
6736	Tung Flat			19 14 29			//		30
6737	FeAr Comp			19 15 57					70
6738	Sky			19 20 47		0 ^h	+50°		123 sec
6739	Tung Flat			19 23 58			//		30
6740	FeAr Comp			19 25 04					70
6741	Sky			19 28 46		0 ^h	+70°		915 sec
6742	Tung Flat			19 45 30			//		30
6743	FeAr Comp			19 46 36					70
6744	BIAS (4)			19 48 43					
6745	DARK			19 55 03		12 ^h	+61° 50'		225 sec
6746	BIAS (4)								
6747	DARK			20 03 55		0 ^h	+43° 40'		225 sec
6748	DARK			20 10 45	21 10 45	0 ^h	+43° 40'		3600 sec
6749	BIAS (4)			21 14 50					
NO MORE TESTS									

Spectr. Te

Focus. 6

Spectr. T

Exp. Mtr.

50 000

50 000

50 000

Transparency Conditions OVERCAST 72

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

73
Page #1

Date ..92-April.30/May1 ObserversI.Hdy.3./Fbr.....

Emulsion Batches:

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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06750	COMP			21/22 21/22				FeAr Clear.	90s 1646s
6751	FLAT							Tung A=14	33s
6752	HD155937	17 09 30	+16 29	21 49 31					600s
6753	BIAS (4)								
6754	HD155937			22 07 30					
6755	— " —			22 17 44					600s
6756	— " —			22 28 58					600s
6757	— " —			22 39 13					600s
6758	BIAS (4)			22 49 27	22 59 27			FeAr	90s
6759	COMP							FeAr	90s
6760	FLAT							Tung	33s
6759	COMP							FeAr Clear	90s
6760	FLAT							Tung A=14	33s
6761	BIAS (4)								

Spectr. Te

Focus.

Spectr. Te

Exp. Mtr.

147 x 4

140

230

185

Spectr. Temp.

Dome Temp./Hum. 6.72 / 7390 (2300)

*NO ENCODER PROGRAM!

[illegible]

75
Page 2

Date 1992 - April 30 / May 1 Observers ... Hdy. (24") / Fbr.

Emulsion Batches:

No ENCOVERS!

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6762	HD155937	17 09 30	+16 29	23 07 30	23 17				600
6763	—" —			17 45					600
6764	—" —			27 59					600
6765	—" —			38 14					600
6766	—" —			23 48 29.					600
6767	—" —			23 58 44	00 08				600
6768	COMP							FeAr clear	905
6769	FLAT							Tung A=1/4	335
6770	BIAS(4)								
6771	HD155937	17 09 30	+16 29	00 14 54					600
6772	—" —			00 25 08					600
6773	—" —			00 35 23					600
6774	—" —			00 45 38					600
6775	—" —			00 58 59					600
6776	—" —			01 09 13					600

* THIS EXPOSURE 3 min. LONGER,
* WASN'T IN CCD WINDOW.

Spectr. Temp. Dome Temp./Hum. $6.2^{\circ}\text{C}/73.2\%$ Transparency Conditions *Fabulously Clear!* 76
 Focus 6.80
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
570	~1"	8.29 → 8.77	F8	CASS CCD	1800 G=6020	200 μ		H _α	Hdy Pgm	λ = 6563 Å	
570								3ci		} mki filling in for 1 hour lunch break.	
315								3ci			
305								3ci			
318								3ci			
								3ci		Dome T = 5.9°C / Hum = 75.6%	
								4ci			
								5ci			
								1ci			
372		8.29 → 8.77	F8		G = 6020		λ = 6563 Å	3ci	Hdy pgm.	Dome T = 5.8°C / Hum = 76%	
350											
323											
460										{ WASN'T IN CCD WINDOW FOR READOUT }	
388											
460										Humidity = 78% / T = 5.1°C	

77
#3

Date 1992 - April 30 / May 1 Observers ... (Hdy 24") / For ...

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6777	COMP							FeAr CLEAR	90s
6778	FLAT							Tung A = 1/4	33s
6779	BIAS(4)								
6780	HD155937	17 09 30	+16 29	01 26 04					600
6781	— " —			01 36 19					600
6782	— " —			01 46 34					600
6783	— " —			01 56 49					600
6784	— " —			02 07 03					600
6785	— " —			02 17 18	02 27 32				600
6786	COMP							FeAr Clear	90s
6787	FLAT							Tung A = 1/4	33s
6788	BIAS(4)								
6789	HD155937	17 09 30	+16 29	02 38 17					600s
6790	— " —			02 48 29					600s
6791	— " —			02 58 44					600s

Spectr. Te

Focus. (

Spectr. Te

Exp. Mtr.

120

365

404

380

230

444

350

295

100

Spectr. Temp. Dome Temp./Hum. ... $5^{\circ}\text{C}/78\%$ Transparency Conditions CLEAR 78
 Focus ... 6.8.0
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
420		8.29 → 8.77	F8	CASS CCD	1800 a=6020	200 μ	λ=6563Å	3c2	Hdy Pam	THIS IS <u>TOTAL</u> EXCITEMENT...	
365											
404											
380										Dome T=4.6°C/ Hum=78.8%	
230											
444										*NOTE: DOME IS BEGINNING TO DRIP WATER FROM SHUTTERS. NO ALLOT, BUT NOTICEABLE.	
350		8.29 → 8.77	F8	CASS CCD	1800 a=6020	200 μ	λ=6563Å	3c2	Hdy Pam		
395										MIRROR HEAT AND	
400										BACK FAN ACTIVATED.	

#4

Emulsion Batches:

[illegible]

Spectr. T.

Focus...

Spectr. T.

Exp. Mur.

90 CG4 in CCT = -101°C

333

81

#1

SAT-SUN

No OBS for Reg Tour

Emulsion Batches:

Date 1992 - MAY 2/3..... Observers (Hdy 24")... /Tn/Fbr

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCD 6798	BIAS (4)			19 35 12					
6799.Fts	BIAS (4)			00 17					
6800	Comp							Fcbr Clear	120s
6801	FLAT							Tiny $\Delta = 1/4$	38s
6802	HD 155937	17 09 30	+ 16 29	00 28 54		E			
6803	"	"	"	00 39 09					
6804	"			00 40 00					678s
6805	"			01 01 43					
6806	"			01 11 58					
6807	"			01 22 13	01 32 13				
6808	Comp							Fcbr Clear	120s
6809	FLAT							Tiny $\Delta = 1/4$	38s
6810	Bias (4)	not written							
681P	HD 155937			01 39 37					
681R	"			01 49 52		00 45E			

Spectr. Te

Focus.

Spectr. Te

Exp. Mtr.

Sum of 2

700

332

270

245

230

240

300

Spectr. Temp. Dome Temp./Hum. $7.9^{\circ}\text{C}/68.5\%$ Transparency Conditions CLEAR 82

Focus 6.80

Spectr. Temp. Dome Temp./Hum.

CGain = 90 CCD T = -10°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	CCDT	-21 ^c		CASS CCD	Before Topup	$\lambda = 5880 \text{ \AA}$				DELAY START TIME DUE TO CONDENSATION ON TELESCOPE	
										Pure T = 7.6°C	
								3c			
								4c		10,000 ADU MAX.	
	4 ⁺	$\sqrt{8.29} \rightarrow 8.12$	F8		1800 a = 5505	200 M	$\lambda = 5880 \text{ \AA}$	5c	Hdy Pgm.	H/R MASS = 1.29	
SUM OF 2								5c		guiding	
700								6c			
332											
270											
275											
230											
240	5 ⁺									Dome T = $+6.6^{\circ}\text{C}$	
300										guiding	

Note HD 55937 guided for most part on south 1/3 of image to avoid any possible? contamination from $\sqrt{}$ faint nearby companion star.

83 pg#2

SAT-SUN

Date 92-May 2/3 Observers (Hdy 24") Tn/Fr

Emulsion Batches:

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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6812	H0155937	17 09 30	+16 29	02 00 07					
6813	"			02 10 22					
6814	"			02 20 36					
6815	"			02 30 51					
6816	BIAS(4)								
6817	Comp							FeAr CLEAR	120s
6818	F-LAT							TUNG A=1/4	38s
6819	H0155937	17 09 30	+16 29	02 50 47					
6820	"			03 01 02					
6821	"			03 11 17					
6822	"			03 21 31					
6823	"			03 31 46					
6824	"			03 42 01					
6825	BIAS(4)								

Spectr. Ter

Focus...

Spectr. Ter

Exp. Mtr

290

305

Sum of

720

385

400

375

350

425

430

[illegible]

3

Emulsion Batches:

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.....

.....

[illegible]

Transparency Conditions *Fine* 96

Dome Temp./Hum. 5.4°C... 71%
CLAMPED

All to Parents & WPM

87pg #1

Mon-Tues

Date 1992 MAY 4/5... Observers Hdy... Tn.....

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 6836								FeAr	
CC 6837	Focus Test							Clear	10/15
6838	BIAS(4)								
6839	Comp							FeAr Clear	50sec
6840	9 Aur D	04 5851	+51 28	20 39 19	21 03 06				1430sec
6841	9 Aur D			21 06 30	21 19 52				802sec
6842	BIAS(4)								
6843	Comp							FeAr Clear	50sec
6844	FLAT							TUNG A=1/4	
6845	Comp								230sec
6846	HD 87901	10 03 03	+12 27	21 40 25 21 38 41	21 41 25 21 34 30				
6847	FLAT							TUNG A=1/4	8sec
6848	BIAS(4)								
6849	HD 87901			21 58 00	21 59 30 56 25				
6850	Comp							FeAr Clear	40s
6851	FLAT							TUNG Clear	28s

Spectr. Te

Focus /

Spectr. Te

Exp. Mir.

6 (5X)

1 (10X)

2 (20X)

A.V.

Spectr. Temp. ... $+7.4^{\circ}\text{C}$... Dome Temp./Hum. 7.6°C ... 47% Transparency Conditions ... *Fine in NW* ... *88*

Focus 6.90 ... for both gratings

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

90 CGAIN CCD T = -1018

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS	G 3606	200 μ		10ci		CCD FMT	
				CCD	831	Full	6563A	11ci		120 0 12 1024 40 1	
										353 0 50 1024 4 1 CCD FMT	
								3ci		I can see 9 Aur D in Compview	
								5ci	Blk pgn	$\Delta RA = -00 00 38$ $\Delta Dec = -00 01 06$	
								6ci	Faint star visible for guiding @ 300 msec	Int	
										Dome T = $+5.4^{\circ}\text{C}$	
										13 K MAX	
								3ci			
								7ci	Telluric std	12.5 K MAX	
								4ci		13 K MAX ADU	
								2.			
					G-4500	200 μ		9ci	Hdy pgn (Telluric std)	6 K MAX	
					1800	Full	4860A	8ci			
								12ci			

89 pg #2

Date 1992 MAY 4/5... Observers ... Hdg... Tz... MKI.....

Emulsion Batches:

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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCO 6852	FLAT							JUNG CLEAR	28s
6853	Comp							Fear CLEAR	40s
6854	HD 155937	17 0930	+16 29	22 16 09	22 26 10	04 12 E			600s
6855	"	"	"	22 40 58					600s
6856	Comp H β			23 00 24				Fear CLEAR	40s
6857	Comp H α							Fear CLEAR	90s
6858	HD 155937	17 0930	+16 29						
6859	HD 87901	10 0303	+12 27	23 41 26	23 50 30	04 45 W			
6860	BI45(4)								
6861	Comp	accidentally set to 909 sec instead of 90 sec should be OK.						Fear CLEAR	* 909s
6862	FLAT	Drive off & pointed towards Regulus						JUNG A=1/4	33s
6863	Comp							Fear CLEAR	90s
6864	HD 177724	19 00 49	+13 43	00 23 51	00 33 30				577s
6865	"			00 34 00	44 43				
6866	"			00 45 05	00 58 10				
6867	"			00 58 36	01 13 40				

Spectr. Ter

Focus... 6

Spectr. Ter

Exp. Mtr.

90

90

2907

30769

1627

410

3500

5157

Transparency Conditions PART cloudy..... 90

South half of sky
then all of it

Dome Temp./Hum. C 22 / 40 BDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G = 4800 1800 l/mm	200μ Full	4860A	12ci		12.5 MAX	
90 90 2907	3"	V829 8.77	F8					13ci 14ci 8ci	Hdy pgn	v cloudy cirrus	
					G 6020 1800 l/mm		6563A	13ci			
						n		15ci	Hdy pgn	WEAK!	
30769								16ci 1ci 13ci	telluric std	2.13 AIRMASS	
								12ci 8ci	Strong Comp	13 K	
1627 4110 13500 5157								17ci 17ci 17ci	Telluric Std	Cloudy 1.97 AIRMASS X=1.89-1.80 less cloud X=1.795-1.699 even less cloud X=1.695-1.60 more cloud	X=1.97-1.90

91 pg #3

Date 1992 May 4/5 Observers Hdy/Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
6868	Comp			01 15 45				FeAr Clear	90s
6869	FLAT FOR ZETA BAR							Tung A=1/4	
6870	BIAS(4)			01 19 30					
6871	Comp FOR ARCTURUS							FeAr Clear	90s
6872	HD 124897	14 11 06	+19 42 30	01 25 26	01 27 57				
6873	Comp							FeAr Clear	90s
6874	Flat FOR ARCTURUS							TUNG A=1/4	33s
6875	Comp FOR NOVA			01 39 37				FeAr Clear	90s
6876	Nova Cyg 92	20 27 43	+52 17 39	01 42 47	01 52 48				
6877	Comp			01 56 14				FeAr Clear	90s
6878	FLAT FOR NOVA							TUNG A=1/4	33s
6879	BIAS(4)			02 05					
6880	DARK			02 07					225s
6881	DARK (NEVER DONE)								225s
6881	BIAS(4) WHILE TOPPING UP								

Spectr. Te

Focus.

Spectr. Te

Exp. Mtr.

6170

5972

10000

14

92

690

C LAMBDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
6170				CASS CCD	G=6020 1800	20 μ a	6563A	8ci		13.7 K ADU	
5972								8ci			
10,000								18ci	Std vel	6700 K MAX	
								8ci			
								12ci		13.0 K ADU MAX	
171	3'							19ci	Nova pgm	cloudy 3.4 K ADU MAX	
								8ci		13.4 K ADU MAX	
										13.4 K ADU MAX	
										WHILE TOPPING UP T _{exp} -DO-3	

93 pg #1 Tues-Wed

Date 1992 MAY 5/6... Observers Hdy, Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06882									
CC06883	Focus Test	Comp 1 stellar	HURTman Pos'n	20 30	01 W	+12 30	FeAr clear	50/80	
6884	BIAS(4)								
6885	HD 87901	10 03 03	+12 27	20 42 45	20 43 50				
6886	" Regulus			20 45	20 46 19				
6887	Comp							FeAr clear	90s
6888	FLAT at Regulus pos'n							TUNG A=1/4	33s
6889	FLAT at							"	"
6890	Comp							FeAr clear	90s
6891	HD 155937	17 09 30	+16 29	21 15 46	21 25 46				600s
6891	BIAS(4) Before stellar exp								
6893	HD 155937			21 26 00				FeAr clear	600s
6894	BIAS(4)			21 26 00					
6895	Comp								
6896	HD 124897	14 11 06	+19 42 30	22 04 04	22 05 08	01 30	W/E		
6897	Comp								

Spectr. Te

Focus.

Spectr. Te

Exp. Mr.

37K

38K

105

130 (S/N)

Spectr. Temp. 7.4°C

Dome Temp./Hum. 7.5°C 65%

Transparency Conditions .. PART. Cloudy 94

Focus 6.7.7.

Spectr. Temp.

Dome Temp./Hum.

90CGAIN

CCDT → -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6020 1800 l/mm	200μ Full	6563Å	10ci 11ci	Focus	stellar vs! Red CCD FMT 480 0 50 1024 41	
37K									Telluric Std		
38K								5ci	Telluric Std		
								3ci			
								4ci			
								4ci		13 K max ADU / pixel	
105								7ci	Hdy pgr cloudy		
130 (SNY)										mostly cloudy	
								3ci			
11K								8ci	std vel	cloud at 1st & effective start 146AP	
								9ci			

95 Pg #2

Emulsion Batches:

Date 1992 MAY 5/6... Observers Hdy/Tn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06898 6899	DARKS x2			22 25					225s
6900	BIAS(4)			01 30					
6901	Comp							Fear clear	90s
6902	HD124897	14 11 06	+19 42 30	01 38 08	01 38 45	02 04W			37s
6904	Comp written auto for per							Fear clear	90s
6903	FLAT							TUNG A=1/4	33s
6905	BIAS(4)			02 08		Time T = 6.0°C			
6906	FLAT							TUNG A=1/4	33s
6907	Comp							Fear clear	90s
6908	HD155937 Companion			02 27 40					1166s
6909	HD155937			02 51 00	03 01				606
6910	AK Her C		← SAME STAR	03 04 46					3 1000s
6911 6912	BIAS(1) x2								
6913	Comp							Fear clear	160s
6914	FLAT							TUNG A=1/2	30s

Spectr. Te

Focus.

Spectr. Te

Exp. Mir.

11k

109

830

110

Spectr. Temp. Dome Temp./Hum. $+63^{\circ}\text{C}$ 69% Transparency Conditions ... Cloudy mostly ... 96
 Focus ... 6.77
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6020 1800	200 μ FULL	6563R	1c 12c		All edited & backed up to 4 worms per page	
								1c		Dome T = $+6.5^{\circ}\text{C}$	
								12c			
11K			K					13c	std vel	1.23 AIR mass 7K max AP4	
								14c			
								4c	***	Its on previous frames.	
								1c	Noise from CCD power supply noticed		
								1c	Bias (4)	without noise CAMERA unplugged	
								Note	CCD EEV Camera power unplugged for Readouts.		
109	1"	$\checkmark$ 2120						5c	(Akh/c)	480 0 200 1024 1 1	
								21c	Hdy pgn	Sep 425 from AkH/c	
Q-830	1"	V8029 -8.77	F8					22c	n	* 4 frames grabbed with "Guides"	
110								23c	find comp again		
								24c			
								25c			
								26c			
								27c			
								28c			
								29c			
								30c			
								31c			
								32c			
								33c			
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								94c			
								95c			
								96c			
								97c			
								98c			
								99c			
								100c			

FRAMES Grabbed
 ca 100 [FM00000A, B, C. FTS]

10K MAX AP4

97 pg #3

Emulsion Batches:

Date 1992 MAY 5/6... Observers Hdy. (24") Tg.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc06915	Comp							Fekr clear	90s
6916	BIAS(4)								
6917	FLAT			03 42 25				TUNG A=1/4	33s
6918	HD155937	17 09 30	+16 29	03 42 25					604s
6919	"			03 55 37					601s
6920	"			04 07 02					
6921	FLAT							TUNG A=1/4	30
6922	Comp at HD155937 posn.							Fekr clear	90s
6923	HD177749	19 00 49	+13 49	04 25 46	04 29				
6924	"	"	"	04 30 17	04 34				
6925	BIAS(4)								
6926	Comp							Fekr clear	90s
6927	FLAT							Tung A=1/4	33s
6928	FLAT							"	33s

Spectr. Te

Focus.

Spectr. Te

Exp. Mr.

790

760

38K

38K

432

Spectr. Temp. Dome Temp./Hum. $+5.3^{\circ}\text{C}$ 67% Transparency Conditions ... Clear 98

Focus 6.77 Dome Temp./Hum. $+4.8^{\circ}\text{C}$ 68%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/0/0	200x Full	H2	15ci	back to	Binning 480 0 50 1024 4 1	
								1ci 46ci			
								16ci			
790	<1"							17ci	Hdy pjm		
760	<1"							18ci	"		
	1"							19ci	"		
38K								20ci	Telluric Std.	(CAM on for Radout) 10K MAX	
38K								20ci	"	CAM OFF for Radout	
5432											
										12.4 K	
										All to Perseus & work m.	
										TO 6899 on Ex4 by JP	

199
pg#1

Emulsion Batches:

Date 1992.. MAY 6/7... Observers Hdy.. Tu.....

Note Times in headers... x.4 sec. ahead of WWW time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06929	BIAS(4)								
6930	SKY FLAT			19 42 44		00 30 W	+16 30		80s
6931	Comp					"	"	FeAr CLEAR	180s
6932	FLAT					"	"	Tung A=1/2	
6933	BIAS(4)								
6934	BIAS(4)								
6935	Comp							FeAr CLEAR	90s
6936	FLAT							Tung A=1/4	33s
6937	HD87901	10 03 03	+12 27	20 23 09					39s
6938	"	"	"	20 25					50s
6939	FLAT							Tung A=1/4	33s
6940	FLAT					06 E	+16 30	"	30s
6941	Comp							FeAr CLEAR	90s
* 6945	BIAS(4) written later								
6942	HD155937	17 09 30	+16 29	20 53 50		05 27 E			600s

Spectr. Te

Focus..

Spectr. Te

Exp. Mtr.

1700

1130

5731

40s

524

90

Spectr. Temp. Dome Temp./Hum. $+9.6^{\circ}\text{C}$ $38\% \text{H}$ Transparency Conditions Fine 100

Focus 6.77

Spectr. Temp. Dome Temp./Hum. $+8.8^{\circ}\text{C}$ 37.5% $40\% \text{GAIN}$ $\text{CCDT} = -101^{\circ}\text{C}$ *FANS on as usual

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CASS	1800	500u Full length	Hd			480 0 200 11 CCDMT DRIVE OFF	
17900			GZ					3ci	Hdy Sky FLAT	(crystal clear)	
11,500								4ci			
								5ci			
										480 0 50 1024 41 CCDMT	
5731								3ci			
								4ci		13.4 K	
40K	1"	✓ 1.36	B7n					5ci	Telluric Std	8 K MAX	
52K								5ci	"		
								4ci		13.4 K	
								4ci			
								3ci			
								1ci			
190		✓ 8.29 8.77	F8					6ci	Hdy pyg	3.48 A.R MASS	

101

pg 02

Date 1992 MAY 6/7.... Observers [Hdy] 24" Dome... Ty... Mxi

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06943	HD 155937	17 09 30	+16 29	21 04 07					600
44	"	"	"	21 14 22					500
46	"	"	"	21 26 06					600s
47	"			21 36 20					600s
48	"			21 46 35					600s
6949	BIAS(4)								
6950	Comp							Fed Clear	90s
6951	FLAT							TUNG A=1/4	30s
6952	HD 155937	17 09 30	+16 29	22 04 08					600
6953				22 15 20					
54				22 25 34					
55				35 50					
56				46 04					
57				22 56 20					
58	BIAS(4)								
59	FLAT							TUNG	30s

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

225

300

350

340

430

Tung

6.5

5.5

655

Spectr. Temp.

Dome Temp./Hum. 8.9°C 38%Transparency Conditions Fire Hazy at Low A.H.s. ¹⁰²Focus ... 6.77

Spectr. Temp.

Dome Temp./Hum.

90CGain CCD T = -101°C

Exp. Mir.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
600	225	3"	F8	CASS CCD	G=6020 1800 _{h/m}	200 _m Full	H&L		Hdg pgm	(Faint comp now visible: and well separated from Primary)	
600	300							6ci	"		
600s	350	3 ⁴ 5"						7ci	"	V4R seeing	
600	340	2 ⁴ 5'									
600	430	3'						7ci			
										Dome T = +8.6°C	
715								8ci			
300								4ci		12.5 K MAX	
600	510							9ci		2.035 Air mass	
								10ci	using Repeat	SSTAR8m.BAT 5	
700.											
600										Star drifted.	
500											
655								10ci			
500								4ci			

103

pg 43

Date 1992 MAY 6/7..... Observers (Hdg.)... Jn.... Sam Mki

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06960	Comp							Fear Clear	90s
61	HD155937	17 09 30	+16 29	23 12 49		03 07 E	expose	→ Redent	600s
62				23 23 19			Repeat 5		600s
63				23 33 33					
64				23 43 48					
65				23 54 03					
66				00 04 17					
67	BIAS(4)								
68	Comp							Fear Clear	90s
69	FLAT							Tung A=1/4	30s
70	HD155937	17 09 30	+16 29	00 20 55					
71				00 31 10					
72				00 41 25					
73				00 51 40					
74				01 01 55					

Spectr. Te

Focus.

Spectr. Te

Exp. Mtr.

880

750

960

910

900

820

630

900

500

100

650

Spectr. Temp. Dome Temp./Hum.

[illegible]

105

pg #4

Date ...1992 MAY. 6/7... Observers [Hdg]... Th... m.ki.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Spectr. Ten
CC06975	HD155937	17 09 30	+16 29	01 12 09						575
76	BIAS(4)									
77	FLAT							TUNG H=1/4	30s	
78	Comp							FeAr CLEAR	90	
79	HD155937	17 09 30	+16 29	01 29 20	01 40		Exp-Radiant		634	800
80	ADS10408B	"	"	01 41 02	02 01 02	00 29 E			1200s	110
81	HD155937			02 01 50					600	630
82	— " —			02 12 22					675	660
83	BIAS(4)									
84	Comp							FeAr CLEAR	90s	
85	FLAT							TUNG A=1/4	30s	
86	HD155937			02 30 58			Exp-Radiant		601	735
87	— " —			02 42 12			" "		606	750
88				02 53 07			Repeat 3		600	810
89				03 03 22					600	850

Spectr. Temp.

Dome Temp./Hum. CLHMBDA

[illegible]

107 pg #5

Emulsion Batches:

Date 1992 MAY 6/7... Observers [Hdg]... T.n.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC06990	HD155937	17 09 30	+16 29	03 13 37					600
91	BIAS(4)								
92	FLAT							TUNG H-1/4	30s
93	Comp							FeAr CLAR	90s
94	HD155937	17 09 30	+16 29	03 29 03			repeat 4		600
95	— " —			39 18					"
96	— " —			49 33					"
97	— " —			59 49					"
98	BIAS(4)								
6999	Comp							FeAr CLAR	90s
7000	Flat							TUNG H-1/4	30
7001	HD177724	19 00 49	+13 43	04 21 05	04 23 40				
7002	"			04 24 31	04 ² 28			FeAr CLAR	90s
7003	BIAS(4)								
7005	FLAT							TUNG A=1/4	30s
7006 7007	DARKS x2			04 39 17					225

CC07004 Comp

Spectr. Temp. Dome Temp./Hum. 5.2°C 58.3% Transparency Conditions *Fine* 109

Focus 6.77

Spectr. Temp. Dome Temp./Hum. $+5.3^{\circ}\text{C}$ 58.5%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
830	1"					200 μ	H/L	19ci	Hdy pgm		
								4ci			
								20ci			
840								21ci	Hdy pgm		
800											
870											
900	1"							21ci			
										Dome T = $+5.3^{\circ}\text{C}$	
								22ci			
								4ci			
35K		$\checkmark$ 2.99	A					23ci	Telluric Std	62K max 1.155 Air mass	
41K								24ci		12.5 MAX	
								25ci comp		13K MAX for Flat	
								25ci			
								26ci	225 sec Darks		
								26ci	"		

109

pg #1

Date 1992 MAY 7/8.... Observers [J.K.] & H. = Harlow... Fbr/T_h

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07008									
7009	Focus Test previous morning (MAY 6/7)			04 49		0 0	+16°		
7010									
7011	Focus Test								10/15s
7011	BIAS(4)								
7012	Comp							Fene ?	20s
- 7013	HD124897	14 11 06	+19 12 30	20 17 20	20 18	3 10 E		Fene Clear	20s
7014	Comps ↑								
7015	↓								
• 7016	HD95735	10 57.9	+36 38	20 37 44	20 51 09	00 35 W			
7017	Comp							Fene Clear	20s
7018	BIAS(4)								
7019	Comp							Fene Clear	20s
• 7020	DM+66 717	11 14 26	+66 23 24	21 09 53	21 34 49	W			1435
7021	Comp							Fene Clear	20s
7022	Comp							Fene Clear	
• 7023	HD112956	12 55 12	+69 19	21 47 24	22 07 24				1200s
7024	Comp							Fene Clear	

Spectr. Te

Focus. f

Spectr. T

Exp. Mr.

24K

4200

1030

350

400

Spectr. Temp. Dome Temp./Hum. $+12.3^{\circ}\text{C}$ 44% Transparency Conditions *Fine* 110

Focus ... 6.77

Spectr. Temp. Dome Temp./Hum.

90 CGAIN CCOT $\rightarrow -101^{\circ}\text{C}$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	$T = +5.0^{\circ}\text{C}$	Set 6.77			G=6020 1800h/mu	200u FULL	Hol	27ci 28ci	Focus	Right on at center	
	$T = +12.0^{\circ}\text{C}$	6.77			G=4987 1800	250u Longest	5140Å + length	3ci 4ci	"	uv sl Red	
							5140Å	2ci			
								3ci			
24K		0	K					4ci	std vel	1.44 A/mm	
4200	2"	7-60	Mb					3ci	kk pym		
								5ci			
										Porno $T = 10.7^{\circ}\text{C}$	
								5ci			
1030		9.32	M15					6ci	kk pym		760
1850	2-3"	8.2	d66					7ci	kk pym		
1850								5ci			

111

pg 42

Thurs Fri

Date 1992 May 7/8 Observers [K.K.] Fbr. Jco. JH

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07025	Comp for HD 124752							FeNe Clear	20s
7026	BIAS(4)								
7027	HD 124752			22 19 48					1200s
- 7028	—"—"	14 10 18	+ 68 03 00	22 41 58					1200s
7029	Comp								
- 7030	HD 124752 FAINT COMPANION	14 10 18	+ 68 03 00	23 10 11					1200s
7031	Comp							FeNe Clear	20s
7032	Comp							K	7
7033	BIAS(4)								
7034	BD-15 4041	15 04 48	-15 53 00	23 54 57					1200
7035	Comp	not written		00 16 21				FeNe Clear	20s
7036	7035								
7037	BD-15 4041	15 04 48	-15 53 00	00 18 26					1572
7038	7036								
7039	Comp CC07037							FeNe Clear	20s
7038	BD-15 4042	15 04 48	-15 59	00 47 14					
right no. → 7039	7038 - Comp Comp							FeNe Clear	20

Spectr. Tr.

Focus.

Spectr. Tr.

Exp. Mtr.

1400

28

205

260

240

Spectr. Temp. Dome Temp./Hum. $+8.4^{\circ}\text{C}$... 51.7% Transparency Conditions ... S.1. hazy 112

Focus ... 6:7.7

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G4983 1800	250u Longest Reichen	5140A				
1400	3"	Mag 9.6	KO					8ci	KK pgn	Fnt comp seen 5" NORTH rusty cosmic RAY central	
								8ci	"		
										Dome T = 8°C Hum = 53%	
28	2-3"	V 12						8ci		Faint comp	
								5ci			
										Dome T = $+8.1^{\circ}\text{C}$	
285		V 9.02	KO VI			250u (darker slipped to 2nd longest) Left there.		9ci	KK pgn	NORTH one	
260		9.02	KO VI					9ci	KK pgn	NORTH one again. hazy - thin cloud	
								5ci			
240	2-3"	V 9.43	KO VI					10ci	KK pgn		
								5ci			

113

pg #3

Emulsion Batches:

Date 1992 MAY 7/8... Observers [KH]... Fbr... Tm...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc07040	Comp							FeNe clear	20
7041	HD124897	14 11 06	+19 42	01 16 40	01 18	01 50W			
7042	Comp							FeNe clear	20
7043	BIAS(4)								
7044	Comp							FeNe clear	20
7045	HD144287	16 00 00	+25 30	* 01 29					737
* 7046	Comp							FeNe clear	20
7047	Comp							"	"
7048	HD149162	16 27.9	+3 28	01 47	01 48	02 4W			1300s
7049	Comp							FeNe clear	20s
7050	Comp							"	"
7051	HD161797(BL)	(1950) 17 44 30	(1950) 27 44 54	02 19 07					1500
7052	"			02 45 02	03 10 03				1500
7053	Comp	(1950)	(1950)					RND COR	20s
7054	HD161797A	17 44 30	27 44 54	03 14 12					102s

Spectr. Temp.

Dome Temp./Hum. CLHMBDA

[illegible]

115

p. #4

Date 1992 May 7/8 Observers [K.K.J. Fbr/Tc.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc07055	Comp							FenP clear	205
7056	n								
7057	BD+68 946	17 37 00	68 27 00	03 26 16					125BS
7058	Comp			03 47 54				FenP clear	20
7059	Bias (4)			03 48 40					
7060	Comp							FenP clear	205
7061	HD124897	14 11 06	14 42 30	03 53 46	03 55 13				
7062	Comp							FenP clear	205
7063	FLAT							Tung A=1/2	253
7064	FLAT							Tung A=1/2	253
7065	FLAT							Tung A=1/2	253
7066	FLAT							Tung A=1/2	253
7067	FLAT							Tung A=1/2	253
7068	FLAT							Tung A=1/2	253

* Note: cc07046 to cc07062
inclusive were written to Perseus
and Worm with incorrect headers
(10x1024 instead of 50x1024)
this must be changed before data
analysis is possible.

J.H. 26/06/92

Spectr. Ter

Focus...

Spectr. Ter

Exp. Mtr.

100

11075

116
.....

Dome Temp./Hum. *7.2°C* *55.3%*

Dome Temp./Hum. 7.2°C 55.3%

Exp.	Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
208												
258	140 D	3"	V 9.22	m 5	Cass CCO	1800 $\alpha = 4983$	250 M			K K Pym	Dome T = 7.3°C Humidity = 54%	
20											BEGINNING TO CLOUD IN.	
205												
	11075									Sid Vel	2.02 AIR @ 455 + Cloud	
26												
15)												
25,												
28)												
25)												
25)												
25)												
						All to Pogson's c worm						

Emulsion Batches:

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1992
Date May 9/10 Observers Hdy/Fbr

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[illegible]

118

Dome Temp./Hum.

Dome Temp./Hum.

[illegible]

119¹

Date May 10/11..... Observers (KK) Hlw/Fbr

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07074	Bias (4)								
7075	Comp							FeNe	20 sec
7076	HD 124897	14 11 06	19 42 30	23 11 26 ^{11 26}	23 11 28	0 10 E			
7077	Comp							FeNe	20 sec
7078	Comp							FeNe	20 sec
7079	HD 95735	10 57 54	36 38 00	23 41 ¹⁴ 23		3:42:46W			305s
7080	Comp.							FeNe	20 sec
7081	Comp							FeNe	20 sec
7082	HD 124752	14 10 18	68 03 00	00 38 55		1:34:30			516 sec
7083	Comp							FeNe	20 sec
7084	Bias (4)								
7085	HD 124752 faint companion	14 10 18	68 03 00	00 52 35	01:52:35	2:39:40			1 hr
7086	Comp							FeNe	20 sec
7087	Comp.							"	"
7088	HD 161797A	17 42 31	27 46 06	02:18:07					63 sec

Spectr. T.

Focus

Spectr. T.

Exp. Mtr.

6000

2500

323

1500

121 Pg 2

Date May 10/11

[KK]
Observers H/W / Fbr

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7089	Comp.							FeNe	20 sec
7090	Bias (4)								
7091	Comp							FeNe	20 sec
7092	HD 187691	19:46:15	10:09:54	2:33:50		-2:10			20 sec
7093	Comp							FeNe	20 sec
7094	Comp							"	"
7095	HD 188512	19:50:24	6:09:0						
7095	Comp							FeNe	20 sec
7096	HD 197076	20:36:14	19:34:6 ^{declined}	3:44:15		-1:50			30 sec
7097	Comp							FeNe	20 sec
7098	HD 197076 faint companion.	20:36:14	19:34:36	3:53:44	4:04:00	-1:37			60 sec
7099	Comp							FeNe	20 sec
7100	Bias (4)								
7101	Flat							A = 1/4	33 sec
7102	Flat							A = 1/4	33 sec

Spectr. Te

Focus.

Spectr. Te

Exp. Mtr.

6300

10000

10000

10000

Spectr. Temp. Dome Temp./Hum.

[illegible]

Spectr. Temp.

Dome Temp./Hum.

Dome Temp./Hum. 14.0°C/67%

Transparency Conditions

Okay.....

124

Dome Temp./Hum.

[illegible]

125

Date ... *May 11/12-92* ... Observers ... *Blm.../Fbr./SC* ...

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc07107	Focus (Comp)								
cc07108	Focus (Stell)								
7109	Bias(4)								
7110	Comp							FeAr Cler	90s
7111	HD12028	12 40 23	85 56 00	20 53 25	21-26				2000
7112	HD12038	12 40 23	85 56 00	NO WRITE - TOO MANY PROBS!					
7112	HD149757	22 42 51	-10 22 00					711 Comp FeA	2515 1000 20,000
7113	Comp							FeAr Cler	90s
7114	Bias(4)								
7115	HD149757	16 31 39	-10 22	22 59 16					1141s 100,000
7116	Comp							FeAr Cler	90s.
7117	HD149757	16 31 39	-10 22	23 24 59					108 4s 100,000
7118	Comp							FeAr Cler	90s
7119	HD149757	16 31 39	-10 22	23 50 31					1100s 100,000
7120	Comp.							FeAr Cler	90s

Spectr. Temp. Dome Temp./Hum. ... 17.9°C / 52.3% Transparency Conditions CLEAR 12.6

Focus 6.7.7

Spectr. Temp. Dome Temp./Hum.

600 $\frac{1}{\text{mm}}$ CCD T = -100.4°C
480 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CSSS CCD	600 $\frac{1}{\text{mm}}$ 600 $\frac{1}{\text{mm}}$	200 μ μ				{ 480 0 40 1024 4 1 } 480 0 40 1024 4 1	
				{ Lu notes } — no good for HD149757 — there is a file cc07111.fits, which is good for HD149757.						480 0 50 1024 4 1.	
									$\lambda = 4300 \text{ \AA}$		
25.3 20,000		2.56	09.55				a = 2630		Blm Pam	Dome T = 14.8°C Hum = 62.2%	
								4Li			
								1Li			
1141 100,000	3"							3Li	Blm Pam	Airmass = 1.9378 13,000 Adm Max	
								4Li			
108.45 100,000								5Li	Blm Pam	ENCODERS	
								4Li		NOT	
1100 100,000	6"							6Li	Blm Pam	WORKING	
								4Li			

127
*2-

Date .. MAY. 11/12-92.... Observers B. L. / F. Br. / S. G.

Emulsion Batches:

ENCODERS

NOT

WORKING

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCØ7121	HD 149 757	16 31 39	-10 22	00 21 26					1100
7122	Comp							FeAr Clear	90s
7123	BIAS (4)								
7124	HD 149 757	16 31 39	-10 22	00 45 55	00 03 00				1025
7125	Comp							FeAr Clear	90s
7126	HD 149 757	16 31 39	-10 22	01 11 51					4135
7127	Comp							FeAr Clear	90s
7128	BIAS (4)								
7129	HD 149 757	16 31 39	-10 22	01 32 24					8645
7130	Comp							FeAr Clear	90s
7131	HD 149 757	16 31 39	-10 22	01 51 47					8505
7132	Comp							FeAr Clear	90s
7133	HD 149 757	16 31 39	-10 22	02 13 20	02 29 57				
7134	Comp							FeAr Clear	90s
7135	BIAS (4)								

Spectr. Temp. Dome Temp./Hum.

480 0 50 1024 4 1 ccdfmt

[illegible]

129#3

Date . MAY . 11 / 92 Observers . Bln / Ebr /

Emulsion Batches:

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[illegible]

Spectr. Temp. Dome Temp./Hum. ... 13.3°C / 64.6% Transparency Conditions .. A.. BEAUTY! 130

Focus 6.77 20224

Spectr. Temp. Dome Temp./Hum. 480 0 50 1024 4 1 ccd fnt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
100,000		2.56	0 9.35	CASS CCD	600 h/mm G=2630	200 μ		13ci	λ = 4300 Å	Bl _n Program 13,000 max ADU.	
100,000								14ci	Bl _n Program	Dome T = 13.2°C Hum = 64% / 12500 ADU MAX	
100,000								14ci		12400 max ADU.	
100,000										11,000 Max ADU	
100,000									Bl _n Pgm.		
										11,000 ⁺ ADU max	

All to Perseus; WORM

131

Date *May 12/13-92* Observers *B/C/FOR*

Emulsion Batches:

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[illegible]

132
H.A.R.Y.

Spectr. Temp.

Dome Temp./Hum.

[illegible]

133 pg #1

1992

Date MAY 14/15

Observers Hdy./F.br.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Nr.
7173	BIAS (4)									
7174	FLAT							Tung A=1/4	35 sec	
7175	COMP							FeAr Clear	90 sec	1474
7176	HD 155937	17 ^h 09 ^m .5	+16° 29'	00 32 33					600 sec	320
7177	)			00 46 42					"	320
7178	)			00 57 04					"	290
7179	)			01 07 27					"	260
7180	)			01 17 49					"	233
7181	)			01 28 12	01 38 12				"	250
7182	BIAS (4)			01 39 07						
7183	COMP							FeAr Clear	90 sec	
7184	FLAT							Tung A=1/4	35 sec	
7185	HD 155937			01 45 46					600 sec	290
7186				56 09						320
7187				02 07 02 14						334

Spectr. Temp.

FANS OFF

Dome Temp./Hum.

Transparency Conditions *Clear* *134*

480 9 100 1024 21 ccd firt

2x) binning used due to poor illumination by sources

[illegible]

135
pg #2

'Date May 14/15..... Observers Hdy./Fbr.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7188	HD 155937			02 16 54					
7189	)			02 27 17					
7190	)			02 37 39	02 47 39				
7191	BIAS (4)			02 48 20					
7192	FLAT							Tung AFB4	35 sec
7193	COMP							FeAr Clear	90 sec
7194	HD 155937			02 55 34					600 sec
7195	)			03 05 57					)
7196	)			03 16 20					)
7197	)			03 26 40					
7198	)			03 37 00					
7199	)			03 47 20	03 57 20				
7200	BIAS (4)			03 58					
7201	COMP							FeAr Clear	90 sec
7202	FLAT							Tung A-1/4	37 sec

Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

365

414

412

435

466

490

513

528

547

13994

$$T_{CCD} = -101.8$$
[illegible]

137 pg. 3

Date 1992 May 14/15 Observers .. Hdy/Fbr

Emulsion Batches:

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[illegible]

138

Dome Temp./Hum.

[illegible]

139
pg. 1

Fri Sat

Date 1992 MAY 15/16... Observers Hdg... T...

Emulsion Batches:

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.....
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCO 7212	Focus Test								
CCO 7213									
CCO 7214	BIAS(4) when on Regulus								
7215	FLAT							Tung A=1/4	19 sec
7216	COMP							FeAr Clear	45 sec
7217	HD 87901	10 03 03	+12 27	21 01 26					36 78 sec
7218	"			21 03 10					37 sec
7219	BIAS(4)								
7220	FLAT when on HD 155937							Tung A=1/4	19 sec
7221	COMP							FeAr Clear	45 sec
7222	HD 155937	17 ^h 09 ^m 5	+16° 29'	21 16 28					600 sec
7223	"			21 26 43					"
7224	"			21 36 58					"
7225	"			21 47 13		03 57 E			"
7226	"			21 57 28					"
7227	"			22 07 43	22 17 43				"

Spectr. T.

Focus...

Spectr. T.

Exp. Mtr.

T=44

21000

30000

'420

460

487

492

494

530

90 CGain

[illegible]

141

pg. 2

Date 1992 MAY 15/16 Observers ... Hd.y / Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7228	BIAS(4)								
7229	COMP			22 20 35				FeAr Clear	45sec
7230	FLAT							Tung A=1/4	19sec
7231	HD 155 937	17 0930	+ 16 29	22 29 50					600sec
7232	"			22 40 08					"
7233	"			22 50 27					"
7234	"			23 00 46					"
7235	"			23 11 06					"
7236	"			23 21 24					"
7237	BIAS(4)								
7238	FLAT							Tung A=1/4	19 sec
7239	COMP							FeAr Clear	45sec
7240	HD 155 937	17 0930	+16 29	23 35 55					600
7241	"			23 46 12		01 58 E			"
7242	"			23 56 31					"

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

655

660

790

870

915

970

6760

865

920

1030

Spectr. Temp.

Transparency Conditions .. *Fine* .. *s/haze* .. *142*

Focus 6:70

$$T_{\text{CCD}} = -101.65^{\circ}\text{C}$$

Spectr. Temp.

Dome Temp./Hum. *CLAMBON*

[illegible]

143 pg #3

Emulsion Batches:

Date ..1992.MAY.15/16. Observers ..Hdy...Tn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07243	HD155937	17 09 30	+16 29	00 06 50		01 38 E			
7244	"			00 17 09					
7245	"			00 27 28					
7246	BIAS(4)							Tung A=1/4	
7247	Comp							FeAr Clear	45s
7248	HD155937			00 42 56				Tung A=1/4	19s
7249	HD155937			00 42 56					
7250	"			00 53 16					
7251	"			01 03 35					
7252				01 13 54					
7253				01 24 13					
7254				01 34 32					
7255	BIAS(4)								
7256	FLAT			01 46 21				Tung A=1/4	18s
7257	COMP							FeAr Clear	45s

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

1100

1065

1035

6800

995

1016

983

945

920

905

7546

145 p. 4

Date 1992 MAY 15/16 Observers Hdy Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7258	HD 155937			01 49 17					600sec
7259				01 59 36					
7260				02 09 56					
7261				02 20 15					
7262				02 30 34					
7263				02 40 53	02 50 53				
7264	BIAS(4)								
7265	COMP			02 52 27				FeAr Clear	45sec
7266	FLAT							Tung A=1/4	18sec
7267	HD 155937			02 55 23	03 05 23				600sec
7268	"			03 07 11					600sec
7269	"			03 17 30					
7270	"			03 28 08					600sec
7271	"			03 38 27					
7272	"			03 48 46					

Spectr. Te

Focus...

Spectr. Te

Exp. Mir.

795

783

723

675

690

735

(770)

690

565

582

582

575

580

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions *Clear*

146

Focus

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
795								12ci			
783											
723	2"										
675											
690											
735								12ci			
(770)								6ci			
								5ci		13107 ADU	
690	15-25"							13ci			
565	2-3"							14ci			
580 580											
582	3"										
575	3-4"									tertiary sometimes not visible	
580								14ci			

1147 p.5

Date 1992 MAY 15/16 Observers Hdy / 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	Exp.
7273	↑ BIAS(4)								
7274	FLAT							Tung A=1/4	18sec
7275	└ COMP FOR AM Her			04 01 20				FeAr Clear	45sec
7276	└ COMP FOR 3 Aur 19 00 49 +13 43							FeAr Clear	45sec
7277	HD 177724	19 00 49	+13 43						
7278	HD 177724								
7279	└ FLAT FOR 3 Aur							Tung A=1/4	18sec
7280	└ COMP FOR Nova Cyg	20 27 43	52 17 39					FeAr Clear	45sec
7281	Nova Cyg	20 27 43	52 17 39	04 22 32					128sec
7282	COMP							FeAr Clear	45sec
7283	└ FLAT							Tung A=1/4	18sec
7284	BIAS(4)								
7285	DARK DO NOT USE, WRONG TCCD			04 31 53					225sec
cc 07286.fts	DARK			04 46 52					225sec

Spectr. Temp

Focus.....

Spectr. Temp

Exp. Mtr.

17200

38000

1800

195-1984

(1958)

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

Focus

Spectr. Temp.

Dome Temp./Hum. *11.0°C 54*
$$T_{CCD} = -101.75$$
[illegible]

149

pg #1

Mon/Tues

Date 1992 MAY 18/19 Observers [Rm] Jn... Fbr.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07287	BIAS(4)								
7288	Focus Test								
7289									
7290	Comp BIAS(4)								
7291	Comp							FeAr Clear	45s
7292	HD124897	14 1106	+19 4230	20 2930					275s
7293	Comp							FeAr Clear	455s
7294	Comp							n	γ
7295	HD62509	07 39.2	+28 16	20 4657		04 334V			415s
7296	Comp							FeAr Clear	455s
→ 7297	FLATS x3							TUNG H=1/4	18s
7299								FeAr Clear	45s
7300	Comp for Regulus								
7301	HD87901	10 0303	+12 27	21 1711					66s
7302	Comp							FeAr Clear	45s
7303	HD87901	n	γ	21 2541					89s
7304	Comp							FeAr Clear	45s
7									

Spectr. Te

Focus... 6

Spectr. Te

Exp. Mir.

21K

20K

35K

52K

Spectr. Temp. Dome Temp./Hum. 41.4°C 57% Transparency Conditions *FINE* 150

Focus... *6.70*

Spectr. Temp. Dome Temp./Hum.

90 C G/H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSED 1800 l/n/mm	G=5930 645	200 FULL	6450A			480 0 50 1024 4 1 CCD FMT	
										360 0 10 1024 40 1 CCD FMT	
										480 0 50 1024 4 1 CCD FMT	
								3ci			
21K								5ci	Std Vel	MAX 7200 ADU	
								3ci			
								3ci	Std Vel		
20K								5ci	Std Vel	6700 ADU MAX 1.78 AIR MASS	
								3ci			
								4ci		10 K MAX ADU	
35K								6ci	Telluric Std	6400 MAX ADU	
52K								6ci	Telluric Std (stranger)	T800 ADU	

Set 670 T = +140C

1.14 H0LUB

151 pg #2

Emulsion Batches:

Date .19.92 MAY. 18/19. Observers [Rm]..Th..Fbr.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07305	BIAS(9)								
7306	Comp							FcAr Clear	45s
7307	HD 171232	17 38.5 18 28.5	+04 37 +25 25	21 45 48		04 26 E			126s
7308	Comp							FcAr Clear	45s
7309	FLATS x 3							TUNG A=1/4	18s
7311	at HD 161096 pos'n							FcAr Clear	45s
7312	Comp								
7313	NOVA Cyg 92			22 08 53		6 33 W			971
7314	NOVA Cyg 92			22 26 34		10 10 W			1340
7315	Comp							FcAr Clear	45s
7316	Comp							FcAr Clear	45s
7317	HD 203156	21 15 23	37 49.0	23 00 21		06 28 E			
7318	Comp							FcAr Clear	45s
7319	Comp							"	"
7320	HD 198726	20 47 13	+27 52 30	23 28 57	23 ^m	E			
7321	Comp							FcAr Clear	45s

Spectr. Temp. Dome Temp./Hum. $+11.8^{\circ}\text{C}$ 58% Transparency Conditions ... *sl. hazy* 152
 Focus ... *6.70*
 Spectr. Temp. Dome Temp./Hum. *C LAMBDA* 90 CGA/M CCD T $\rightarrow$ -1008

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G= 5930 1800/1/mm	<i>200</i> Full	6450A				
<i>1268</i>	~ 1000	$3''$ $\checkmark$ 2.77	K2 III					7ci	Std vel	<i>5 KM MAX ADY</i> AIRMASS 3.01	
<i>1858</i>								4ci		9 KM 4X ADY	
<i>1371</i>	1000							8ci	<i>Chg</i> Nova 92 p/m	12,500 MAX ADY	
<i>1340</i>	1380							9ci	Nova Crv 92	TOP OF H ₂ HITS SATURATION	
<i>1453</i>	5000	$4''$ $\checkmark$ 5.89	GO16					10ci	Rm Pgm	HR8157 2700 MAX ADY	
<i>1453</i>	9000 ($2-3''$)	$\checkmark$ 5.75	GO1A					11ci	Rm Pgm	T Vul	

153 py43

Emulsion Batches:

Date 1992. MAY 18/19... Observers [Rn]... Fbr. Tn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07322	BIAS(4)								
7323	Comp	* coords 1900 calc from Rel to HD 214975 encoder offset						FeAr Clear	45s
7324	Unknown	22 36 22	+56 16 14	00 03 35	00 18	06 53 E			890
7325	Comp							FeAr Clear	45s
7326	HD 214975	22 36 55	+56 18 24	00 25 39	01 02 30	06 07 E			2208
7327	Comp							FeAr Clear	45s
7328	BIAS(4)								
7329	Comp							FeAr Clear	45s
7330	HD 162714	17 47 17	-06 07 12	01 19 21		00 42 E			1200
7331	Comp							FeAr Clear	45s
7332	Comp							FeAr Clear	45s
7333	HD 161046	17 38.5	+04 37	01 46 15		00 24 E			98
7334	Comp							n	45s
7335	Comp							n	n
7336	HD 173297	18 39 20	-20 45	01 58 37		E			1600

Spectr. Ten

Focus...6

Spectr. Ten

Exp. Mtr.

78

2340

9800

2K

2400

Spectr. Temp. Dome Temp./Hum. $+11.8^{\circ}$ 51.5% Transparency Conditions ... 51.1% Hazy 154
 Focus ... 6.70
 Spectr. Temp. Dome Temp./Hum.

90CG4in CCD T = -101°

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C435 CCD	65930 1800	200 μ Full	6450A				
78								11ci	WRONG Star Rm pgn	TO SW of HD 24975	
2340	2"	$\checkmark$ 8.40	GOIB					12ci	Rm pgn	$\approx$ 64 ADU sum AVG of 6 obs bkgnd	
										Dome T = $+10.7^{\circ}$	
9800	2"-4"	$\checkmark$ 6.15	GOIB					13ci	Rm pgn	1.31 AIRMASS $\approx$ 20° N of Full Moon	
14K		$\checkmark$ 2.77	K2III					14ci	stable	8700 MAX	
2400	3"	$\checkmark$ 7.48	GOIB					15ci	Rm pgn	5600 ADU sum of 7 obs. $\approx$ 20° E of moon	

Spectr. Temp.

Dome Temp./Hum. CLAMBDA

Transparency Conditions .. 51... *hazy* 156

157

Emulsion Batches:

Date .. May. 19/20..... Observers Fbr.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCD 7346	Focus (6520P)								
7347	Focus (572L)								
7348	BIAS (4)								
7349	Comp							FeAr clear	45s
7350	HD 124897	14 11 06	19 42 30	20 59 02	20 59 19	1 41 E			45s
7350	HD 124897	14 11 06	19 42 30	20 02 03	21 02 07	1 37 E			45s
7351	Comp							FeAr clear	45s
7352	FLAT							TUNG A=1/4	18s
7353	FLAT							"	"
7354	FLAT							"	"
7355	COMP (REARVIEW)							FeAr clear	45s
7356	HD 87901	10 03 03	+12 27	21 37 14	21 37 44				
7357	Comp							FeAr clear	45s

Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

34K

8.5K

480 0 50 1024 41 ccdfmt

All to Powers and GWRM.

159
#1.Date May 20/21..... Observers Bt./Fbr.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 7358	Bias (4)								
7359	Comp							FeAr clear.	200s
7360	H087901	10 03 03	⁺ 12 27	20 50 17	20 50 57				80s
7361	H087901 Comp	10 03 03	12 27	20 56 52 20 50 17				FeAr clear	107s
7362	Comp							FeAr clear	200s
7363	FLAT							Tung clear	50s 400s
7364	FLAT								
7365	FLAT								
7366	Comp							FeAr Clear	200s
7367	H0113226	12 57 12	11 30 00	21 35 18					1259s
7368	Comp							FeAr clear	200s
7369	FLAT							Tung clear	50s
7370	FLAT							Tung clear	50s
7371	FLAT							Tung clear	50s
7372	Bias (4)								

Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

20 K

55 K

60 K

Spectr. Temp.

Dome Temp./Hum. ... 17.2°C / 64.6%

Transparency Conditions

CLEAR

160

Focus 6.70

gain?

Spectr. Temp.

Dome Temp./Hum.

480 0.50 1024 41 cool front

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	$\lambda = 4430$ 1800	200 μ			$\lambda = 4300 \text{ \AA}$		
20 K		✓ 1.35	07 V					4ci			
55 K										10 K MAX NON	
								5ci		11 K MAX NON	
100 K.		✓ 2.83	09 IIIab					6ci		10 K MAX NON.	
								5ci			
								5ci			
								5ci			

161 #2.
pg

Date .. May. 20/21 Observers .. Bt/Fbr

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 7373	Comp							FeAr Clear	2005
7374	H0140573	15 39 18	06 44 00	22 21 43					5095
7375	Comp							FeAr Clear	2005
7376	FLAT							Tung Clear	505
7377	FLAT							Tung Clear	505
7378	FLAT							Tung Clear	505
7379	Bias(4)								
7380	Comp							FeAr Clear	2005
7381	H0153210	16 52 54	+09 32	22 55 09	11 09 55				877
7382	Comp							FeAr Clear	2005
7383 → 7385	FLAT x 3							Tung Clear	505
7386	Bias(4)								
7387	Comp							FeAr Clear	2005
7388	H0154561	17 30 18	12 38	23 33 54					1925
7389	Comp							FeAr Clear	2005

Spectr. Te.

Focus....

Spectr. Te.

Exp. Mtr.

100 K.

100,000

25%

Spectr. Temp. Dome Temp./Hum.

[illegible]

Date ... May. 20/21. 1922. Observers ... Bt / Fbr

Emulsion Batches:

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[illegible]

Spectr. Temp. Dome Temp./Hum.

[illegible]

165

#1.

Thurs Fri

Emulsion Batches:

Date May 21/22-92 Observers WxL/Tn/Fbr

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7397	Bins (4)								
7398	Comp							FeAr Clear	60
7399	H0102870	11 45.29	+02 20	20 25 42		00 19 W			89 sec
7400	"	"	"	20 27 14		00 22 W			102
7401	Comp							FeAr Clear	60 sec
7402	Comp	"						"	4
7403	AH Vir	12 09 15	+12 22 37	20 37 58					500
7404	— " —			20 56 51		00 35 W			600
7405	Comp							FeAr Clear	60s
7406	AH Vir	12 09 15	+12 22 37	21 11 05					560s
7407	AH Vir	12 09 15	+12 22 37	21 21 25	21 31 25				600
7408	Comp							FeAr Clear	60s
7409	Bins (4)								
7410	AH Vir	12 09 15	+12 22 37	21 36 00	21 46				600s
7411	AH Vir	12 09 15	+12 22 37	21 46 42	21 56 44				600s

Spectr. Ten

Focus.....

Spectr. Ten

Exp. Mir.

10k

700 sec

400

1000

500

772

448

388

167
pg#2

Date .. May 21/22-92 Observers WXL/T1/Fbr.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
07412	Comp							FeBr Clear	60s
07413	AH VIR	12 09 15	⁺ 12 22 37	22 01 17	22 11 17				600s
7414	AH VIR	12 09 15	⁺ 12 22 37	22 11 34	22 21 34				600s
7415	Comp							FeBr Clear	
7416	AH VIR	12 09 15	⁺ 12 22 37	22 26 19	22 36 19				600s
7417	AH VIR	12 09 15	⁺ 12 22 37	22 36 53	22 46 53				600s
7418	Comp							FeBr Clear	60s
7419	Bias (4)								
7420 7422	FLAT x3							Tung Clear	10s
7423	Comp							FeBr Clear	60s
7424	EF Dra	18 06 31	69 44 24	23 03 17		03 00 E			120s 120s
7425	EF Dra	18 06 31	69 44 24	23 24 13					1200s
7426	Comp							FeBr Clear	60s
7427	EF Dra	18 06 31	69 44 24	23 47 35					1200 1200
7428	EF Dra	18 06 31	69 44 24	00 07 53		155 E			1203 1203

Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

707

366

368

363

200

200

189

233

Spectr. Temp.

Dome Temp./Hum.

CLAMBA 480 0 50 1024 4 1 cclfont

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60s					CASS CCD	1800 α=4900	200 μ	5010A	6ci	λc=5010Å		
600s	407	2"	√ 9.3	K0						WxL pgm	400 ADU MAX ABOVE BKG.	
600s	366										400 ADU MAX.	
600s	368		√ 9.3	K0					6ci	WxL Pgm	300 ADU MAX	
600s	363		√ 9.3	K0					6ci	WxL Pgm	340 ADU MAX.	
60s												
10s									7ci		Pixel 144 (hot)	
60s											4980Å - broad feature	
600s	200	2"	√ 10.15	F9					8ci	WxL pgm		
600s	200		√ 10.5	F9					9ci	WxL pgm		
60s	189											
600s	223	2"34							10ci			

169

#3

Date ... May 21/22..92 Observers ... WxL./...In./...Fbr

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ccp7429	Comp							FeAr Clear	60s
7430	Bias(4)								
7431	EF Dra	18 06 31	69 44 24	00 33 55					1200s
7432	EF Dra	18 06 31	69 44 24	00 54 24					1203
7433	Comp			01 18 24				FeAr clear	60s
7434	EF Dra	18 06 31	69 44 24	01 18 24					1200
7435	EF Dra	18 06 31	69 44 24	01 38 35					1220
7436	Comp								
7437	Bias(4)								
7438	Comp							FeAr Clear	60s
7439	HD 154417	17 00 12	+00 51	02 12 31			Dec Drum +00 46		302 299
7440	Comp							FeAr Clear	60s
7441	Comp							n	n
7442	HD 155937	17 09 30	+16 29	02 30 12		01 10W			600s
7443	Comp								

Spectr. Ten

Focus....

Spectr. Ten

Exp. Mir.

243

248

246

230

2900

760

Spectr. Temp.

Dome Temp./Hum. $17^{\circ}\text{C}/33.7\%$

Transparency Conditions CLEAR 170

Focus 6.63

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $\alpha = 4900$	200 μ				$\lambda = 5010 \text{ \AA}$	
233		^V 10.5	F9					12ci	W x L		
248		^V 10.5	F9					13ci			
246		10.5	F9					14ci			
230	2"	12.5	F9					15ci			
										Dome T = $+16.9^{\circ}\text{C}$	
2900	2-3"	^V 601	GOV					16ci	Std Vel		
760	2"	^V 8.29 8.77	F8					17ci	W x L ppm	[Hdy interest too]	

171 #4

Date 1992 MAY 21/22. Observers Wxl./Tn./Fbr.....

Emulsion Batches:

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[illegible]

Spectr. Tex

Focus... 4

Spectr. Te

Exp. Mtr.

Transparency Conditions .51. Hazy.....172

Dome Temp./Hum. 71/68°C 28.5/10
CLAMRDA

$$CCDT = -100.4 \%$$

173

pg #1

Fri / Sat

Date 1992 MAY 22/23. Observers ..W.x.L. / J.n. / F.Br./S.J.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCD 7452									
7453	Focus Test (Full Binning as observing)			19 56		0 0	+25 45	FeAr Clear	30/40
7454	BIAS(4)			20 08					
7455	SKY near HD102870 (North 25")			20 11 07		00 12W		FeAr Clear	300s 60sec
7456	Comp							FeAr Clear	60sec
7457	HD 102870	11 45 29	+02 20	20 20 49		00 20W			216s
7458	"	"	"	20 26 10		00 25W			168s
7459	Comp							FeAr Clear	60sec
7460	BIAS(4)								
7461	Comp							FeAr Clear	60sec
7462	AH Vir	12 09 15	+12 22 37	20 39 37		022W			638
7463	— " —	12 09 15	+12 22 37	20 50 40		033W			603
7464	Comp							FeAr Clear	60sec
7465	AH Vir	"	"	21 04 23					600s
7466	— " —	"	"	21 15 38					603
7467	Comp							FeAr Clear	

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

240

13,800

302

2237

300

320

Spectr. Temp. Dome Temp./Hum. $+22.2^{\circ}\text{C}$ 45.0% Transparency Conditions *Sl. hazy* 174

Focus 6.63

Spectr. Temp. Dome Temp./Hum. *CLAMBDA* $T = -100^{\circ}\text{C}$ 90 Cguin

Topup done by 20 EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	$T=6.63$			CASS CCD	G=4900 1800 l _n /mm	200 _u Full	5010 Å	5ci 7ci	Focus	480 0 50 10 24 4 1 2.2 pixel/Red OK as Temp should drop Red	CDFMT
2408								7ci	Sky spectrum	N RA +00 00 8 Δ per +00 04 15	
								3ci			
13,800		$\sqrt{3.61}$	F9V					5ci	Std vel	4400 Å MAX Δ Dec +00 03 50 MJD JD = 2448765.5633 Solar CORR = -26.5685	
		"	"								
								1ci		Dome T = +21.6°C	
302	2"	$\sqrt{9.3}$	K0					20ci	WxL pgn		
203 237								2ki	"	Hazy	
300	2-3"							22ci	WxL pgn		
327								23ci	"		
								3ci			

175 pg#2

Emulsion Batches:

Date 1992. MAY. 22/23. Observers W.K.L./T.G./F.B.R./S.J.... Stan + + +

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07468	AH Vir	12 09 15	+12 22 37	21 30 16					611
7469	— " —	"	"	21 40 59					600
7470	Comp							FeAr Clear	605
7471	BIAS(4)								
7472	AH Vir			21 56 44		01 39W			600s
7473 7473	AH Vir			21 07 04		01 50W			600s
7474	Comp								60s
7475	AH Vir			22 20 38					
7476	"			22 31 50					
7477	Comp								60sec
7478	AH Vir			22 45 34					620sec
7479	"			22 56 51					701sec
7480	"			23 09 09					720
7481	Comp								
7482	BIAS(4)								

Spectr. Ten

Focus..6

Spectr. Ten

Exp. Mtr.

314

300

342

380

380

256

213

214

201

$$CCDT = -100.5^{\circ}\text{C}$$
[illegible]

177 pg #3

Date 1992 MAY 22/23 Observers W.xL./Tn./Fbr...

Emulsion Batches:

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[illegible]

Transparency Conditions... Hazy... moroso.....178

Focus 6.63

Dome Temp./Hum.

90 cgo in

[illegible]

179

pg#1

Sun Mon

Date 1992 MAY 24/25. Observers WXL/Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCO 7496	BIAS (4)								
7497	Comp							Felt Clear	60s
7498	HD 102870	11 4529	+02 20	20 2623					154s
7499	Comp							Felt Clear	60s
7500	Comp							"	"
7501	HD 107904	12 1852	+43 06 00	20 4123		00 23W			600s
7502	Comp							Felt Clear	60s
7503	BIAS (4)								
7504	Focus Test			20 58		00 30W + 4.30		Felt Clear	30/45
7505	Comp								60s
7506	BO CVn	13 54 58	+41 18 19	21 16 58					900
7508	"	"	"	21 33 07					900
7509	"	"	"	21 48 55					900
7510	comp								
7511	BO CVn	13 54 58	+41 18 19	22 11 41		00 22W			902

Spectr. Temp.

Focus....60s

Spectr. Temp.

Exp. Mtr.

8500

444

146

150

157

161

Spectr. Temp. Dome Temp./Hum. $+8.9^{\circ}\text{C}$ 51.5% Transparency Conditions $\dots$ FINE 180
 Focus $\dots$ 6.75 90C6Ain TOPUP & cooling of chip
 Spectr. Temp. Dome Temp./Hum. FOR observations 480 0 50 1024 4 1 CCD FMT
 From AMBIENT by $19:40$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G 4900 1800	200 μ FULL	5D10H			CCD T = -100.2°C	
8,500		$\sqrt{3.61}$	F9V					6ci	Std vel		
4464	$6''$	$\sqrt{5.93}$	F0					7ci	WxL pgrm - for Sp type comparison		
								5ci			
								3ci	Stellar Vsl	Pump T = $+7.8^{\circ}\text{C}$	
								4ci	Red shifted	CCD FMT 360 0 12 1024 40 1	
146		$\sqrt{9.5}$ -10.1	F0					5ci			
150								8ci			
157								9ci			
								10ci			
161								9ci			

181

p4 #2

Emulsion Batches:

Date 1992 MAY 24/25... Observers W & L / Jn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
CC07512	BO CV _n EW	13 54 58	+41 18 19	22 27 55		00 08 W			900	161
CC07513	comp							FeAr clear	60sec	
7514	BO CV _n EW W & L			22 47 02					900	207
7515	" EW			23 02 30					899	288
7516	comp							FeAr clear	60sec	
7517	BO CV _n			23 21 20					975	300
7518	"			23 39 04					900	265
7519	comp							FeAr clear	60sec	
7520	BI45(4)*	Average of 4 brass		23 57				Tung clear	8sec	
→ 7521	FLATS x 3									
7522	BO CV _n			00 01 13					917	281
* 7525 ✓	"			00 16 46					901	291
7526	comp									
7527	BO CV _n			00 36 35					900	292
7528	"			00 52 13					908	283

Spectr. Temp. Dome Temp./Hum. 16.9°C 58.6% Transparency Conditions ... OK ... 182
 Focus ... 6.75 ...
 Spectr. Temp. Dome Temp./Hum.

CLAMBDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
161	5"	$\checkmark$ 9.5 -10.1	FO	CASS CCD	G = 4900 1800 $1/2$ mm	200 μ Full	5010A	10 ci	WxL pgr		
								5 ci			
209								11 ci			
288	3"-4"							11 ci			
								5 ci			
300								9 ci 12 ci		Edit Header UT	
265								12 ci			
								5 ci			
								13 ci		8700 MAX ADU/pixel	
284								14 ci			
291								14 ci		above backgrd. ≈ 1200 photons sum of 4 ccs.	
292								15 ci			
283								15 ci			

183 pg#3

Date 1992 MAY 24/25 Observers WxL / Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07529	Comp							Felt Clear	60s
7530	#1 BO CVn	13 54 58	+41 18 19	01 10 53					90s
7531	"	"	"	01 26 16		03 37W			900
7532	"	1	1	01 42 09					913
7533	Comp							Felt Clear	60s
7534	Comp							"	1
7535	HD171232	18 28 5	+25 25	02 07 32		00 15 E			900
7536	Comp							Felt Clear	60s
Fm 0432	HD171232 See Test 4 frames.			02 20		00 00	"N" mode	Int 67m sec	
7537	BIAS(4)								
7538	Comp							Felt Clear	60s
7539	EF Dra			2 42 48		00 40W			447
7540	Comp							Felt Clear	60s
7541	HD187691	19 46.2	+10 10	03 00 47	03 05 47	00 50E			300
7542	Comp							Felt Clear	60s

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

278

260

260

1900

35

200

Spectr. Temp. Dome Temp./Hum. $+5.5^{\circ}\text{C}$ 58.3% Transparency Conditions sl. hazy 184

Focus ... 6.75

Spectr. Temp.

Dome Temp./Hum. $+4.9^{\circ}\text{C}$ 58.3% Light N breeze
FANS were on since 19.30

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2			CAS CCD	G = 4900 1800 $1/2$ mm	200u Full	5010A	5ci			
278	3" 5" $\checkmark$ 9.5 -10.1		FO					46ci	WxL pgm		
260								46ci		1.254 Air mass	
260								16ci			
								5ci			
								5ci			
1800	5" $\checkmark$ 7.73		G8III					17ci	Std vel		
	6" $\checkmark$ 7.73		G8III						Seeing Test	Dome facing SW Dome T = $+4.8^{\circ}\text{C}$	
								5ci			
35								18ci			
200	6" $\checkmark$ 5.11		F8IV					19ci	Std vel		
								5ci			

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pg #1

Emulsion Batches:

Date 1992 MAY 27/28 Observers ... B.L.M. / T.M.

Note Header Times $\approx$ 6 sec. Ahead of W.W.V. Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07543	BIAS(4)			(Header or CCD3 pgm Times)					
7544	Focus Test	Comp/Stellar	Hurtmann Points					FeAr	10/10
7545								clear	
7546	Comp							FeAr	10/10
7547	HD107328	17 15 16	+03 52	20 39 00		00 27 W		FeAr	17.3
7548	Comp							clear	
7549	FLATS x 3	at HD107328 posn.						TUNG	30s
7551								A=1/8	
7552	BIAS(4)								
7553	Focus Test	Comp/Stellar		21 39				FeAr	10/10
7554								clear	
7555	BIAS(4)								
7556	FLATS x 2							TUNG	100sec
7557								A=clear	
7558	Comp							FeAr	50sec
7559	HD149757	16 31 39	-10 22	21 59 47		02 00 E			1862
7560	Comp							FeAr	50s
7561	HD 149757	16 31 39	-10 22	22 36 16		01 24 E			1804
7562	Comp							FeAr	50s

Spectr. Ter

Focus....

Spectr. Ter

Exp. Mtr.

4349

Set 57

221K

216K

216K

Spectr. Temp. Dome Temp./Hum. $+11.5^{\circ}\text{C}$ 567 Transparency Conditions ... *Some cloud* ... 186

Focus ... 6.75

Spectr. Temp. Dome Temp./Hum. CCD Temp set accidentally to "6" instead of "5"

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=3606 831 l/lin/mm	200 Full Length	6563A			CCD Temp was -110C	
								3ci 4ci		v vs Blue stellar	
								5ci			
4349								6ci	std vel	max 9K ADU	
								5ci			
					G=3606 831 l/lin/mm		6563A	7ci		12.4 K ADU MAX	
								1ci		CCD Temp = -110 Dome T +11°C	
Set 6.75					G=4300 1800 l/lin/mm	200 Full Length	4120A	3ci 4ci		v vs Red stellar	
										CCD T = -100.7°C Now	
										488 0 58 1024 41	
								8ci			
								5ci			
221 K	4"	B 2.58	09.5 In					9ci	Blk pgn	5400 ADU MAX 30 min upper limit to exps	
								10			
216 K	4"	B 2.58	09.5 In					11	Blk pgn	All with (30K cnts exp. area) centered at start of Exp.	
216 K								12		Then trailed Full slit Length.	

187 p4 #2

Date 1992 MAY 27/28 Observers Bln / Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 07563 7564	FLATS x2			23 09 37				TUNG Clear	100s
7565	BIAS(4)								
7566	HD149757	16 31 39	-10 22	23 15 29		00 45 E			180
7567	Comp							Fear Clear	50s
7568	HD149757	16 31 39	-10 22	23 49 29		00 10 E			1800
7569	Comp							Fear Clear	50s
7570	Flats x2						TUNG Clear	Fear E	100s
7571									
7572	BIAS(4)								
7573	HD149757	16 31 39	-10 22	00 30 12	01 00 12	00 29 54 00 30 12			
7574	Comp							Fear Clear	50s
7575									
7576	Flats x2						TUNG Clear		100s
7577	HD149757	16 31 39	-10 22	01 12 40	01 32 40				
7578	Comp							Fear Clear	50s
7579									
7580	Flats x2						TUNG Clear		100s
7581	BIAS(4)								

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

25K

231K

258K

247K

Spectr. Temp. Dome Temp./Hum. $+9.2^{\circ}\text{C}$ 62.2% Transparency Conditions ... S1. hazy 128

Focus ... 6.75

Spectr. Temp. Dome Temp./Hum. $+8.1^{\circ}\text{C}$ 63.7%
CLAIMBDA

90 CGAIN CCDT = -100.5°C

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=4300 1800 l/mm	200 μ Full	4120A	13ci 14ci		12K MAX ADU/pixel	
								1ci		Dome T = $+9.2^{\circ}\text{C}$	
215K	3" ^B	2.58	0.95V _n					15ci	Blk pgn	Full slit guiding after central stages	
								16ci			
231K	3"							17ci	Blk pgn		
								18ci		1ci	
								19ci 20ci		11K MAX	
								1ci		Dome T = $+8.1^{\circ}\text{C}$	
258K								21ci	Blk pgn.	110K ADU Sum Avg above blgnd	
								22ci			
								23ci			
								24ci			
247K	4"							25ci	Blk pgn		
								26ci			
								27ci			
								28ci		11K MAX	
								1ci			

189 pg #3

Date 1992 MAY 27/28.. Observers .. B/n./Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07582	H0149757	16 31 39	-10 22	01 53 23		01 53 30 W			180A
7583	Comp							Fear clear	50 ^s
7584	FLATS x 2							TUNG clear	100 ^s
7585									
7586	H0149757	16 31 39	-10 22	02 31 34		02 31 35 W			1800
7587	Comp							Fear clear	50 ^s
7588	bias (x4)								
FMO433	fts HD176844	18 57 03	+40 32 36	03 18		00 10 W		"N" mode	67ms Int
7589	Nova Cyg 92	20 27 43	+52 17 39	03 23 45		00 47 E			616
7590	Comp							Fear clear	50 ^s
→ 7591	FLATS x 3							TUNG A=1/4	30 ^s
7593									
7594	Focus Test								
7595									

Spectr. Te

Focus . . .

Spectr. Te

Exp. Mr.

237K

183K

55x55pce

Transparency Conditions *OK* *part claus 190*

Focus 6.75

Spectr. Temp.

Dome Temp./Hum. $+7.5^{\circ}\text{C}$ 66.5%
CLHMBDA

Fans OFF all night as per odd/even code.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
237K	3"	B 2:55	09.5	CASS CCD	G 4300 1800 l/n/mm	200u Full Length	4/20A	29ci	Blk pgn		
237K								30ci			
								31ci			
								32ci			
183K								33ci	Blk pgn		
								34ci			
								1ci			
55x55pms	3"	6:65	M2 III			200u Lower R. light monitor			Seeing Test	Dome West Light NNW wind	
	3"	7:08			G 6000 1800 l/n/mm	200u Full Length		35ci	Nova Cyg pgn	10.3K MAX	
					"			36ci			
					"			37ci		13K MAX	
					"			3ci 4ci	stellar	3 Red for Stellar	

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pg #1

Date May 28/29 - 1992. Observers [Rm] Tn / Fbr.....

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc 7596	FOCUS BS 4328	1992 ¹⁵ 12 25 29	+39 03 37	20 05	BS 4728	00 08 E			
7597	FOCUS							FeAr CLEAR	
7598	BIAS (4)								
ABC 0 Fmoo 434.48	HD 113811	13 01.2	+40 08	20 40		00 12 E	67	"N" made	47A7 pds
7599	Comp							FeAr CLEAR	50 sec
7600	HD 62509	07 39.2	+28 16	20 53 04		05 19 W			34s 13K
7601	Comp							FeAr CLEAR	50s
7602	Comp								
7603	HD 124897	14 11 06	+19 42 30	21 10 32		00 54 E			12 sec 8K
7604	Comp							FeAr CLEAR	50s
7605	Comp							"	
7606	HD 87901	10 03 03	+12 27	21 23 ¹²		03 26 W			69s 30K
7607	Comp							FeAr CLEAR	50s
7608	BIAS (4)								
7609 7611	FLATS x 3	At HD 87901 posn						TUNG A=1/4	30s

Spectr. Temp. Dome Temp./Hum. $14.4^{\circ}\text{C}/49.5\%$ Transparency Conditions fine 192

Focus 6.6.7

Spectr. Temp. Dome Temp./Hum. 113.2 53% 90CGAIN FANSON 90CGAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $\lambda = 5930$	200 μ	6450 Å			BS 4728 used Tel normalization STAR (encoders)	
			Set 667	14.2°C						stellar uv sl Red	
47x47 prot	2"	V 695	M	67 msec Int		200 Full Length				Seeing Test Dome WSW (no wind)	
13 K								3ci			
								4ci	Std vel	guided 2.400 Air MASS	
								3ci			
								5ci			
8 K	2"							6ci		8 K max	
								7ci			
								8ci			
30 K								9ci	Telluric Std	6 K MAX ADU Air MASS = 1.690	
								8ci			
								1ci			
								10ci		13 K	

193
pg#2

Date .. May 28/29..1992 Observers .. [Rm.] Tr/Fbr.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7612	Comp							FeAr Clear	50s
7613	HD 161096	17 38 30	04 37	21 50 25		3 41 E			73s
7614	Comp							FeAr Clear	50s
7615	B145(A)								
7616	Comp							FeAr Clear	50s
7617	HD 198726	20 47 13	27 52 30	22 07 22		6 13 E			1800s
7618	Comp							FeAr Clear	50s
7619	Comp							FeAr Clear	50s
7620	HD 203156	21 15 23	37 49 00	22 45 43		6 03 E			1200
7621	Comp							FeAr Clear	50s
7622	Comp			23 14 42				FeAr Clear	50s
7624	HD 162714	17 47 17	-06 07 12	23 14 42		2 17 E			600
7623	Comp							FeAr Clear	50s
7624 - 7627	Fr or X3							FeAr Clear	30s
7628	Bms(u)								

Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

3460

7800

600

Transparency Conditions... CLEAR... (SLT... HAZE)... 194

Dome Temp./Hum.

FANS ON

[illegible]

195 #1
P8

Date May 29/30 - 1992. Observers ... Fbr..... (Backup by Bln by phone)

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ccp 7629	Focus (Comp)								
7630	Focus (Steel)								
7631	Bias (4)								
FM00435.fts (AOC O)	HD 113811	13 01 12	+ 40 08						
7632	Comp							F/Ar Clear	50s
7633	HD 124897	14 11 06	+ 19 42 30	22 16 09	22 16 19	2 30 W			10s
7634	Comp							F/Ar Clear	50s
7635	Comp							F/Ar Clear	
7636	HD 161096 HD 87901	17 38 30	01 37 00	22 37 42		2 49 E		F/Ar F/Ar Clear	100s
7637	Comp							F/Ar Clear	50s
7638 - 7640	FLAT x3	17 38 30	04 37 00			2 44 E		Tung n=1/4	30s
7641	Bias (4)								
7642	Comp				22 54	5 43 E		F/Ar Clear	50s
7643	HD 198726	20 47 13	27 52 30	22 56 38		513 E			1600s
7644	Comp							F/Ar Clear	50s

Spectr. Tem

Focus.....

Spectr. Tem

Exp. Mtr.

9K

4600

3500

Spectr. Temp. Dome Temp./Hum. . 13.7°C / .51% Transparency Conditions *ptly. cloudy* 196
 Focus 6.67
 Spectr. Temp. Dome Temp./Hum. **FANS OFF (90 CGAIN)**

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CSSS CCD	1800 G = 5930	200 μ	$\lambda_c = 6450$			BS4728 to Normalize	
	2"	V 6.95		6.7ms TEST			(one of 4 frames not saved - (B) T _n June 92	3ci	SEEING TEST	DOME W (no wind)	
9K								4ci	STO VEL	40 K Sum Avg Above max Pyrd T = 12.2°C Hum = 53.2%	
4600	2"	V 2.77	K ² <u>11</u>					5ci	Sno VEL	8400 Sum Avg Above max ^{byrd.}	
								6ci			
								1ci		ccd Temp = -100.4°C	
3500	4"	V 5.75	G0Ib					7ci	Rm T Val pgm		

Date *May 29/30 - 1992* Observers ... *Fbr... (Bln... by phone)*

Emulsion Batches:

[illegible]

Transparency Conditions ~~Star~~ Claudio 1998

Spectr. Temp.

Dome Temp./Hum.

FANS OFF (90 CRAIN)

[illegible]

199

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Date June 1/2... 1992... Observers Fbr.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc 8 7649	Bias (4)	12 25 29	39 03 45	20 14 52					
FM06436.FH (ABCP)	H0113811	13 01 12	+40 08						
7650	Bias (4)	13 01 12	+40 08						
7651	Comp							FeAr Clear	50s
7652	H0124897	14 11 06	19 42 30	21 30 17	21 30 27				10s
7653 -7655	FLAT X3 (H0124897)							Unq $\Delta = 1/4$	30s
7656	Comp (H0124897)								
7657	Comp							FeAr Clear	50s
7658	H087901	10 03 03	12 27 00	21 53 25		04 14 W			92s
7659	Comp							FeAr Clear	50s
7660	Comp							FeAr Clear	50s
7661	H0161096	17 38 30	04 37 00	22 13 32		03 01 E			93s
7662	Comp							FeAr Clear	50s
7663	Bias (4)								
7664 7666	FLAT X3	17 52 55	04 32 21	22 30		02 52 E		Unq $\Delta = 1/4$	30s

Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

3500 B

30 K

0 K

Spectr. Temp. Dome Temp./Hum. $16.4^{\circ}\text{C} / 59.9\%$ Transparency Conditions CLEAR 200
 Focus 6.67 (1944)
 Spectr. Temp. Dome Temp./Hum. ccd Temp = -100.4°C
 FANS OFF (90CCAIN) 480 0 50 10 24 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CSSS CCD	1800 $\alpha = 5930$	200 M			$\lambda = 6450 \text{ \AA}$	BS4728 USED TO NORMALIZE 12 25 29 +39 03 37 RENORMALIZED TO HD113811 Done W (NO WIND)	
		V 6.95		67ms SEEN TEST							
8500 B								4ci	STD. VEL.	60 K Sum avg above. bkgd.	
								5ci			
								3ci			
30 K	4"						$\lambda = 6450$	6ci	TELLURIC STD	DOME T = 14°C Hum = 55.3% 40 K Sum avg above max	
								3ci			
10 K	4"	V 2.77	.142 III					7ci	STD. VEL.	10 K Sum avg above max	
										Air Mass = 1.760	

201
#2

Date .. JUN 21/2 .. 1992 ... Observers ... FDR

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ccp 7667	Comp							FeAr clear	50s
7668	HD 162714	17 47 17	-06 07 12	22 42 23		2 30 E			800s
7669	Comp							FeAr clear	50s
7670	Comp							FeAr clear	50s
7671	HD 203156	21 15 23	37 49 06	23 08 26	23 28 26	524 E 2430 E			1200s
7672	Comp							FeAr clear	50s
7673	Bias (4)								
7674-76	FLAT X 3 (² HD 203156)	21 18 56	38 12 42	23 33 20				Tung A=1/4 FeAr clear	30s
7677	Comp							FeAr clear	45s
7678	UU Her	^{1992.6} 16 35 42	^{1992.6} 37 59 00	00 33 17					1000s
7679	Comp							FeAr clear	45s
7680	Bias (4)								
76									

Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

4000

5880

20

202

Dome Temp./Hum. ... 13.2°C / 55.3%

Dome Temp./Hum.

FANS OFF (90 again) CCD Temp = -100.4°C

Exp.	Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50's					CASS CCD	1800	200 μ	$\lambda = 6450$	3ci			
80's	4000	6"	V 6.15	G0Ib					8ci	Rm Pam	8400 SUM AUC ABOVE BCRD. AIRMASS = 2.167	
50's												
50's									3ci		DOME FOCUS NE. VERY STRONG WIND FROM NE!	
20's	5880	6"-7"	V 5.8-5.9	F2			200 μ	$\lambda = 6450 \text{ Å}$	9ci	Rm Pam	DOME T=13.6°/Hum=54.8% 8 K SUM AUC ABOVE BYEL.	
50's									3ci		AIRMASS = 1.86	
30's									5ci			
45's						1800 l/mm	200 μ	$\lambda_c = 6563 \text{ Å}$		ss/Fe	H α	
100's	120											
45's												

ALL TO BE SCUT + WORKED

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Page 1 UN

Date .. June 2/3-92.... Observers ... H/w./F.br./Bhrm

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc 7681	Focus	12 25 28	+ 39 3 45						
7682	Focus	"	"						
FM00437 (ABCO)	HD 113811	13 01 12	40 08 00					FeNe	20 sec
7684	comp (test)	13 01 12	40 08 00						
7685	Comp for HD 124897							FeNe	20 sec
7686	HD 124897	14 11 06	19 42 30	21:08:16	21:08:19				3 sec
7687	Comp for AC 76530							FeNe	20 sec
7688	AC +76 5308	15 43 12	76 20 00	21:38:14	22:03:14	-1:7:00			1500 sec
7689	Comp for J							FeNe	20 sec
7690	Bias (4)								
7691	Flat	15 43 12	76 20 00					Tungsten	A=1/4 33 sec
7692	Flat							Tungsten	A=1/4 33 sec
7693	Flat							Tungsten	a=1/4 33 sec
7694	Comp							FeNe clear	20 sec
7695	HD 238090	12 07 36	55 09 00	23 38 09	23 58 09	+3:16:10			20 min, 120

Spectr. Temp.

Dome Temp./Hum.

17.7°C/48.5% Transparency Conditions CLEAR 204

Focus 6.67

Spectr. Temp.

Dome Temp./Hum.

ccd temp: -100.4°C

FANSON

Format: 480 0 40 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					G=4983 1800 l/mm	300μ 10μ slit dekker	5140A				
		✓ 6.95		SEFAC C7ms TEST				3ci			
								3ci			
10K		0	K0p					4ci	std Vel: KK/Hlw	30K ADU Sum Avg Above Bkg.	
								3ci			
105		13	M4					4ci	KK/Hlw	We don't have a field and are guessing a bit Is this it? WRONG STAR, same as one on June 9/10	Great Seeing!
								3ci			
								1ci			
								1ci		with dekker	
								1ci		with dekker	
								1ci		with dekker	
								3ci			
	2"	✓ 9.5	M2					4ci	KK/Hlw	Δ mass = 1.15 PERMET = 16.1°C/49.2%	

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Date ... JUN 2/3-92 ... Observers ... Hlw./Fbr./Bhcm ...

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7696	Comp							FeNe clear	20 s
7697	Bias (4)								
7698	AS + 62 26749 → Comp							FeNe	20 sec
7699	AC + 62 26749	17 34 30	61 45 00	00:24:26					1080 sec
7700	Comp							FeNe	20 sec
7701	Comp							FeNe	20 sec
7702	HD 188512	19 50 24	06 09 00	01:15:02					97 sec
7703	Comp							FeNe	20 sec
7704	HD 188512 Faint Companion	19 50 24	06 09 00	01:21:42		-1:32:30			1800 sec.
7705	Comp							FeNe	20 sec
7706	Flat	19 50 24	06 09 00					Tung	a = 1/4 33 sec
7707	Flat							Tung	a = 1/4 33 sec
7708	Flat.				01:57:30			Tung	a = 1/4 33 sec
7709	Comp							FeNe	20 sec
7710	HD 187691	19 46 15	10 09 54	02:10:30					150 sec
7710									

Spectr. Ten

Focus....

Spectr. Ten

Exp. Mtr.

Counts

1000 counts

350 counts

Spectr. Temp. Dome Temp./Hum. $16^{\circ}\text{C}/49.2\%$ Transparency Conditions CLEAR (QUITE HAZY) ²⁹⁶

Focus 6.7

Spectr. Temp. Dome Temp./Hum. FANS ON

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								3c			
								3c 1c			
								3c			
0 counts		9.95	M1 _v					4c	KK/HW	Perhaps not the right star - need field.	
								3c		WRONG STAR	
								3c			
10000 counts		3.7	G8					4c	KK/HW		
								3c			
350 counts	3 ^u	11.4	M3					4c	KK/HW	Air Mass: 1.33 Easily separated	
								3c		lots of sky background	
								1c		with dekker	
								1c		with dekker	
								1c		with dekker	
								3c			
		5:16	F8 II						KK/HW		

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Date June 2/3 1992 Observers Hlw / Fbr

Emulsion Batches:

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Plate N ^o .	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7711	Comp							FeNe	20 sec
7712	HD 187691 ^{Faint} Companion	19 46 15	10 09 54	02:25:49					1007
7713	Comp							FeNe	20 sec
7714	Comp		57 17 00						
7715	HD 4614	00 43 03	00 43 03	03:07:36	03:08:36	-5:09			60 sec
7716	Comp							FeNe	20 sec
7717	HD 4614 ^{Faint} Companion	00 43 03	57 17 00	03:12:36					720 sec
7718	Comp							FeNe	20 sec
7719	Bias (4)								
7720	Flat			03:33:53			$\alpha = 1/4$	Tung	33 sec
7721	Flat						$\alpha = 1/4$	Tung	33 sec
7722	Flat						$\alpha = 1/4$	Tung	33 sec
7723	Flat						$\alpha = 1/4$	Tung	33 sec
7724	Flat						$\alpha = 1/4$	Tung	33 sec
7725	Flat						$\alpha = 1/4$	Tung	33 sec

Spectr. Te

Focus....

Spectr. Te

Exp. Mir.

23 sec

30 sec

3300

Spectr. Temp.

Dome Temp./Hum.

Dome Temp./Hum.

Dome Temp./Hum. 13.2°C / 60.7% Transparency Conditions Hazy 210

215

[illegible]

211 p9#1

Wed Thurs

Date June 3/4 92 observers Hlw/Tn/Fbr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
7729	Bias (4)								
7730	Focus Test	Comp pose		39:37:00		-0:08		FeNe clear	6 sec 8 sec
7731		stellar pose							
FM00438 (ABCD)	HD113811	13 01.2	+40 08	20 30			Int 67 msec	"W" mode	
7732	Comp							FeNe clear	20 sec
7733	HD124897	14 11 06	19 42 30	20 48 34					9 sec
7734	Comp							FeNe clear	20 sec
7735	Comp							"	"
7736	HD 110833	12 39 42	52 19 00	20 58 50					331
7737	Comp							FeNe clear	20 sec
7738	Comp							FeNe clear	20s
7739	HD 238090	12 07 24	55 09 00	21 17 20	21 52	02 10W			2070
7740	Comp							FeNe clear	20s
7741	Comp							FeNe clear	20s
7742	BD ⁺ 71 851	17 40 06	71 22 00	22 35 53 22 26 16		01 49E	15		2400
7743	Comp							FeNe clear	20s

Spectr. Temp. Dome Temp./Hum. $20.2^{\circ}\text{C}/47.7\%$ Transparency Conditions ... *Hazy* 212

Focus *6.6.7* Format: $\frac{400}{400} \frac{0}{0} \frac{12}{40} \frac{1024}{1024} \frac{20}{41} \frac{1}{\text{for focus test}}$

Spectr. Temp. Dome Temp./Hum. *CLIMBING TEL NORMALIZED TO BS4728*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	$\theta = 4983$ 1800	300u	5140A	1ci		90 CGAIN CCOT = -1012	
				67ms seeing test	(Longest Decker)			3&4ci			
4 frames	$V = 6.45$ 7.53		K5/DZ						Seeing Test	Dome is pointing West no wind	
								5ci			
4500		0	K					6ci	Std vel	6000 ADU sum average of	OK
								7ci			
								8ci			
3000	$1.2''$	V 7.0	K3					9ci	KK pgn	2800 ADU Sum Avg.	OK
								10ci			
								11ci			
1700	$1.2''$	V 9.6	M2				$\lambda = 5140$	17ci	KK Pgm	2000 ADU Sum Avg.	OK
								12ci			
								13ci			
2930	$1.2''$	V 9.1	K4					15ci	KK pgn	Faint companion noted at 7" WSW ($\theta = 225^{\circ}$) 2300 ADU sum AVG of 4 cots	OK
								16ci			

213

pg#2

Date JUNE 3/4.....

Observers

[kk] Fbr/Tn

Emulsion Batches:

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[illegible]

215

sun/mon

Date June 7/8 92 Observers HIW/Tn Encoder Tests for [KK]

Emulsion Batches:

Plate No.	Object	R.A. 1992 1900	Declination 1900 1992	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
FM00439 (ABCD)	BS 5299	1992.5 records 14 07 38	43 53 24			-0:15:00		"N" mode	
	BS 5299	"	"	21:04:30		-0:14:00			
	BS 3881	09 48 07	09 48 07 46 03 22	21:09:50		4:11 West			
	BS 5315	14 12 30	-10 14 21			0:6 East			
	BS 6872	18 19 36	36 03 39	22:24:00		4:06 East			
	BS 5321	14 08 52	77 34 58			0:16 West			
	"	"	"			0:25 West			
	BS 3881	09 48 07	46 03 22			4:10 West			
	BS 5315	14 12 30	-10 14 21			0:48 West			
	BS 6872	18 19 36	36 03 39			3:12 East			
	BS 5299	14 07 38	43 53 24			1:09 West			
CC07764	BIAS(4)								
CC07765 7766	Focus Test			00 50		0 0	+12°	Felt Clear	30/40
	FLAT to demonstrate		apparent water on cap window			n	n	Tung Clear	40sec

Spectr. Temp. Dome Temp./Hum. $18.5^{\circ}\text{C}/96.2\%$ Transparency Conditions Haze, slightly foggy ²⁶
 Focus some clouds.
 Spectr. Temp. Dome Temp./Hum. $+18.0^{\circ}\text{C}$ 96.8% **FANS OFF**

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		M4.5 M4.5		Int=67msec		Lower of 310u	Right slit		Seeing test	No integration for these tests (Perhaps has a northern comparison within 2° - 'whorps')	
	5.27	"	"	Also encoder lagged from Autose		WV Time	OK too		Encoder test	telescope normalized to star	
	5.01	G 0.5	IVa						Encoder test	W - $18^{\circ}\alpha + 3' 09''\delta$	
	4.19	K 2.5					West side of Pier		Encoder test	S - $13^{\circ}\alpha - 1' 15''\delta$	
	4.33	K 2							Encoder test	E + $1^{\circ}\alpha + 0' 39''\delta$	
	4.82	K 3 II		Note Tel focus not touched after Seeing Test					Encoder test	N + $29^{\circ}\alpha + 1' 39''\delta$	
	"	"		ie. Focus will move image rel to slit.					Encoder test	N - $42^{\circ}\alpha - 1' 39''\delta$	
	5.09	G 0.5 IIa					East side of Pier		Encoder test	W - $21^{\circ}\alpha - 3' 06''\delta$	
	4.19	K 2.5							Encoder test	S - $10^{\circ}\alpha - 3' 03''\delta$	
	4.33	K 2							Encoder test	E - $3^{\circ}\alpha - 2' 51''\delta$	
	5.27	M 4.5							Encoder test	Zenith - $22^{\circ}\alpha - 2' 39''\delta$	
						310u 3 windows	[G=44150 4300A]	1ci			
	Set 6.67			T = $+17^{\circ}\text{C}$				8ci 4ci	480	0 20 1024 10 1 count	
								6ci	not written	water drops on window	
									490	0 50 1024 4 1	

217 Mon TUES
pg#1

Date 1992 June 8/9. Observers [Rm] Th... Fbr... Kamran

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7767 7768	Focus Test					0 0	+30°	FeAr clear	30/40
7769	BIAS(4)								
7770 FM 06 440	Comp HD 120245 for seeing test					Int 67 msec	N node	FeAr clear	60 sec
7771	HD 124897	14 11 06	+19 42 30	20 39 28	20 39				13s
7772	Comp								
7773	Comp								
7774	HD 87901	10 03 03	+12 27	20 49 12					54s
7775	Comp								
7776	Comp								
7777	HD 161096	17 38 30	+04 37	21 03 34		E			124 sec
7778	Comp							FeAr clear	60s
7779	Comp							n	60s
7780	HD 171232	18 28.5	+25 25	21 31 11		03 56 E			718
7781	Comp							FeAr clear	60s
7782	BIAS(4)								

Spectr. Temp. Dome Temp./Hum. $+16.7^{\circ}\text{C}$ 51.5% Transparency Conditions Mostly Clear 218

Focus 6.67

Spectr. Temp. Dome Temp./Hum. 14.6°C 52%

90CGAIN as usual
FANS on from start

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	T=167C			CASS CCD	G=5930 18000 n/mm	200u Full Length	6450A [Stellar VSI Red]		Focus $\rightarrow$	CCD Fmt 360 0 12 1024 401 440 0 50 1024 4 1 CCD Fmt	
4 frames		$\checkmark$ 6.95	KO III		on 200u slit had.	Light NW wind		5ci	Seeing test	Dome SW	
12K		0	K2 III				6450A	6ci	std vel	12.4 K max	
								7			
								8			
28K		$\checkmark$ 1.36	B7 IV					9	Telkric Std		
								10			
		$\checkmark$ 2.77	K2 III					11ci	std vel	18K ADU Sum Avg 3 obs	
								12ci			
								13ci			
		$\checkmark$ 4"	7.73	G8 III				14ci	std vel	1800 ADU Sum Avg of 3 obs	
								15ci			

219 pg#2

Date 1992 June 8/9... Observers [Rm] In Fbr.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07783	Comp							FeAr Clear	60s
7784	HD 203156	21 15 23	+37 49	21 58 59		06 15 E			646s
7785	Comp							FeAr Clear	60s
7786	Comp							"	"
7787	HD 198726	20 47 13	+27 52.5	22 18 43					719
7788	Comp							FeAr Clear	60s
7789	FLATS x3					02 11 E	-6°07	Tung A=1/4	25s
7790	Comp							FeAr Clear	60s
7793	HD 162714	17 47 17	-06 07 12	22 58 31		01 44 E			894s
7794	Comp							FeAr Clear	60s
7795	Comp							"	"
7796	HD 214975	22 36 55	+56 18 24	23 27 27		E			2481
7797	Comp							FeAr Clear	60s
7798	Comp							"	"
7799	HD 203156	21 15 23	+37 49	00 16 42					600s
7800	Comp							FeAr Clear	60s

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

840

1960

1960

930

2220

5400

Spectr. Temp. Dome Temp./Hum. 14.6°C : 51.4% Transparency Conditions PART Cloudy 220

Focus 6.57

Spectr. Temp. Dome Temp./Hum. LAMBDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G 5930 1800 lnm	200 μ Full	6450P	16c:			
1840	6"	^V 5.8 -5.9	F2					17c:	HR8157 Rm pgm	Cloudy . 2500 ADU SUM AVG Top Priority P=33336dy	
								18c:			
								19c:	Rm pgm	cloudy	
1960	6"	^V 5.75	GOIb					20c:	Rm pgm	6cols 3200 ADU SUM AVG	
1960								—			
								21c:		Cloudy 10 KMHX	
								22c:			
930	6"	^V 6.15	GOIb					23c:	Rm pgm	cloudy 1800 ADU SUM AVG	
								24c:			
								25c:			
2220	4"	^V 8.4	GOIb					26c:	2 Lac Rm pgm	4500 ADU SUM AVG thin cloud	
								27c:			
								28c:			
5410	6"	^V 5.8 -5.9	F2					29c:	HR8157 Rm pgm	Repeat Clearer now	
								30c:			

22 p943

Date 1992 JUN 8 19..... Observers [R.A.] service... T.h... Fbr... Kamran

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
CC07801	BIAS (4)									
7802	Comp							FeAr clear	60s	
7803	HD162714	17 47 17	-06 07 12	00 55 58		0 10 E			900s	4250
7804	Comp							FeAr clear	60s	
7805	Comp							"	"	
7806	HD173297	18 39 20	-20 45 00	00 57 32		00 23 E			180s	1790
7807	Comp							FeAr clear	60s	
7808	Comp							"	"	
7809	HD124897	14 11 06	+19 42 30	01 36 06		W			18s	15K
7810	Comp							FeAr clear	60s	
7811	Comp							"	"	
7812	NOVA Cyg 92	20 27 43	+52 17 39	01 45 53		01 36 E			900s	1000
7813	Comp							FeAr clear	60s	
7814 7816	FLATS x 3					01 30 E	+52 35	TUNG A=1/4	25s	
7817	Comp							FeAr clear	60s	

Spectr. Temp. Dome Temp./Hum. $+12.7^{\circ}\text{C}$ 55% 3% Transparency Conditions ... Part Cloudy ... 22

Focus ... 6.67

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G5930 1800 l/n/m						
						200u F411	6450A	31ci	Rm pgm	Repeat	
4250	5"	6.15	GOIb					32ci	Sn Y0ph	7200 Adu max sum avg	
								34ci			
1790	6-8"	7.48	GOIb					34ci	Rm pgm	3500 Adu sum avg	
								33ci			
								8ci			
15K	8"	0	A					9ci	std vel	14 K MAX A mag 1.877	
								10ci			
								11ci			
1000	5"							12ci		10 K MAX	
								13ci			
								15ci			
					G6070 1800 l/n/m	65		16ci		Change	

223 pg 4 

Date 1992 JUNE 8/9 Observers Fbr./Tn

Emulsion Batches:

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[illegible]

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

Spectr. Temp. Dome Temp./Hum.

[illegible]

725
79

Tue/Wed

Date June 9/10 '92 Observers Hlw/Fbr

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCP 7828	Focus test								
7829	Focus test								
FM00441 (441) (ABLO)	H0113811	13 01 13	40 08 00						
7830	Bias (4)								
7831	Comp							FeNe clear	20s
7832	HD 124897	14 11 06	19 42 30	21:16:00	21:30:07	0:1 E			4s
7833	Comp (H0238090)							FeNe clear	
7834	H0238090	12 07 24	55 09 00	21 32 09	22:12:09	2:57 W			2400
7835	Comp							FeNe clear	20sec
7836	Comp							FeNe clear	20s
7837	HD 110833	12 39 42	52 19 00	22:22:40	22:30:40	2:45 W			480sec
7838	Comp							FeNe clear	20sec
7839	Bias (4)								
7840	Comp							FeNe clear	20s
7841	AC +76 5308	15 43 12	76 20 00	22:59:48					

Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

10000

1000

3500

Spectr. Temp. Dome Temp./Hum. $16.1^{\circ}\text{C} / 45\%$ Transparency Conditions CLEAR 226
 Focus 6.67
 Spectr. Temp. Dome Temp./Hum. FANS OFF Format: 480 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G = 4983 1800 l/mm	310 μ triple slit	centre = 5140 Å			Normalization to BS 4728 1992.5 coords: 12 25 29 39 03 37	
									1ci		
									3ci		
10,000 c			K						4ci	Std. Vel	
									3ci		
1800 c		9.5 ^v	M2				$\lambda = 5140 \text{ Å}$		5ci	KK/Hlw	
									3ci		
									3ci		
3500 c		7.0	K3						6ci	KK/Hlw	
									3ci		
									1ci		
									3ci		
		13.0	M4						7ci	KK/Hlw	
										<u>WRONG</u> STAR.	

2272
Pg 2

Date June 9/10 Observers H/w / ~~W~~ Fbr

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7842	Comp.							FeNe Clear	
7843	Flat							Tung	$a=1/4$ 33 sec
7844	Flat							Tung	$a=1/4$ 33 sec
7845	Flat							Tung	$a=1/4$ 33 sec
7846	Comp							FeNe Clear	
7847	Ross 226	22 50 30	60 28 00	00:49:51	01:49:51	4:05 E	+60		360
7848	Comp							FeNe Clear	20 sec
7849	Comp			02:01:53	02:31:53			FeNe Clear	20 sec
7850	BD +71 851	17 40 06	71 22 00	02:01:53	1:52 W	1:52 W			1800s
7851	Comp							FeNe Clear	
7852	Comp							FeNe Clear	
7853	AC +62 26749	17 34 30	61 45 00	02:46:58	03:16:58	2:40 W			1800 sec
7854	Comp							FeNe Clear	20 sec
7855	Bias (4)								
7856-7851	Flat x 9							Tung	$a=1/4$ 33 sec

Spectr. Tem.
Focus.....
Spectr. Tem.
Exp. Mtr.

4/c
1570

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								3ci			
								8ci			
								8ci			
								8ci			
								3ci			
41 c		13.2	M4					9ci	KK/Hlw	spectrum looks wrong (Hlw 11-93)	
								3ci			
								3ci			
1570		9.1	K4					10ci	KK/Hlw		
								3ci			
								3ci			
		9.95	M1 IIe					11ci	KK/Hlw		
								All to to WORM & Perseus			

229pg +

Date June 10/11 Observers Hlw/Fbr

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC07862	Focus test								
7863	Focus test								
FM00442 (ABCO)	HD 113811	13 01 12	40 08 00	21:33					
7864	Bias (4)								
7865	Comp							FeNe clear	20 sec.
7866	HD 103095	11 47 12	38 26 00	21 50 08		3:01 W			162 sec
7867	Comp							FeNe clear	20 sec.
7868	Comp							FeNe clear	20 sec
7869	AC +76 5308	15 43 12	76 20 00	22:22:12	23:22:12	0:41 W			3600 sec
7870	Comp							FeNe clear	20 sec
7871	Bias (4)								
7872 7874	Flat X3	15 43 12	76 20 00					Tung N-14	33 sec
7875	Comp							FeNe Comp	20 sec
7876	AC +76 26719	17 34.5	61.5	00 43 25 00 03 13	01 13 25	0:39 W			
7877	Comp								

Spectr. Temp.

Focus 6.67

Spectr. Temp.

Dome Temp./Hum. 18.6°C/44%

Transparency Conditions

Clear

230

(FANS ON)

Format: 490 0 50 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					G = 4483 1800 l/mm	30 μ triple slit	$\lambda = 5140$			Normalization to BS4728 1992.5 coords: $\alpha = 12:25:29$ $\delta = 39:03:37$	
		V = 7.53	K5 III							Seeing test Done pointing west	
								1ci			
								3ci			
~2500 count		6.45	G8 Ia					4ci	Std Velocity	~2000 Sun Av. above bias	
								3ci			
								3ci			
450 count		13.0	M4					5ci	KK/Hlw		
								3ci			
								1ci			
								6ci			
								3ci			
		9.95	M1					7ci	KK/Hlw	Good Spectrum!!	
								3ci			

231 Pg 2

Date June 10/11 Observers HW/For/Bhrm

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7878	Bias (4)								
7879	Comp							FeNe Clear	
7880	BD +76 785	20 13 54	76 55 00	01:42:44	02:07:48	1:00 E			1506 sec
7881	Comp							FeNe Clear	
*7883	AS 16 Comp.							FeNe Clear	
7882	AC+65 6955	20 29 00	65 06 00	02:34:01	03:04:01				4480 800s
7884	Comp							FeNe Clear	
7885	Comp							FeNe Clear	
7886	AC+75 8347	21 57 04	75	03 25 21					448
7887	Comp							FeNe Clear	
7888	Bias (4)								
7886 -7894	Est x 6								

Focus . . .

Spectr. Te

Exp. Mtr.

232

Dome Temp./Hum.

[illegible]

233
pg 41

Thurs Fri

Date 1992 JUNE 11/12 Observers [Rm] Fbr/Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 07895 7896	Focus Test	Comp/Stellar Hutman		20 40		01 20	+40°		20/25
FM 00443 (ABCO)	HO 113 811	13 01 12	40 08				4 frames	N made	
7897	Comp							FeAr Clap	60sec
7898	HD 123 782	14 04 24	49 56	21 03 42		00 03 W			145sec
7899	comp							FeAr Clap	60sec
7900	BINS (4)					10	26		
7901	Comp							FeAr Clap	60sec
7902	HD 87901	10 03 03	+12 27	21 24 13		4 23 W			63sec
7903	Comp							FeAr Clap	60sec
7904	Comp							"	"
7905	HD 171232	18 28.5	+25 25	21 40 47		-3 34 E			563
7906	Comp							FeAr Clap	60sec
7907 7909	FLATS x3	at HD 171232 posn						Tung A=1/4	155
7910	Comp							FeNe	409
7911	HD 171232	18 28 30	+25 25	22 08 58					889

Spectr. Te.

Focus....

Spectr. Te.

Exp. Mtr.

2000

4000

Spectr. Temp. Dome Temp./Hum. 20.3°C $45\% - 70\%$ Transparency Conditions *Fine* 234

Focus 6.58

Spectr. Temp. Dome Temp./Hum. *CLIMBDA* **FANS OFF** *CCDT -100 $^{\circ}$ C* *90CGAIN*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	19.7°C			CASS CCD	G-5930 1800 l/m	200 μ Full	6450A	3ci 4ci	360 0 12 1024 40 1 CCD FMT	Stellar vu v Sl Blue	
	$\sqrt{}$ 7.93		K5 III			480	0 50 1024	41	CCD FMT $\downarrow$	Dome West. No Wind	
								5ci			
	$\sqrt{}$ 5.25		M2 III ab					6ci	S+O.Vel.	7700 ADU MAX	
								7ci			
								8			
	$\sqrt{}$ 1.36		B7V					9ci	Telluric std	12K MAX ADU 2.32 Air mass	
								10ci			
								11			
2000	2"	$\sqrt{}$ 7.93	G8 III					12ci	Std Vel	2400 MAX ADU.	
								13ci			
				* CHANGE *							
				$\lambda = 4380$	$\lambda = 4250$	200 μ PULL			Bhrm pgm. (mentor Student)		
9000	$\sqrt{}$ 7.73		G8 IV						Std Vel	3K Sun Ag.	

235

2

Trans - Fr.

Date ... 1992. JUN 8. 11. 2 Observers [Rm] Fbr./Ta./Bhr.m

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7912	Comp							FeNe Clear	40s
7913	Comp							FeNe Clear	40s
7914	HD 186408	19 39 06	50 18 00	22 3440		03 44E			1072
7915	Comp	BIAS(4) = CCO 7916						FeNe Clear	40s
7917	FLAT							TUNG Clear	60sq
7918	Comp							FeNe Clear	50s
7919	HD 186408	19 39 06	+50 18 00	23 0910					1924
7920	Comp							FeNe Clear	50s
7921	FLAT							TUNG Clear	
7922	Comp							FeAr Clear	60s
7923	HD 203156	21 1523	+37 49	23 5447		04 10E			530s
7924	Comp							FeAr Clear	60s
7925	Comp							"	"
7926	HD 198726	20 4713	+27 5230			03 26E			451s
7927	Comp								
7928	BIAS(4)								

Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

20.000

20

7880

6000

Spectr. Temp. Dome Temp./Hum. 19.0°C/42.5% Transparency Conditions *Clear* 236

Focus 6.58

Spectr. Temp. Dome Temp./Hum. 17.5°C/48.0%
C2/HMB04

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							4250A				
							"				
20000	1.2"	V 5.96	G2 V	CASS CCD	G=4380 1800	200 μ	"	18ci	Bhrm pgm		
						"	"				
						"	"			MAX AD4 11K	
				λ change	G=4175 1800 1/2 mm	"	3927A				
20K	2.3"	V 5.96	G2 V			"	"	22ci	Bhrm pgm		
							"				
							"				
				λ change	G=5930 1800 1/2 mm	200 μ Full Length	6450A	25ci		within 1 pixel of test	
7880	1.2"	V 5.8-5.9	F2 F2					26ci	Rm pgm	Set at G=5930 13K ADU SUM AVG of 7 ads	
								27ci		250K photons	
								28			
6000	1.2"	V 5.75	G0 Ib					29ci	Rm pgm		
								30ci			

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Thurs Fri

Date 1992 JUNE 11/12... Observers [Rm]... T. L. F. B. / B. H. m.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCO 7929	Comp							Felr clear	60s
7930	HD 162714	17 47 17	-06 07 12	00 28 34		00 08 E			600s
7931	Comp					00 08 E		Felr clear	60s
7932 → 7934	FLATS x 3	at HD 162714 posn		00 44				Tw16 A-1/4	25s
7935	Comp							Accident Ap F 1/4	60s
7936	HD 173297	18 39 20	-20 45 00	00 53 25		00 16 E			1800
7937	Comp							Ap = 1/4	60s
7938	Comp							Ap = 1/4	60s
7939	HD 214975	22 36 55	56 18 24	01 33 38		3 16 E			2719
7940	Comp							Felr clear	60s
7941	Comp							Felr clear	60s
7942	HD 203156	21 15 23	37 49 00	02 26 41					337
7943	Comp							Felr clear	60s
7944	Comp							Felr clear	60s
7945	HD 171232	18 28 30	25 25 00	02 39 57		01 21 W			441s

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

7050

4700

3360

6600

200

Spectr. Temp. Dome Temp./Hum. *17.6°C 47.7%* Transparency Conditions *sl. hazy* *238*

Focus *6.58*

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	180°/1mm	200μ FULL	6450P	30ci			
7050	2'-3"	^V 6.15	GOIb					31ci	Rm pgn		
								32ci			
								33ci			
		^V 7.48	GOIb					34ci	Rm pgn		
4760	2'-3"	^V 7.48	GOIb					35ci	Rm pgn		
								7ci			
								.			
3360		^V 8.40	GOIb					9ci	Rm pgn	2000 Sun Aug ADU	
								10ci			
								11			
6600		^V 5.8 5.9	F2					12	Rm pgn (Repeat)		
								13			
								14			
2100		^V 7.77	48 III					15ci	Std Vel		

239 page #4

Date 92-JUNE 11/12.... Observers [R.m] Tn./Fbr./Bhcm

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
7946	Comp							FeAr Clear	60s
7947	Comp							FeAr Clear	60s
7948	NOVA Cyg 92	20 27 43	52 17 39	02 53 55		00 26 E			273
7949	Comp								
7950	BIAS(4)								
7951	FLATS x 3	at Nova Cyg 92 posn						TUNG A=1/4	25s
7954	Comp							FeAr Clear	60s
7955	Nova Cyg 92	20 27 43	52 17 39	03 09 30		00 10 E			280
7956	Comp							FeAr Clear	60s
7957	FLATS x 3	at Nova Cyg 92 posn						TUNG A=1/4	
7959									
Fm0044A	SATURN			03 30					

Fads of

60c

241

Fri - Sat

Date .. 1992 June 12/13 Observers [Am].... Tn./Fbr/Bhm. Shen came 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	Exp.
CC07960	BIAS(4)								
7961	Comp							Fair Clear	60sec
7962	HD123782	14 08 01	+49 29 37	21 48 35		00 51 W			120s
7963	Comp	14 04 06	+49 56					Fair Clear	60sec
EM00445 ABCD	HD 144579	16 01 30	+39 25 36	23 25		00 30 W		N made	67 msc
	Comp							Fair Clear	60sec



243
pg

SAT SUN

Date 1992 JUN 13/14. Observers [KK]... Tn. / Fbr. / ... Kamran [BHRM]

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc07966 [*]	BIHSC(4) written after write of focus			23 48					
cc7964 7965	Focus Test					0 0	+35°	Fene Clear	10/13
7967	Comp							Fene Clear	60s
7968	HD 159561	17 3018	+123800	00 1004					104s
7969	HD 159561	"	"	00 1811					154
7970	Comp							Fene Clear	60s
7971	"							"	7
7972	HD 182640	19 2030	+0255	00 3023					7/65
7973	Comp							Fene Clear	60s
7974	HD 182640	19 2030	+0255	00 4947					912
7975	Comp							Fene Clear	60s
7976	Comp	17 00 12	00 51 00	02 22 28				Fene Clear	60s
7977	HD 154417	17 00 12	00 51 00	02 2228		159W			1660
7978	Comp							Fene Clear	60s
7979 9990	FLAT X12	17 00 12	60 51 00					Try A=Clear	40s

Spectr. Ter

Focus...6

Spectr. Ter

Exp. Mir.

50K

70K

70K

01832

220

245

pg#1

Sun - Mon

Date 1992 June 14/15. Observers WXL/Tn

Emulsion Batches:

Header Times 5 secs ahead of U.U.U. Time.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
Fm00446 ABCD	HD 120245	13 43 11	+38 23 33	20 25			"N" mode	Int 67 nsec	
CC07991	Comp							FeAr Clear	30 sec
7992	44 Vir	12 09 15	+12 22 37	20 58 19		02 21 W			1205
7993	Comp							FeAr Clear	30s
7994	BIASC4)								
7995	FLAT							Tung Clear	40s
7996	Comp							FeAr Clear	30s
7997	HD 126 053	14 18 06	+01 43 00	21 38 50		00 41 W			484s
7998	Comp							FeAr Clear	30s
7999	Comp							FeAr Clear	60s
8000	H D 126 053	14 18 06	+01 43 00	21 55 51		00 58 W		"	480
8001	Comp							FeAr Clear	60s
8002	Comp							"	"
8003	EF Dra	18 06 31	69 44 24	22 16 33		02 12 E			1200
8004	EF Dra	"	"	22 37 35		01 51 E			1200

Spectr. Temp. Dome Temp./Hum. $+16.5^{\circ}\text{C}$ 46%
 Focus... 6.67 ... $\#$ *Changed part on seeing focus test*
 Spectr. Temp. Dome Temp./Hum.

Transparency Conditions... *Fine*... 246
CCD had warmed up during day,
 90CGAIN $\text{CCDT} \rightarrow -100^{\circ}\text{C}$

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30	55x55 <i>pic</i>	<i>poor</i>	$\checkmark$ 6.95	KOM			200μ <i>Lower Right</i>			Seeing test	Dome West, med NW wind.	
30					CASS CCD	CASS 1800	200μ FULL	4770A	5ci			
1205	562	5"	$\checkmark$ 9	KO		G=4406			6ci	Ecl WUMA	Only $\approx 15/1$ S/N	
30									7ci			
40											Dome T = $+15.2^{\circ}\text{C}$	
30									8ci		7 K max ADU	
40									9ci			
30	2800	5"	$\checkmark$ 6.27	GLV					10ci	std vel	500 ADU sum AVG	
30									11ci			
60						G=4900 1800 Interm	200μ FULL	5010A	12ci			
40	3000	5"	$\checkmark$ 6.77	GLV					13ci	std vel		
60									14ci			
4									15ci		GO comp	
120	140	5"	$\checkmark$ 10.15 MAX	F9					16ci	Ecl WUMA		
120	140								17ci	"	import	80 ADU sum AVG Above bkgnd.

247

pg #2

Date 1992 June 14/15.... Observers WxL / Ta.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08005	Comp							Fe Ar Clear	60sec
8006	EF Dra	18 06 31	+69 44 24	23 01 58					1220
8007	EF Dra	"	"	23 23 15		01 05 E			1200
8008	comp					0			60sec
8009	BIAS(4)								
8010	EF Dra			23 47 45		00 41 E			1200
8011	"			00 08 21		00 20 E			1200
8012	Comp							Fe Ar Clear	60s
8013	EF Dra			00 34 37					1200
8014	"			00 55 27					1200
8015	comp							Fe Ar Clear	60s
8016	Comp							n	n
8017	V829 Her	16 52.2	35.20	01 34 34					900
8018	"	"	"	01 51 17		2 28 W			99
8019	comp								

Spectr. Temp. Dome Temp./Hum. $+13.7^{\circ}\text{C}$ 55.6% Transparency Conditions ... *Fine* 248

Focus ... 6.67

Nice Lunar eclipse

Spectr. Temp. Dome Temp./Hum.

LAHIMBDA

windy, NNW

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=4900 1800 $\mu\text{m}/\text{mm}$	200 μm Full	5010A	18ci			
1220	145	5" $\sqrt{10.5}$ max	F9					19ci	Ecl WUMa		
1200	166							20ci	"		
60s								18ci			
								1ci			
1200	188	5"						21ci		At max nar	
1200	170	5"						21ci			
60s								22ci			
1200	150							23ci			
1200	143							24ci			
60s								22ci			
7								25ci			
900	195	4" $\sqrt{10.1}$ $\sqrt{10.1}$ max	G0					26ci	Ecl WUMa		
900	187							27ci			
								28ci			

249 pg 43

pg 43

Date 1992 June 14/15 Observers WxL/Tn

Emulsion Batches:

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[illegible]

Spectr. Temp.

Dome Temp./Hum. *+12.2° 56%*

Transparency Conditions... *some clay* 250

Focus . . . G.6.7

Spectr. Temp.

Dome Temp./Hum.

480 0 50 1024 41 CCDFMT

[illegible]

251

pg #1 Mon-Tues

Date 1992 June 15/16.. Observers W.x.L. / T.n.....

Emulsion Batches:

Harden Times Tsecs ahead of W.U.V. Timer.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 8032 8033	Focus Test ✓					0 0	+40°	FeAr Clear	20/30
8034	BIAS(4)								
8035	Comp							FeAr Clear	60s
8036	HD 123 782	14 08 01	+49 29 37	20 55 39		00 10 W			12As
8037	Comp	14 04 06	+49 56					FeAr Clear	60s
8038	Comp							"	"
8039	BO CV _n	13 54 58	+41 18 19	21 09 47					720
8040	BO CV _n	13 54 58	+41 18 19	21 22 28					760
8041	comp							FeAr	
8042	BO CV _n			21 41 25		1 16 W			722
8043	"			21 54 10					720
8044	"			22 06 42					720
8045	comp								
8046	BO CV _n			22 23 10					720
8047	"			22 35 32					"

Spectr. Temp. Dome Temp./Hum. $+16.0^{\circ}\text{C}$ 47.2% Transparency Conditions ... *sl. cloudy (thin)* 252
 Focus ... 6.72
 Spectr. Temp. Dome Temp./Hum.

CLAMBDA

90CG/min ECOT $\rightarrow -100^{\circ}\text{C}$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	6.72	$T = +16.0^{\circ}\text{C}$		CASS CCD	$G = 4900 \times$ 1800 lines/mm	$20\mu\text{m}$ FULL	5010A	3ci 4ci	WUS/Reel 875 p/inch	* set by hand to 46.2°	
								1ci			
								5ci			
5439	$1.2''$	5.25	$M2$	Wab				6ci	st/ed	Also for Tel Normalization	
								7ci			
								8ci			
316	$2''$	9.48		FOV				9ci	Ec/WUMa		
319								9ci			
								8ci			
346								11ci			
271								12ci			
293								13ci			
								14ci			
293								15ci		280 ADU Sum Avg a box	
293								16ci		bk gnd for 4 cols	

253

p4#2

Emulsion Batches:

Date 1992 June 15/16 Observers WxL / Jy.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08048	BO CVn	13 54 58	41 18 19	22 47 55					720
8049	comp							FeAr Clear	60sec
8050	BO CVn			23 03 50					720
8051	"			23 16 13		02 50 W			720
8052	"			23 28 58		03 04 W			720
8053	comp							FeAr Clear	60sec
8054	Bras(4)								
8055	BO CVn			23 46 32					720
8056	"			23 59 25					720
8057	"			00 13 11		03 50 W			801
8058	comp							FeAr Clear	60sec
8059	BO CVn			00 29 56					840
8060	"			00 46 18					880
8061	comp							FeAr Clear	60sec
8062	Comp for HP154417							L	"

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

217

281

300

213

203

203

245

240

149

127

Spectr. Temp. Dome Temp./Hum. ^H 19.4°C : 50.9% Transparency Conditions ... Part Cloudy ... 254

Focus 6: F2

Spectr. Temp. Dome Temp./Hum. 113.0°C ... 53.9% 90 CGAIN 480 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
267	2"	9 ^v .48	FO	CASS CCD	G=4900X 1800 l/m/mm	200 Full	5010A	17ci	Ecl. WUM ₉	* Grating T.H set to 46.00 by hand at start of night.	
								18ci			
281								19ci			
300								20ci			
213	3"							21ci		in cloud	
203								22ci			
								23ci			
203								23ci			
245								24ci			
240	3"							25ci			
								26ci			
149								27ci		cloudy again	
127	2.3"							28ci		VERY cloudy	
								29ci			
								30ci			

255 pg #3

Date 1992..JUNE 15/16 Observers ...Wxh./Tm.....

Emulsion Batches:

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[illegible]

Spectr. Temp.

Dome Temp./Hum. $+13.5^{\circ}\text{C}$... 530%

Transparency Conditions... *cloudy* 256

[illegible]

257

p421

Tues - wed

Date 1992 June 16/17.

Observers

[Hdy] / T. 24" dome

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08069 8070	Focus Test	Comp/	stellar	Hurtman posns		0 0	+49°	FeAr Clear	20/25
8071	BIH5(4)			20 40					
8072	Comp							FeAr Clear	90sec
8073	HD123782	14 04.6	+49 56	20 45 14		00 05W			126
8074	Comp for HD23782							FeAr Clear	90sec
8075	HD 87901	10 03 03	+12 27	20 55 27					50sec
8076	"	"	"	20 56 52					61sec
8077	Comp (only comp for HD87901.)							FeAr Clear	90sec
8078 8079	FLATS x2					04 20W	+12 27	FeAr Clear A=1/2	125
8080	Comp							FeAr Clear	90sec
8081	HD 197433	20 38 36	+75 14	21 21 26		05 44E	exp - readout		445sec
8082	"			21 34 16			exp readout		420s
8083	"			21 42 12			Batch →		420s
8084	"			21 49 30					420s
8085	"			21 56 48					7

Spectr. Te

Focus 6.7

Spectr. Te

Exp. Mtr.

161

4000

25K

31K

1414

1470

1580

1620

Spectr. Temp. Dome Temp./Hum. 16.5°C 43.9% Transparency Conditions .. *Fine* 258

Focus $6.72 \rightarrow \underline{6.65}$

Fans on early as they are on over days

Spectr. Temp. Dome Temp./Hum.

90 CGAIN CCDT $\rightarrow -100^{\circ}\text{C}$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0/25	16.1°C Set	$\checkmark$ 6.65 6.75		CASS CCD	G-5530 1800 l/n/mm	200 FULL	5880 Å	3ci 4ci	360 0 12 1024	401 CCD FMT VVVV 5/Ref @ 390 p/n/t	
								1ci	480 0 50	1024 4 1 CCD FMT	
90sec								5ci	std vel	Also Tel normalization Star.	
126	4000	2"	$\checkmark$ 5.25	M20ab				6ci	std vel		
90sec								7ci			
50sec	25K	$\checkmark$ 1.36	B7V					8ci	Telluric Std	7 K max	
50sec	31K							8ci	"	AIR MASS 2.2	
90sec								7ci			
12s								9ci		12.4 K max	
90sec								10ci			
405sec								11ci	Hdg ppm	encoder 05:00 00:50 00:00 $\rightarrow$ +00 00 18	
405sec	1414	$\checkmark$ 7.377	G5V+K					12ci		AIR MASS = 1.45	
405sec	1470	23"						13ci		@ 05:24 East	
405sec	1580										
1	1620										

3000 ADU SUM AVG
Above Background 50/s

259

Pg #2

Tue-Wed

Date 1992 June 16/17.... Observers Hdy./Tn.....

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
CC08086	BIAS(4)								
8087	FLAT							TUNG A=1/2	1058
8088	Comp							Fair Clear	9088
8089	HD197433	20 38.6	+75 14	22 12 15		04 54 E			420
8090	"	"	"	22 20 04					420
8091	"	"	"	22 27 55		04 38 E			420
8092	"			22 35 13					
8093	"			22 42 31					
8094	"			22 50 31	57 27				420
8095	"			22 58 09		04 07 E			420
8096	Comp							Fair Clear	908
8097	FLAT							TUNG A=1/2	1058
8098	BIAS(4)								
8099	HD197433	20 38.6	+75 14	23 13 56					420
8100	"			23 21 14					420

Spectr. Ten

Focus.....

Spectr. Ten

Exp. Mtr.

1500

1470

1440

1500

1460

1460

420

420

420

420

420

420

CLIMBODU

[illegible]

261
py #3 Tues Wed

Emulsion Batches:

Date 1992 JUN 16/17. Observers Hdy. Tn... MKI.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08101	HD197433	20 38.6	+75 14	23:28:32					420
8102				23:36:19					420
8103				03:36					420
8104				50:54					420
8105				23:58:48					420
8106				00:06:05					420
8107				13:23					420
8108	BIAS(4)								
8109	FLAT							TUNG A=1/2	105
8110	Comp							FeAr C100R	
8111	HD197433	20 38.6	+75 14	00 28 25		02 37E			420
8112				00 35 43					420
8113				00 43 35		02 22E			420
8114				00 50 52					"
8115				00 58 10					"

Spectr. Temp. Dome Temp./Hum. 14.0°C 77% Transparency Conditions *PART. Cloudy* 262
 Focus ... 6.65
 Spectr. Temp. Dome Temp./Hum. *LIMBDA*

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
420	1100.		7.3 7.7	G5V	CASS CCD	1800 lines/mm	200 μ Full	5880A		Hdy p4m		
420	900											
420	890.											
420	900.											
420	840.											
420	560										Very cloudy	
420		$3''-4''$							22ci			
									1ci		Dome T = $+13.4^{\circ}\text{C}$	
									23ci		11 K MAX	
									24ci			
420	380	$2''-3''$							25ci		Repeat x 2	
420	690								25ci		cloud	
420	655										Repeat x 3 ^{1.224 AIR MASS}	
	540											
	1140								26ci			

263
Pg #4

Date 1992 June 16/17... Observers Hdeg. I. Ta / ... M.K.I.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08116	HD197433	20 3836	+75 1400	01 06 08					420
8117	"			01 13 26		01 52 E			420
8118	"			01 20 54					421
8119	BIAS(4)								
8120	Comp			01 29 26				FeAr Clear	90 sec
8121	Flat							Tung A=1/2	10 sec
8122	HD 197433	*		01 34 12					420 sec
8123	"			01 41 30					
8124	"			01 49 00					
8125	"			01 56 18					
8126	"			02 03 36					
8127	"			02 ?					
8128	"			02 18 48					
8129	BIAS(4)								
8130	Flat			02 27 18				Tung A=1/2	10 sec
8131	Comp							FeAr Clear	90 sec

Spectr. Te
Focus...
Spectr. Te

Exp. Mtr.

960
945
020
0590
680
830
715
770
400
776
430
0160

Spectr. Temp. Dome Temp./Hum. *H3.2°C 50%*Transparency Conditions *PARTLY mostly cloudy 264*Focus *6.65*

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>960</i>	<i>3"</i>			<i>CASS CCD</i>	<i>G 5530 1800 l/n/ly</i>	<i>206</i>	<i>5880A</i>		<i>Hdy pgm</i>		
<i>945</i>											
<i>1020</i>								<i>27ci</i>			
								<i>1ci</i>			
<i>10590</i>								<i>28ci</i>			
								<i>29ci</i>		<i>11247 MAX</i>	
<i>680</i>								<i>30ci</i>			
<i>830</i>											
<i>715</i>											
<i>770</i>											
<i>900</i>											
<i>776</i>											
<i>480</i>											
								<i>1ci</i>			
								<i>31ci</i>		<i>11 K MAX</i>	
<i>10160</i>								<i>32ci</i>			

265pg. #5

Date 1992 June 16/17 Observers Hdy/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 08132fs	HD 197433	20 38.6	+75° 14'	02 32 06					420
8133				02 39 24					" 500
8134				02 46 42					" 440
8135				02 54 01					" 230
8136				03 01 44					" 340
8137				03 09 02					" 400
8138				03 16 40					" 405
8139	BIAS(4)								
8140	Comp			03 25 50				FeAr Clear	90 0274
8141	Flat							Tung A=1/2	10
8142	Dark			03 31 23					225
FMO 0947	HD 195047 201750	20 23 9 21 06.5	+36 24	03 44		00 00	67 ^{Int} _{msec}	"H" mode	225
8143	Dark			03 48 13					225
8144	HD 177724	19 00 49	+13 43	03 54 11		02 19W			186s 2/100
8145	"	"	"	03 58 38					153s 94300

Transparency Conditions *hang sinus and hang*... ²⁶⁶

[illegible]

267 #6

Date 1992 June 16/17. Observers Hdg. J. N.

Emulsion Batches:

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[illegible]

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions *heavy wire and base*.....

$$T_{CCD} = -100,4^{\circ}C$$

268

[illegible]

269

p.1

Date 1992 June 17/18. Observers Hdy..Tn.....

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ABCD FM00448	HD128718	14 33 24	+48 39 00		20 44	00 24 E	+48 13	N ^o mod	67 msec
CCO 8150 8151	Focus Test				21 09	00 00	n	FeAr clear	20/25
8152	BIAS(4)								
8154	FLAT For HD197433							TUNG A=1/4	28 sec
8153	Comp							FeAr clear	60 sec
8155	HD197433			21 23 34					422
8156	"			21 33 13					540
8157	"			21 42 34					425
8158	"			21 50 07					455
8159	"			21 58 01					420
8160	BIAS(4)								
8161	FLAT			22 07 29				TUNG A=1/4	28 sec
8162	Comp							FeAr clear	60 sec
8163	Comp							FeAr clear	60 sec
8164	HD177724	19 00 49	+13 43						

Spectr. T.

Focus.

Spectr. T.

Exp. Mtr.

4.5 mm

T=

365

390

300

380

800

172

3000

Spectr. Temp. Dome Temp./Hum. $+22^{\circ}\text{C}$ 67% Transparency Conditions Hazy 270

Focus ... 65.8

Tel encoders normalized 1st on
HD 123782

Spectr. Temp. Dome Temp./Hum.

CCOT $\rightarrow +100^{\circ}\text{C}$ 90CGAIN

NO FANS

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4 frames	OK	$\checkmark$ 6.7	I-2			200 μ Full	To Lower R of slit		Seeing test	Dome NW gusty S wind not S W wind	
	T = 21.7 $^{\circ}$	658		CASS CCD	G-6020 1800 l/mm	200 μ	6563A	3ci 4ci		Comp Right on 276-284 pixel #	
								1ci		480 0 50 1024 4 1 CCD FMT	
								6ci			
								5ci			
365	3" $\checkmark$ 7.3 -7.7		65 $\bar{V}$ + K0 $\bar{V}$ + K5 $\bar{V}$					7ci	Hdy pgm	J.455 Air mass $\checkmark$ Hazy here	
390								8ci			
300								9ci			
380								9ci		(501.5M) For 5 cols 820 ADU SUM AVG a line bkgnd	
800	sum of 2?							9ci			
								6ci		13869	
8172								5ci			
15000		$\checkmark$ 2.99	A0 $\bar{V}$ m					10ci	Telluric Std	X = 1.61	

271 p. 2

Date 1992 June 17/18 Observers Hdy/Tn

Emulsion Batches:

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[illegible]

Transparency Conditions. *VERY Hazy - some day*

Thunder storm advancing

Dome Temp./Hum.

[illegible]

273
pg.1

22/23

Date June 23/24.92 Observers Hdy./Fdr./Bhrm...

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCØ8173	FOCUS TEST	14 04 36	+49 56 00	20 21 18					
CCØ8174	FOCUS TEST								
⁹⁸⁰⁰ FM 0049	HO 128718	14 33 24	+48 39 00						
CCD8175	BIAS(4)			21 23 35					
8176	COMP							FeAr Clear	60sec
8177	HD 177724	19 00 49	+13 43	21 32 58 21 32 58				FeAr FeAr	115sec
8178	"			21 35 31					176sec
8179 8180	FLAT							Tung A=1/4	28sec
8181	BIAS(4)			21 43					
8182	FLAT							Tung A=1/4	28sec
8183	COMP							FeAr Clear	60sec
8184	HD 197433	20 38.6	+75° 14'	21 58 42					420sec
8185				22 06 00					"
8186				22 13 19					"
8187				22 20 38					"
8188				22 27 56					"

Spectr. Tr.

Focus...

Spectr. Tr.

Exp. Mtr.

15000

20600

7469

1320

1220

360

1540

1640

Spectr. Temp. Dome Temp./Hum. 12.7°C/44.7% Transparency Conditions CLEAR SMALL AMOUNT
 Focus 6.65
 Spectr. Temp. Dome Temp./Hum. FANS ON! 90CCAIN Norm 1250 on HD123782

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					$\lambda = 6020$ 1800	200 μ	$\lambda = 6563 \text{ \AA}$			480 0 50 1024 4 1 ccd	
		$\sqrt{6.7}$	F2								
										480 050 1024 41	
										TIME ~30 SEC OFF	
15000										TIME SET TO WWV	
20600											
										11690 MAX 11449 MAX	
										13666 MAX ADU	
7969											
1320											
1220											
1360											
1540											
1640											

} Hdy

225 pg. 2

22/23

Emulsion Batches:

Date June 23/24 92 Observers .. Hedy./Fbr./Bhr.m...

Plate.No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
8189	HD 197433			22 35 15					420sec
8190	"			22 42 34	22 49 34				"
8191	COMP			22 50 53				FeAr Clear	60sec
8192	FLAT							Tung A=1/4	28sec
8193	BIAS(4)			22 53 46					
8194	HD 197433	20 38.6	+75 14	22 55 10					420s
8195	"			23 02 29					"
8196	"			23 09 48					"
8197	"			23 17 06					"
8198	"			23 24 25					"
8199	"			23 31 44					"
8200	"			23 39 03					"
8201	COMP							FeAr Clear	60
8202	FLAT							Tung A=1/4	28
8203	Bins(4)								

Spectr. Ter

Focus....

Spectr. Ter

Exp. Mtr.

1445

1380

1465

1490

1400

1410

1420

1566

1520

Spectr. Temp. Dome Temp./Hum. ... 9.8°C / 47.7% Transparency Conditions Clear 276

Focus 6.5

Spectr. Temp. Dome Temp./Hum.

Fds ON!

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
420	1445											
11	1380											
60												
28												
420	1465											
	1490											
	1400											
	1410											
	1420											
	1566											
	1520											
60												
28												

} Hdy

2773
PJ

Emulsion Batches:

Date ~~June 23/24~~ 22/23 9.2 Observers ~~Hely./Fbr./Bhrm.~~

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
8204	HD 197433	20 38.6	+75 14	23 52 39					420s	1580
8205	"			23 59 57					"	1750
8206	"			00 07 16					"	1270
8207	"			00 14 34					"	1349
8208	"			00 21 53					"	1450
8209	"			00 29 12					"	1462
8210	"			00 36 31					"	1550
8211	Bias(4)									
8212	FLAT							Tung A=1/4	28s	
8213	Comp							FeAr 100%	60s	
8214	HD 197433			00 48 57					420s	1770
8215	"			00 56 16					"	1660
8216	"			01 03 35					"	1480
8217	"			01 10 54					"	1600
8218	"			01 18 13					"	1230
8219	"			01 25 32					"	1625

Spectr. Temp. Dome Temp./Hum.

FANS ON!

[illegible]

Date ... June 22/23 ~~28/24~~ ... Observers ... Hdy Pbr ...

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mr.
8220	H0197433			01 33 51					420s	1775
8221	Bias (4)									
8222	Comp							R/Sr cls	60s	
8223	FLAT							Ty A-1/4	28s	
8224	H0197433	20 38.6	75 14	01 45 07					420s	1735
8225	"			01 52 26					"	1800
8226	"			01 59 45					"	1560
8227	"			02 07 04					"	780
8228	"			02 14 23					"	1800
8229	"			02 21 42					"	1375
8230	"			02 29 01					"	480
8231	Bias (4)									
8232	FLAT							Ty A-1/4	28s	
8233	Comp							R/Sr cls	60s	

Spectr. Temp. Dome Temp./Hum. ... 9.72/48% Transparency Conditions Clear 280

Focus 6.65

Spectr. Temp. Dome Temp./Hum. Fnds ON.

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4205	1775											
605												
285												
4205	1735											
4	1800											
4	1560											
4	1780											
4	1800											
4	1375											
11	1480											
285												
605												

} Hdy

281

#5

22123

Date ... J. N. E. ~~1910~~ 1912 Observers H. J. P. r.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mr.
8234	HD 197433	20 38.6	+75 14	02 42 47					420s	1600
8235	"			02 50 05					"	190
8236	"			02 57 24					"	1490
8237	"			03 04 43					"	1460
8238	"			03 12 02					"	1340
8239	"			03 19 21					"	1600
8240	"			03 26 39					"	1450
8241	Bias (4)									
8242	Comp							FeAr Cl Wg N=H	60s	
8243	FeAr								28s	
8244	Bias (4)									
8245	Comp FeAr							N=H Wg FeAr Cl	28s	
8246	Comp								60s	
8247	HD 177724	19 00 49	13 43 00	03 46 09					87	20K
8248	"			03 48 30					94	22K

Spectr. Temp. Dome Temp./Hum. $9.2^{\circ}\text{C}/53.8\%$ Transparency Conditions Clear 282

Focus 6.65

Spectr. Temp. Dome Temp./Hum. FANS ON!

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
120s	1600				1800 $\alpha=6020$	200 μ			$\leftarrow \lambda=6563$	Airmass = 1.3167	
"	1490								Hdy		
"	1490										
"	1460										
"	1340										
"	1500										
"	1450										
60s											
35s											
28s											
60s											
87	26 K								TELLURIC STD		
94	22 K								TELLURIC STD, 10 K MAX		

283

Date ... JUNE 22/23-92 Observers ... Hdy Fbr

Emulsion Batches:

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[illegible]

Spectr. Temp. Dome Temp./Hum.

[illegible]

285
Pg #1

Wed-Thurs

Date JUNE 24/25/92. Observers Hdy./Fbr./Tee.....

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
8252	Focus Tst					0	+40°	FeAr Clean	
8253	Focus Tst.					0		n	
FM00450(?)	HD 128718	14 33.4	+48 39	20 35		00 00	+48 39	'N' made	4frang
8254	BIAS(4)			20 42					
8255.fts	Comp							FeAr Clear	70sec
8256	HD 177724	19 00 49	+13 43	20 48 39		04 15 E			316sec
8257	FLAT at this posn							TUNG Ap=1/2	13sec
8258	FLAT							TUNG A=1/2	13sec
8259	COMP							FeAr Clear	70sec
8260	HD 197433	20 38.6	75 14	21 08 28					420sec
8261	"			21 15 45					"
8262	"			21 23 04	21 30 04				"
8263	"			21 30 37		05 04 E			420sec
8264	"			21 37 55					"
8265	"			21 45 13					"
8266	"			21 52 31	21 59 31				"

Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

12000

34K

1505

1680

1530

1550

1620

1600

1490

286
CIRRUS IN SOUTH
' HUMIDITY INCREASING

Focus 6.68

Dome Temp./Hum.

FANS ON!

$$\text{ccsl temp} = -100.4^{\circ}\text{C}$$
[illegible]

287
pg #2

Date JUNE 24/25, 1992 Observers Hdy / Flor. / 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	Exp.
8267	COMP							FeAr Clear	70 sec
8268	FLAT							Tung A=1/2	13 sec
8269	BIAS (4)			22 03 40					
8270	Comp [do not use; gratings may have moved]							FeAr Clear	70 sec
8271	FLAT								13 sec
8272	Comp (use)							FeAr Clear	70 sec
8273	HD 197433			22 19 39					420 sec
8274	"			22 26					"
8275				22 34 15		0400E			"
8276				22 41 33					"
8277				22 48 51					"
8278				22 56 10					"
8279				23 03 28	23 10 28	03 30E			"
8280	Comp							FeAr Clear	70 sec
8281	BIAS (4)								
8282	FLAT						A=1/2	TUNG	11 sec

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

8923

1390

1280

1240

1210

1210

1240

1340

1340

1340

1340

Spectr. Temp. Dome Temp./Hum. $+12.5^{\circ}\text{C}$ 72.4% Transparency Conditions 288
 Focus 6.68
 Spectr. Temp. Dome Temp./Hum. $+12.3^{\circ}\text{C}$ 79.6%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8923					1800 1/mm G=5505		5880A	8ci			
								9ci		12060	
								1ci			
					* 1800 1/mm G=5530		* 5890A	10ci		* Grating Angle changed to get NE D Lines captured	
								11ci		12279 MAX ADU/pixel	
								12ci		← GRATING JIGGLED	
1390	2"							13ci	Hdy pgm		
1280											
1240											
1210											
1210										GUIDE CAMERA OFF	
1240										BACK ON	
1340											
								14ci			
13sec Flat came close to saturation ∴ 11sec done								15ci			

289

pg #3 wed-Thurs

Hdy To 24" for photometry now

Emulsion Batches:

Date 1992 JUNE 24/25 Observers Hdy / J. / Fbr.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
CC08283	HD197433	20 38 36	+75 14	23 18 25		03 17 E			420s	1070
8284	"			23 25 43					"	1190
8285	"			23 33 01					"	1315
8286	"			23 40 19					"	1025
8287	"			23 47 52		02 49 E			255s	350
8288	FAST								11sec	
8289	COMP									
8290	BIAS(4)									
8291	HD177724	19 00 49	+13 43	00 36 33	01 01 ...	00 07 E			1456sec	21082
8292	BIAS(4)	before HD177724		00 35						
8293	COMP			01 05 14				FeAr CLEAR	70sec	
8294	FLAT							Tung A=172	11sec	
8295	BIAS(4)			01 09 16				FeAr FLAT	70sec	
8296	COMP							FeAr CLEAR	70sec	
8297	FLAT							Tung A=172	11sec	
8298	BIAS(4)			01 41						

Spectr. Temp.

Dome Temp./Hum.

[illegible]

291 pg. 4

Date 1992 June 24/25 Observers Hoy/Tn/Flor

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
8299	HD 197433			01 42 52					420 sec
8300	"			01 50 09					"
8301	"			01 58 00					
8302	"			02 05 18					
8303	"			02 12 49					626 sec
8304	"			02 24 38					355
8305	BIAS(4)								
8306	FLAT							Tung A=1/2	12 sec
8307	COMP							FeAr Clear	70 sec
8308	COMP							FeAr Clear	60 sec
8309	Nova Cyg	20 ^h 27 ^m 43 ^s	+52° 17' 39"	03 07 26	03 14				433 sec
8310	COMP							FeAr Clear	60 sec
8311	FLAT							A=1/4	25 sec
8312	BIAS(4)								
8313	Comp							FeAr Clear	60 sec

Spectr. Tem

Focus....C

Spectr. Tem

Exp. Mtr.

740

860

313

319

98

574

Spectr. Temp. Dome Temp./Hum. $+12.1^{\circ}\text{C}$ ~~17.2%~~ Transparency Conditions *heavy wave clearing 292*
 Focus $6.6.8$ ~~17.2%~~ *then more cloud*
 Spectr. Temp. Dome Temp./Hum. $+12.0^{\circ}\text{C}$ 17.2% 79%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
420 sec	740	3 ⁴				200 _u Full length	5890A	6ci	Hdg pgn		
	860										
	860 296										
	313										
626 sec	319										
355	98										
12 sec										12368 AD4	
70 sec										TOP UP by 03 EST	
60 sec					G=6020	000 _u Full	6563A	4ci	Nova Cyg 92 ↓		
433 sec	574							5ci		13.5K MAX	
60 sec								4ci			
25 sec								7ci		10790 max	
								1ci			
68 sec								8ci			

293 pg 5

Emulsion Batches:

Date 1992 June 24/25... Observers Hdg./Tn./Fbr.....

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[illegible]

mostly cloudy..... 294

Dome Temp./Hum. 11.6°C.....82.3%RH

Dome Temp./Hum. 11.6°C... 82.3% H

Exp.	Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
182 60 25					C4SS CCD	G=6420 1800 l/mm	200μ	6563Å	9ci	Telluric Std	10949 ADU max	
											11123 ADU max	
											All to Perseus & UCM. T _{ccd} = -4.5	

295

#1

Thurs Fri

Date ... JUNE 25/26-92 Observers ... L.H. J. Tr./Fbr...

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
8318	Bias (1)								
8319	Bias (1)								
8320	Focus (Low)							FeAr clear	60sec
8321	Focus (Steel)								
FM00451(1/2)	HD 144579	16 01 30	+ 39 25 36	21 30		00 30E	+39 11	"N" mode	
8322	Bias (4)								
8323	Comp							FeAr clear	60sec
8324	Flat							TUNG A=1/4	
8325	HD 177724	19 00 49	+13 43	21 48 40		03 11E			2955
8326	Comp							FeAr clear	60sec
8327	Comp.							"	"
8328	FLAT							TUNG A=1/4	27sec
8329	Bias (4)								
8330	HD 197433	20 38 36	+75 14	22 00 01					
8331	"	"	"	22 11 21					
8332	"	"	"	22 24 40	22 17 30				

Transparency Conditions Hazy... / Part. clouds...

Topup from ambient Temp tonight

BS5763 Tel Normalization stage No Fans tonight

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G6020 1800h/km	200u FULL	6563A				
47x47 pixels				666 G8E 67max int		200u (Lower Right view below slit)				DOME South West ESD Dome T = +19.5°	
								1ci			
								3ci			
								4ci		10,000 ADU MAX	
								5ci	Telluric Std	10 K MAX	
								4ci		12.5 K ADU MAX	
630 1290 660 660								6ci	Hely pgm	1.346 AIA MASS	

297
#2

Date JUNE 25/26-92 Observers Hdy./Tn./Fbr.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
8333	HD 197433	20 3836	+75 14	22 3247		03 57.5E			420s
8334	"			22 40 05					"
8335	"			22 47 23					"
8336	"			22 54 41					"
8337	FLAT							Tung Δ=1/4	27s
8338	Boxa Comp							FeAr clear	60s
8339	Bias (4)								
8340	HD 197433	20 3836	+75 14	23 0722		03 23E			420s
8341				23 1439					"
8342				23 2157					"
8343				23 2915					"
8344				23 3633					
8345				23 4350					
8346				23 5108					
8347	Comp							FeAr clear	60s

Spectr. Temp. Dome Temp./Hum. *14.6°C / 77.4%* Transparency Conditions *Hazy* *208*

Focus *6.6.8*

Spectr. Temp. Dome Temp./Hum.

FANS OFF!

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>800</i>		<i>7.3</i> <i>7.7</i>	<i>G5V</i> <i>+K7V</i>	<i>CCD</i> <i>CASS</i>	<i>G=6020</i> <i>1800h/mm</i>	<i>200μ</i> <i>Full</i>	<i>6563R</i>	<i>6ci</i>	<i>Holy pyn</i>		
<i>820</i>											
<i>800</i>											
<i>1075</i>											
										<i>12.3 K ADUMAX</i>	
										<i>Dome T = +14.3°C</i>	
<i>1290</i>	<i>2"</i>							<i>6ci</i>	<i>Holy pyn</i>		
<i>1350</i>	<i>1.5"</i>									<i>broad cosmic Ray?</i> <i>odd emission ~ 6600Å</i>	
<i>1475</i>	<i>"</i>										
<i>1470</i>	<i>"</i>										
<i>1470</i>											
<i>1450</i>											
<i>1500</i>											
								<i>7ci</i>			

299 pg #3

Date 1992 June 25/26... Observers Hdg. on 24" (photometry) Fbr 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	Exp.
8348	FLAT							TUNG A=1/4	25s
8349	BIAS(4)								
8350	HD197433	20 3836	+75 1400	00 0422					40s
8351	"			00 2048			Repeat x 4		420s
8352	"			00 2806					"
8353	"			00 3524		01 55E			"
8354	"			00 4243		01			"
8355	"			60 5007					"
8356	BIAS(4)								
8357	FLAT							TUNG A=1/4	25s
8358	COMP							FeAr clear	60s
8359	HD197433			01 02 15					420s
8360	"			01 09 33					"
8361	"			01 16 51					"
8362	"			01 2409		01 13 E			"
8363	"			01 31 27		01 06 E			"

30/p944

Date June 25/26-92 Observers Hdy (24") T/P

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
8364	HD 197433			01 38 45					420s
8365	"			01 46 02		00 44E			"
8366	BIAS(4)								
8367	Comp							Ferr Clear	60sec
8368	FLAT							TUNG A=1/4	25sec
8369	HD 197433	20 38 36	+75 14	01 59 06					423
8370	"			02 15 01					420
8371	"			02 22 19					"
8372	"			02 29.36					"
8373	"			02 36 54					"
8374	"			02 44 27		00 15W	Exp/Redout		"
8375	"			02 51 54			"		"
8376	BIAS(4)								
8377	FLAT							TUNG A=1/4	29sec 28s
8378	Comp							Ferr Clear	60sec

Spectr. Ter

Focus....

Spectr. Ter

Exp. Mir.

910

975

975

990

665/100h

505

890

120

Spectr. Temp. Dome Temp./Hum. $72.79/14^{\circ}\text{C}$ Transparency Conditions . *Hazy... cloud seeding.* ³⁰²
 Focus *6.6.8*
 Spectr. Temp. Dome Temp./Hum. *90CGain CCDT = -10.5°C*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>910</i>	<i>3"</i>	<i>73</i> <i>-77</i>		<i>CASS</i> <i>CCD</i>	<i>60205</i> <i>1800/1/1/1</i>	<i>200u</i>	<i>6563A</i>				
<i>975</i>								<i>6ci</i>		<i>AIR MASS 1.180</i>	
										<i>Dome T = 131°C</i>	
								<i>7ci</i>			
								<i>10ci</i>		<i>MAX = 105 KADU/pixel</i>	
<i>975</i>								<i>11ci</i>	<i>Helix pgm</i>		
<i>990</i>	<i>2.4"</i>							<i>11ci</i>		<i>Repeat x4</i>	
<i>1</i>	<i>3.5"</i>										
<i>1665</i>	<i>(combination of 2)</i>										
<i>505</i>											
<i>890</i>								<i>12ci</i>		<i>Cloud at times</i>	
<i>1020</i>	<i>3.3"</i>							<i>13ci</i>		<i>2700 ADU sum AVG above bkgd for 5 cols</i>	
										<i>Dome T = 12.6°C</i>	
								<i>14ci</i>		<i>MAX = K ADU/pixel</i>	
								<i>15ci</i>			

305

pg 41

Date 1992 JUNE 26/27 Observers ... Hdy./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	Exp.
CC08388 8389	Focus Test	comp / stellar HARTMAN positions							20/25
8390	BIAS(4)			20 26					
ABCD FM00452	BS5763	15 30 40	1992.5 +40 51 30	20 45		00 35E	+40 51	*N mode Felt Clear	67 msec Tint 60 sec
CC08391	Comp								
8392	HD177724	19 00 49	+13 43	21 02 10		03 54 E			259
8393	Comp							Felt Clear	80 sec
8394 8395	FLATS x2	at HD177724 posn						TUNG A=1/2	12 sec
8396	BIAS(4)								
8397	FLAT at HD197433 posn							TUNG A=1/2	11 sec
8398	BIAS Comp							Felt Clear	60 sec
8399	BIAS(4)								
8400	HD197433	20 38 36	+75 14	21 27 23		04 59E			430 sec
8401				21 35 43					720
02				21 42 58					"
03				21 50 16		04 37E			"
04	Comp							Felt Clear	60 sec

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

A7-A7p

20K

660

530

90

75

Spectr. Temp. Dome Temp./Hum. 15.8°C 83.7% Transparency Conditions ... $H_0.29$ / P_{ART} (clear) 306

Focus 6.68

Spectr. Temp. Dome Temp./Hum. CCD T $\rightarrow -100^{\circ}\text{C}$ 90CGain

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	$+5.8^{\circ}\text{C}$			CASS CCD	*G-5525 1800lu/mm	200 μ FULL	*5890Å exactly			360 0 12 1024 40 1 CCDFWT Stellar Kartman 2 pixel flat	
47x47 pixels	$\sqrt{502}$ 4 frames		K 4.5	[now seeing test star done checked by Holy as having no companions visible.]					Seeing test	FANSON EARLY 2.4 km/hr Dome West $\sqrt{\text{light NW wind}}$	
20 K	$\sqrt{299}$		A07 mm					5ci			
								6ci	Telluric Std	8 K MAX ADU/pixel	
								7ci			
								8ci		12.4 K MAX ADU/pixel	
										Dome T = $+15.1^{\circ}\text{C}$	
								9ci		14.5 MAX ADU/pixel	
								10ci			
660	$3''$	$\sqrt{73}$	G5K					11ci	Hdy pgn	Dome T = $+15.2^{\circ}\text{C}$ 1400 ADU SUMMING above 1000 1.39 AIR MASS	
530		77	+KOV					12ci	Hdy pgn	Repeat x3 somewhat	
90								"		Lots of Cloud	
75								"		" " "	
								13ci		Caught in a Batch	

[Totally a sky spectrum]

307 Pg #2

Emulsion Batches:

Date 1972 June 26/27.. Observers Hdg. / Tg.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
C08405	FLAT							TUNG A=1/2	10sec
8406	BIAS(4)								
8407	HD197433	20 38 36	+75 14	22 05 22					305
8408	DARK			22 18 39					225sec
8409	DARK			22 37 31					225sec
8410	DARK			22 57 48					720sec
8411	BIAS(4)								
8412	FLAT							TUNG A=1/2	11sec
8413	Comp							Felt Clear	60sec
8414	HD197433	20 38 36	+75 14	23 43 28		2 43 E			420
8415	"	"	"	23 50 50					422
8416	"	"	"	23 58 40					420
8417	"	"	"	00 06 38					"
8418	Comp	"	"	00 17 02				Felt Clear	60sec
8419	BIAS(4)								
8420	FLAT						A=1/2	TUNG	11sec

Spectr. Temp. Dome Temp./Hum. $+15^{\circ}\text{C}$... $83\% \text{ H}$ Transparency Conditions ... *PeAT... cloudy* ... 308

Focus ... $6:6.8$

Spectr. Temp. Dome Temp./Hum. *CL/HIPBDA*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					<i>1800 l/m</i>	<i>200% Full</i>	<i>5890 Å</i>	<i>14c</i>			
<i>210</i>								<i>15c</i>	<i>Hdy pgn</i>	<i>AIR MASS = 1.348 + cloud</i>	
								<i>16c</i>		<i>Dome closed before dark</i>	
								<i>16c</i>		<i>TCCD = -101.8°C</i>	
										<i>Dome closed</i>	
										<i>Dome T = +150°C</i>	
								<i>17c</i>		<i>MAX 14K ADU</i>	
								<i>18c</i>			
<i>730</i>	<i>3"-5"</i>							<i>19c</i>	<i>Hdy pgn</i>	<i>1400 ADU SUM AVG above bkgrnd</i>	
								<i>20c</i>		<i>(Clear in NORTH (Haze))</i>	
<i>870</i>								<i>21c</i>			
<i>860</i>	<i>3"</i>							<i>22c</i>			
<i>890</i>								<i>23c</i>			
								<i>24c</i>		<i>Cloud</i>	
								<i>25c</i>		<i>12.4 ADU MAX</i>	

309 pg #3

Emulsion Batches:

Date .1972. June 26/27 Observers ... Hdy. I. Tu.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
8421	BIAS(4)								
8422	FLAT							TUNG A-V2	105e
8423	Comp			01 40 39				Felr clear	60se
8424	HD197433	20 38 36	+75 14	* 01 43 07					420s
8425	"			01 49 48		00 36 E			"
8426	"			01 57 16					"
8427	"			02 04 40					"
8428	"			02 11 56					"
8429	"			02 19 13					"
8430	m flat			02 26 50					"
8431	n flat			02 34 06					"
8432	Comp							Felr clear	60sec
8433	BIAS(4)								
8434	FLAT							TUNG A-V2	105e
8435	HD197433			02 46 28	00 20	00 20 W			420s
8436	"			02 53 46					"

Spectr. Temp. Dome Temp./Hum. $+14.1^{\circ}\text{C} \dots 80\%$ Transparency Conditions ... *semi. clear. slightly* 310

Focus 6:68

*High pressure dry air
moving in now*

Spectr. Temp. Dome Temp./Hum. *CLIMBERA*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 μm	200 Full	5890A				
								26ci		11496	
6643	3							57ci			
809	3-4	$\frac{7.3}{-7.7}$	G5U +KOV					28ci	Hdy ppr	Repeat 3 times	STAR NOT ON SLIT UNTIL 014327
840								"		1.179 AIR MASS	
790								28ci			
790	4-5							"		Repeat 3 times	
760								"			
790								28ci			
760								29ci			
785	3-4							24ci			
								30ci			
								1ci		Scout T = $+13.0^{\circ}\text{C}$	
								31ci		10.7 K ADU MAX	
850								32ci		Repeat x 3	1.760 AIR MASS
800								32ci			

Dome Temp./Hum. $+12.5^{\circ}\text{C}$... 7456

Exposure	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
120s	850	4"						5890A	32c	Hdg pyg		
"	860	.							33c		Repeat x2	
"	890								<u>33c</u>			
120s	870								33c			
10s									31c		10 K MAX	
16s									30c			
"									30c			
34s	28K	8" ^v	2.99	A0V _m					34c	Telluric std	MAX = 12.4 K ADU AIRMASS = 1.430	
45s	21.5K								35c	"	9 K MAX typical	
60s									30c			
70s									36c		MAX ADU = 13K ADU	
											All to DESSAS & WORM Tn	

313
Pg#1 Sat-Sun

Date 1992 June 27/28 Observers Hdy...Tm.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08452	SKY diffuse (mirrors ^{done open} covered)			~16 EST		0 0	235°		
Fm00453	BS 5763	^{1992.5} 15 30 40	+40 51 30	20 43			67 ^{int} msec	"N" make	
8453	Comp							fehr clear	60s
8454	BIAS(4)							comp A=1/2	
8455	FLAT							comp A=1/2	10s
8456	HD197433	20 38 36	+75 14	23 04 06		03 18.5 E			420s
8457	"	"	"	23 12 53					420
8458	"			23 20 16					420
8459	"			23 27 56					420
8460	"			23 35 14					"
8461	"			23 42 32					"
8462	"			23 49 50					"
8463	"			23 57 22					420
8464	BIAS(4) /	CC08465	FLAT A _p =1/2 10s		CC08466	Comp (clear)			60 secs

90CGAIN CCT = -101.7°C

[illegible]

315 pg #2

Date .1992 June 27/28.. Observers .Hdy./Tg.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08467	HD197433	20 38 36	+75 14	00 10 17					420s
8468	"			00 17 34				"	"
8469	"			00 24 52				"	"
8470	"			00 32 10				"	"
8471	"			00 39 28				"	"
8472	"			00 46 46				"	"
8473	"			00 54 04				"	"
8474	BIAS(4)			01 01	CC08475 / Comp 60sec / CC08476 / FLAT 10sec /				
8477	HD197433			01 06 06					420s
8478	"			01 13 24				"	"
8479	"			01 20 42				"	"
8480	✓ "			01 28 13				"	"
8481	✓ "			01 35 31				"	"
8482	✓ "			01 42 49				"	"
8483	"			01 50 08				"	"

Spectr. Temp. Dome Temp./Hum. $+13.8^{\circ}\text{C} / 18.8\%$ Transparency Conditions *S.1. hazy* 366

Focus 6.68

Spectr. Temp. Dome Temp./Hum. *CLIMBDA*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>4203</i> 700	5-6"	ARTAN FOCUS	NO	CASS CCD	1800 μm	200 μm FULL	5890A	18ci	Hdy pgn	Repeat x 7	
700	3-5"										
700	2-4"										
650											
732	4-5"										
800											
750								18ci			
										Dome T = $+13.3^{\circ}\text{C}$	
<i>4203</i> 720								19ci		Repeat x 3	
730											
900	3"							19ci			
900								20ci		Repeat x 4	
975											
950											
990								20ci			

317
Pg # 3

Emulsion Batches:

Date 1992 JUNE 27/28 Observers Hdg. / Tm.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08484	BIAS(A) ✓	CC08485	FLAT ✓	10 sec MAX 11 KADU	CC08495	Comp	22ci	FeAr clay	60sec
8486	HD197433	203836	+7514	020337		0019E			420s
8487	"			021055					"
8488	"			021813					"
8489	"			022531					"
8490	✓			023309					
8491	✓			024027					
8492	BIAS(4) 1/2			Comp 60secs					
8493	Comp							FeAr clay	60s
8494	FLAT							FeAr clay tung A=1/2	123s
8496	HD197433			025734					454
8497	"			030552		0044W			420s
8498	"			031310					"
8499	"			032028		0058.5W			"
8500	BIAS(A)								

Spectr. Temp. Dome Temp./Hum. $+13.2^{\circ}\text{C}$ $79\frac{6}{10}$ Transparency Conditions $\dots$ *sl. hazy / thin clouds* 318

Focus $6:68$

Spectr. Temp. Dome Temp./Hum. $+12.8^{\circ}\text{C}$ $80\frac{5}{10}$
CLAMBDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $1/4$ max	200m Full	5890A			Note Comp written letter	CCD 8495
1010	3"	$\sqrt{7.3}$ 7.7	65V +10V							Hdy ppm	Repeat x 4
1000											
880											
950								23c			
920	3"-5"							24c		Repeat x 2	
950								24c			
								1c		Dome T = $+13.1^{\circ}\text{C}$	
								25c			
								26c		12 K ADU MAX	
1000								27c		AIR MASS = 1.180	
850								28c		Repeat x 3	
810	3"-8"										
890								28c			
								1c			

369 pg #4 SAT/Sun

Date 1992 JUNE 27/28 Observers Hdy./Tm.

Emulsion Batches:

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[illegible]

Spectr. Temp.

Dome Temp./Hum.

Dome Temp./Hum. 43°C 80.5% H

Transparency Conditions . . . *Hazy* 320

320

[illegible]

321 pg1

sun-moon

Date June 28/29 Observers Tr./Hlw [KK]

Emulsion Batches:

16mm guide lens installed
for guide camera. To day

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
FM00455 (ABCD & X)	HD123782	^{1992.5} 14 08 01	49 29 37	20 27 00				67mc	integrati
cc08511	Bias (4)								
cc08512	Focus Test			~20:54					
cc08513	Focus Test								
8514	Comp.							FeNa clear	20 sec
8515	HD123782	^{1992.5} 14 08 01	49 29 37	21:02:46	21:04:57	1:10 W	+50°		131 sec
8516	Comp	¹⁹⁰⁰ 14 04.6	49:56					FeNe clear	20 sec
8517	Comp							"	"
8518	Ross 1051	15 02 01	60 46 30	21:22:19	22:00	1:08 W	+61°		2266s
8519	Comp.							FeNe clear	20 sec
8520	Bias (4)								
8521	Comp							FeNe clear	20 sec
8522	AC +76 5308	15 ^h 43.2 ^m	76° 20'	22:14:55		1:41 W	+76°		3360 sec
8523	Comp.							FeNe clear	20 sec
8524	Bias (4)								

Spectr. Temp. Dome Temp./Hum. $18.5^{\circ}\text{C}/59.9\%$ Transparency Conditions ... Slightly ... Hazy ... 322
 Focus 6.68 Light South Wind.
 Spectr. Temp. Dome Temp./Hum. CLIMBON FANS ON CCDT $\rightarrow -100^{\circ}\text{C}$ 90CGAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5x55 pixels		5.25	M2 II ab	CASS CCD	1800 l/mm	310 μm triple slit			Seeing test	FM0045 5x slit illumination strong due to sky. (Not quite dark)	
					G=4983	$\lambda=5140$ $\lambda=5115$		1ci	Dome temp 18.0°C	Format 480 0 50 1024 41	
					G=5000	$\rightarrow \lambda=5140$		3ci	Stellar 0.1 pixel red-shift	Format: 480 0 20 1024 10 1	
								4ci		(only for 3ci & 4ci)	
23000 counts.								5ci			
9000 counts		5.25	M2 III ab					6ci	Std. Velocity $= -13.4 \pm .3 \text{ km/s.}$	6000 ADU Sum Average above background, 4 columns	
								7ci		$\sim 310 \text{ SNR}$	
								8ci			
830c	1.2"	11.0	M2					9ci	KK Prog. $\rightarrow$	Encoder deltas look good.	
								10ci	$\rightarrow$	* Accidentally exited to Doss, then reset encoders to this star.	
								1ci		600 sum Avg. above background	
								11ci		Dome Temp $= 17.2^{\circ}\text{C}$	
	* 1.2"									* image mostly in slit	
302c		13.0	M4					12ci	KK pgm	250 ADU Sum Avg. Above Regl.	
								13ci			
										Dome Temp $= 16.7^{\circ}\text{C}$	

323 pg 2

Date June 28/29 Observers Tn/Hlw [KK]

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
F 8525	Comp							FeNe Clear	20 sec
8526	AC +62° 26' 49"	17 34 30	61 45 00	23:21:57	00:	0:42 W	+61° 41'		2606 sec
8527	Comp							FeNe Clear	20 sec
8528	Bias (4)								
8529	Comp								
8530 - 8532	Flat x 3							Tung. A = 1/2	10 sec
8533	LHS 494	20 31 43	61 23 48	00:19:10	01:19:10	1:01 E	61°		3600
8534	Comp						Note!! A = 1/2	FeNe Clear	20 sec
8535	Bias (4)								
8536	Comp			01:39:12				"	"
8537	AC +65° 69' 55"	20 29 00	65 06 00	01:39:12 ↑	02:	0:01 W	65°		2291
8538	Comp							FeNe Clear	20 sec
8539	Comp							"	"
8540	AC +75° 83' 47"	21 57 36	75 08	02:27:34	02:57:39	0:47 E	75°		1805 sec
8541	Comp							FeNe Clear	20 sec

Spectr. Temp. Dome Temp./Hum. $16.6^{\circ}\text{C}/64.8\%$ Transparency Conditions *Clear, Slight Haze* ³²⁴
 Focus ... *6.68* ...
 Spectr. Temp. Dome Temp./Hum.

CLAMBDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $\mu\text{m}/\text{mm}$	310 μm	5140R	14ci			
2220	1-2"	✓ 9.95	M1Ve					15ci	KK pgm	~1800 Sum Avg. Abv. Bkgd.	
								16ci			
								1ci			
								17ci			
								18ci		Max ~7200 Intensity	
208c	1-2"	✓ 12.5	m?					19ci	KK Pgm.	Easy guiding at 167 ms integration with new guider setup.	
								20ci		Why did we get less count than from AC-76 5308?	
								1ci		Seeing seems just as good.	
								21ci			
~900c		10.4	M3					22ci	KK Pgm	750 Sum Avg. of 5 columns.	
								23ci		~122 SNR	
								24ci			
668c		10.5	MO					25ci	KK Program	500 ABU Sum Avg above Bkgd (5 cols)	
								26ci		~100 SNR	

325 pg 3

Emulsion Batches:

Date June 28/29 Observers Tn/Hlw [KK]

[illegible]

Spectr. Temp.

Dome Temp./Hum. *41.6°C 77.3%*

[illegible]

327 py#1

$[KK]_{pgm}$

Emulsion Batches:

Date June 30/July 1 Observers Hlw/Tn

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[illegible]

Spectr. Temp. Dome Temp./Hum. 17.3°C/56.8% Transparency Conditions Clear 328

Focus 6.68

Spectr. Temp. Dome Temp./Hum.

FANS ON Topup @ 20:35 (still cool)
90CGHn CDT → -100E

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		5.25	M2IIIab	CASS CCD	1500L/mm G=5000	310μ triple slit	5740A		Focus test	Stellar ~ 0.1 pixel to the red	
39x39 pixels	"	"	"						Seeing Test	Right below middle slit. Dome WNW, No wind	
								1ci		Dome Temp 17.0°C	
								5ci		These were trashed	
11800 counts ~2"		5.25	M2IIIab					6ci	Std. Vel	because Hartman mask was in Stellar posn for 1st comp.	
								7ci			
~11000 c ~2"		5.25	M2IIIab					8ci	std vel		
								9ci			
								1ci			
								10ci			
379 c 2"		11.2	M2					11ci	KK pgm	1.775 Air Mass Small cloud drifted by halfway through.	
								12ci		Δ RA +00 00 07 @ 10 30E Δ Dec 00 00 27	
								13ci		~300 ADU Sum Avg NW Big	
672 c 2"		10.8	M2					14ci	KK pgm	East of pair (Sep 1') 2.032 Air Mass	
								15ci		Δ RA 00 00 2 Δ Dec -00 00 46 7E	

pg #2
329

Date June 30/July 1 Observers Hlw/Tn [KK Pgm]

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
8566	Bias (4)								
8567,8,9	Flat x 3			00:00		6:37 E	61° N		
8570	Comp						$\alpha = \frac{1}{2}$	FeNe clear	20 sec
8571	LHS 215	05 49 05	82 06 21	00:12:41	01:13:00	10:30 E	82° N	>1hr	3752
8572	Comp						$\alpha = \frac{1}{2}$	FeNe clear	20 sec
8573	Comp							FeNe Clear	
8574	BD +57 2735	23 19 54	57 20 00	01:25:51	01:57:	3:05 E	58° N		1916
8575	Comp							FeNe Clear	20s
8576	BIHS								
8577	Comp							FeNe Clear	20s
8578	Ross 226(?)	22 50 30	60 28 00	02 06 04					1182
8579	Comp								
Not Written	✓ Comp								
	HD 18884	02 57 06	03 42 00						
8580-82	Flat x 3							100G A-1/2	1/5
8583	BIAS (4)								

Spectr. Temp. Dome Temp./Hum. $15.0^{\circ}\text{C}/57.6\%$ Transparency Conditions Clear, with high 330
 Focus 6.68
 Spectr. Temp. Dome Temp./Hum. $13.4^{\circ}\text{C}/62.5\%$
 cirrus

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								1d			
								17, 18 19 ci			
980	72"	10.5	M2					21ci		Air Mass = 1.70x	
13K								22ci			
								23ci			
1154		10.5	MZe					24ci			
								25		Dome Temp	
								26			
0								27		50 ADU sum AVG above bkgnd. (Clouding in)	
								28ci		spectrum doesn't quite look like an M2	
								29ci			
								31ci		Did Not do due to sudden cloud cover.	
										MAX = 5800 ADU/pixel	
										All converted to Persians	

331

pg#1

Mon/Tues

Emulsion Batches:

Date 1992 July 6/7... Observers ... Hdg. ... I.Tn ...

Reset CSS Clock to ... W.W.V. Time ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08584 8585	Focus Test							FeAr clear	20/20
8586	BIAS(4)			20 19					
FM00458(ABCD)	FTS HD144579	16 01 30	+39 25 36	20 30		00 42E	+39 10 27	"N" made	
8587	Comp							FeAr clear	60s
8588	BIAS(4)								
8589	HD177724	19 00 49	+13 49	20 48 32		3 29 E			175
8590	"	"	"	20 53 13					207
8591	Comp							FeAr clear	60s
To 8592	FLATS x3	at HD177724 posn.		21 06				TUNG A=1/4	30sec
8594	FLAT at	HD155937 posn.						TUNG A=1/4	25sec
8595	BIAS(4)								
8596	Comp							FeAr clear	60s
8598	HD155937	17 09 30	+16 29	21 19 07		01 01E			604
8599	"			21 31 48		repeat x 3			600s
8600	"			21 42 07					600s
8601	"			21 52 26					600s

Spectr. Temp. Dome Temp./Hum. $+17.7^{\circ}\text{C}$ 68-87% H Transparency Conditions ... FINE 332

Focus $6.68 \rightarrow 6.62$

Spectr. Temp.

Dome Temp./Hum. CLAMBDA

90CGAIN CCD $\rightarrow -100^{\circ}\text{C}$
FANS ON as they should be

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
$T=17.6^{\circ}\text{C}$	Set	6.62		C455 CCD	G=6020 1500 $1/\text{mm}$	200 μ Full	6563A	3ci 4ci	Focus Test	360 0 12 1024 40 1 CCD FWHM For Focus Test	
31x31 pixels 67 max Int	6.66	G8V	4 frames	Lower Right slit view	200 μ Also	Te/Normulization	STAR Seeing Test			Dome $T=17.6^{\circ}\text{C}$ Dome SSW wind NNW 4 km/hr	
								5ci			
										Dome $T=+17.1^{\circ}\text{C}$	
30K								6	Telluric Std	guided somewhat 10704 Air mass (500 ADU MAX)	
35K								7	"	7700 ADU MAX	
								8			
								9			
								10		12.4 K ADU MAX	
								11		" " Bit Time only 25secs	
								12			
								1ci		Dome $T=16.7^{\circ}\text{C}$	
								13ci			
644	* 1.2"	8.29 8.77	F8					14ci	Hdypgm	800 ADU SUM AVG of 4 ccds after * It's comp sep by 4secs clearly separated.	
560	2"							15ci		AIR MASS = 1.168 @ 21.21	
Sum of 2											
1370										1200 ADU SUM AVG ABOVE BK gnd. For 6 cols	

333
pg#2

mon/Tues

Date 1992 Jul. 6/7..... Observers Hdg./Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08602	HD155937	17 0930	+16 29	22 0352		00 16 E	exp-Random		60s
8603	BIAS(4)								
8604	Comp							FeAr Clear	60sec
8605	FLHT							TUNG A-1/4	25sec
8606	HD155937			22 19 22			Repat x 4		600s
8607	"			22 29 41					60s
8608	"			22 40 00					"
8609	"			22 50 18					"
8610	"			23 00 46		00 42 W	Rep-Random		
8611	BIAS(4)								
8612	FLHT							TUNG A-1/4	25s
8613	Comp							FeAr Clear	60sec
8614	HD155937	17 0930	+16 29	23 16 24			Repat x 2		
8615	"			23 26 43					
8616	"			23 37 18			Repat x 4		
8617	"			23 47 37					

Spectr. Temp. Dome Temp./Hum. $+15.8^{\circ}\text{C}$ 7/19/11 Transparency Conditions FINE - Sl. hazy 334

Focus 6:62

Spectr. Temp. Dome Temp./Hum. CLHMBD1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
360	2"	8.29 -8.77	F8	CASS CCD	G-6020 1800/h/mm	200μ FULL	6563A	16ci	Hdy p9m		
								17ci			
								17ci			
								18ci		12.4 K ADU max	
520								19ci			
530	2"										
540											
480	1"-2"							19ci			
540								20ci			
										Dome T = $+15.0^{\circ}\text{C}$	
								21ci			
								22ci			
520								23ci			
550								23ci			
560	1"-2"										
570											

@ 23:18
Had to Reinsert CCD power for guide
camera, due to H meter interference
problems

335
pg #3

Date 1992 July 6/7 Observers Hdy / Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08618	HD 155937	17 09 30	+16 29	23 57 55					600sec
8619	"			00 08 14	00 18 14				600s
8620	BIAS(4)								
8621	Comp							FeAr Clear	60sec
8622	FLAT			00 21 58				Tung A=1/4	25sec
8623	HD 155937			00 23 54			Repeat x6		600sec
8624	"			00 34 13					"
8625	"			00 44 32					"
8626	"			00 54 51		02 35W			"
8627	"			01 05 09					"
8628	"			01 15 28					"
8629	BIAS(4)								
8630	FLAT							Tung A=1/4	25sec
8631	Comp							FeAr Clear	60sec
8632	HD 155937			01 30 42			exp / Radon		

Spectr. Temp. Dome Temp./Hum. $13.8^{\circ}\text{C} / 79.9\%$ Transparency Conditions *S/ hazy* 336
 Focus 6.62
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
650									<i>Hdy pgn</i>		
612	2-3"	<i>V</i> 8.29 -8.77	F8					23c			
8930								24ci			
								25ci		10698 ADU MAX	
650								26c			
650	2-3"										
600	3"										
680										1.345 AIR MASS	
660	2-3"										
640								<u>26c</u>			
										<i>Petro T = +13.2°C</i>	
								27ci		<i>MAX = 10 K ADU/pixel</i>	
								28ci			
560								29ci			

337 pg#4

Mon - Tues

Date 1992 July 6/7..... Observers H. G. T. n.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08633	HD155937	17 09 30	+16 29	01 52 07		03 33 W	Repeat x3		600s
8634				02 02 26			Repeat x3		600s
8635				02 12 45					1
8636				02 23 17			exp Repeat		7
8637	BIAS(4)								
8638	Comp							FeAr CLAR	60sec
8639	FLAT							TUNG A=1/4	30sec
8640	HD155937			02 39 46		04 20 W	Repeat x3		600s
8641				02 50 48					600s
8642				03 01 07		* 04 42 W			600s
8643	BIAS(4) Dome T = H33C			FLAT		TUNG/A=1/4			30secs,
8646	Comp for HD177724							FeAr CLAR	60sec
8647	HD177724	19 00 49	+13 43	03 20 40					276s
8648	"			03 26 14					253s
8649	Comp							FeAr CLAR	60sec

Spectr. Temp. Dome Temp./Hum. $+13.2^{\circ}\text{C}$ 82.3% Transparency Conditions ... Sl. Hazy ... thin clouds 338

Focus 6.62

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
580	2"				G 6020 1/800 l/h/mm	200 μ Full length	G 5638	30c	Holy pyre	(^{EST} exp 01 41 - 51 ^{EST} Lost)	
500											
550											
470	3"							30c			
										Dome T = $+13.4^{\circ}\text{C}$	
								31c			
* Aperture								32c		11K MAX AOU	
330											
300	2.4"									2.131 AIR MASS thin cloud here	
300								33c		* VERY close to Tel Limit FOR Tel west of PERS.	
C 08645								34c			
								34c			
38K	✓ 249 AOU							35c	Telluric Std	MAX 7400 AOU 1.520 AIR MASS	
40K								35c	"	10K MAX	
								17c		108	

339 pg 55

Date 1992 July 6/7 Observers H. J. T. G.

Emulsion Batches:

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[illegible]

Transparency Conditions *sl 1429* *340*

Dome Temp./Hum $+13.2^{\circ}\text{C}$... 80.5% H

Exp.	Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
303									18ci		11K MAX	
✓									—			
✓									18ci			
									1cs			
60g									17ci			
303	520	2.3			CASS CCD	G=6020 1800/n/mm	200x FULL	6563A	19ci		6100 ADX max 1.077 Air mass	
60g									22ci			
75g									25ci		8700 ADX max	
											All TO WORM G: 92-07 E Persons.	

341

pg. #1

Tue/Wed

Emulsion Batches:

Date 1992 July 7/8

Observers Hdy/Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
CC 08661.FS 8662	FOCUS TEST	Comp/Stellar Hurtman positions						FeAr Clear	20/20
FM00459(AKD).FIS	HD 144579	16 01 30	+39 25 36	20 36			Int 67msec	"N" mode	
8663	BIAS(4)			20 40 27					
8664	COMP							FeAr Clear	60sec
8665	FLAT	NORMAL						Tung A=1/4	25sec
8666	HD 144579	16 01 30	+39 25 36	20 46 04	20 49 14				190sec
8667	COMP							FeAr Clear	60sec
8668	BIAS(4)			21 01 50					
8669	COMP							FeAr Clear	60sec
8670	HD 144579	16 01 30 REVERSED	+39 25 36	21 05 38					184sec
8671	COMP							FeAr Clear	60sec
8672	FLAT							Tung A=1/4	25sec
8673	FLAT	REVERSED						Tung A=1/2	121sec
8674	COMP							FeAr Clear	60sec
8675	HD 177724	19 00 49	+13 43	21 23 48		02 50 E			217
8676	"	"	"	21 28 29				186 sec exp	186

Spectr. Temp. Dome Temp./Hum. 19.4°C / 64% Transparency Conditions .. PART. Cloudy 342

Focus ... 6.62

Clear

Spectr. Temp. Dome Temp./Hum.

NO FAPS CCDT $\rightarrow -100^{\circ}\text{C}$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/20				C455 CCD	1800 11/min G=6020	200M FULL LEN	6563A	3ct 4ct	Focus test	Stellar pixel red 360 0 12 1024 40 1 CCDFMT	
	31x31 pixels	6.6	G8V	4 Frames	Also Tel Normalization star Logged again when Reversed					DOME SW, NO WIND FELT	
										480 0 50 1024 4 1 CCDFMT	
60sec	7632							5ct			
25sec								6ct		12003 ADU MAX	
192sec	2310	2"						7ct	std vel		
60sec	7600							8ct			
60sec								9ct			
184sec	2370							10ci			
60sec	2370 6800							11ci			
25sec	6800							12ci		11667 ADU MAX	
12sec								13ci		15328 ADU MAX	
60sec	6060							14ci			
17sec	3K	249	A0 nm					15ci	guided Telluric Std.	excessively 6000 ADU MAX 1.976 HiR mag.	
150sec	37K	"	"					16ci	"	7K MAX	

343
pg #2

Emulsion Batches:

Date 1992 JULY 7/8.. Observers Hdy. / Tn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCO 8677	Comp							FeAr Clear	60sec
8678	FLATS x2			21 35 52				Tung A=1/2	10sec
8679									
8680	BIAS(4)			21 41 39					
8681	FLAT							Tung A=1/2	10sec
8682	COMP							FeAr Clear	60sec
8683	HD 155937	REPEAT 3	17 ^h 09 ^m 30 ^s +16° 29'	21 48 23					600sec
8684	"			21 58 41					"
8685	"			22 09 00	22 19 00				"
8686	"	REPEAT 3		22 20 18					"
8687	"			22 30 37					"
8688	"			22 40 55	22				"
8689	BIAS 4								
8690	COMP							FeAr Clear	60sec
8691	FLAT			22 55 18				Tung A=1/2	10sec
8692	DARKS x2			23 05		00 38W	+16 23		600sec
8693									
8694	BIAS(4)			23 28 11					

Spectr. Temp. Dome Temp./Hum. 18.7°C... 65% H Transparency Conditions ... P.A.T. Cloudy 344

Focus 6.62

Spectr. Temp. Dome Temp./Hum. 17.9°C... 68.5% H

→ mostly so

CLAMBDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	G=6020 18001/n/mm	200 μ Full L	6563A	17c;			
								18c;		13239	
								19c;		14862	
								20c;			
925	2"	✓ 8.29 8.77	F8					21c;	Hdy pgm	WELL SEPARATED COMPANION	
947											
790								21c;		Cirrus Cloud at times.	
549										CLOUD	
223	2-3"									a	
125								22c;		Thick cloud	
								23c;			
								24c;		12528	
								25c;	26c;		

345 pg #3

Emulsion Batches:

Date 1992 July 7/8 Observers Hdy/Tn

[illegible]

Part cloudy 346

Focus ... 6:62

all cloudy

Dome Temp./Hum. ... 1.0°C ... 1.0%

[illegible]

347 pg#1

Date 1992 July 9/10 Observers Hdy./Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08709 8710	Focus Test	Comp/Stellar/Hartman		20 03		0 0	+37° Tel west side		20/20
ABCD EFG FM00461	HD 144 579	16 01 30	+39 25 36	20 35	(67 msec Int x 4 frames)	(133 msec x 3 frames)	"N" mode		
8711	BIAS(4)			20 47 17					
8712	COMP			20 48 41				FeAr Clear	60 sec
8713-5	FLATS x 3							Tung A=1/2	10 sec each
8716	HD 177724	19 00 49	+13 43	20 53 42					179
8717	"	"	"	20 57 48					240
8718	COMP							FeAr Clear	60 sec
8719	BIAS(4)								
8720	FLAT							Tung A=1/2	10 sec
8721	COMP							FeAr Clear	60 sec
8722	HD 155937	17 09 30	+16 29	21 13 42		Repeat x 6			600 sec
8723	"			21 24 00					"
8724	"			21 34 19					"
8725	"			21 44 37					"

Spectr. Tem
Focus...
Spectr. Tem

Exp. Mir.

FeAr
or

FeAr

6464

30000

4000

6461

670

590

570

50

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
FCA CLEAR	6.62	Set/T=20.8°C	CASS CCD	G-6020 1800 μ /mm	20 μ Full	6563Å	3ci 4ci	*	* T=20.8°C	* @ 360 0 12 1024 40 1 CCD FWHM <u>Stellar Still</u> 2d pixel Red	
SIX	6.66	G8V			200 μ Lower Right	] NOFANS			Seeing Test	DOME EAST Tel East SIDE	
6464							5ci				
							6ci			11367, 11321, 11212	
30000		V 2.99	A0 Venn				7ci		Telluric St	6000 ADU TRAILED	
41000							8ci			11000 ADU TRAILED	
6461							9ci				
							10ci			14784	
							11ci				
670	2"-3"	V 8.29 8.77	F8				12ci		Hdg pgrm		
590											
570											
510											

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Date 1992 JULY 9/10... Observers ... Hdg./Tn.....

→ 24"/14" photometry of same star

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC08726	HD 155937	17 09 30	+16 29	21 54 56					600s
8727	"			22 05 14		00 03 E			600
8728	BIAS (A)								
8729	Comp							Felr clear	60 sec
8730	FLAT							TUNG A=1/2	8 sec
8731	HD 155937			22 21 16		00 13 W	exp/RAA not		600s
8732	"			22 31 54			"		600s
8733	"			22 42 43			Repeat x3		600s
8734	"			22 53 00					"
8735	"			22 03 19					"
8736	BIAS	PHOTOMETRY ENDS							
8737	FLAT							TUNG A=1/2	8 sec
8738	Comp							Felr clear	60 sec
8739	ADS 10408 C			23 22 44	23 42 48				120 sec
8740	HD 155937			23 45 50					600 sec
8741	"			23 56 09					"

Spectr. Temp. Dome Temp./Hum. 19.6°C ... 73.4% Transparency Conditions ... Fine ... vs. 1. hazy ... 350

Focus 6:62

Spectr. Temp. Dome Temp./Hum. CLAMPBDA

not All Exp Tonight with Tel on East Side of Pier

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
560	1.2"	8.29 8.77	F8	CHSS CCD	G6020 1800 lines/mm	200 μ Full	6563A				
580								12c		1.128 AIR MASS	
								1c			
5900								13c			
								14c		11 K MAX	
550								15c		eclipse (probably) for 5 cels 1000 ADU SUM AVG above bkgnd	
550								15c			
580										67 msec Int on Slit	
590										FM00462XY saved of Pair	
										@ 02 51 EST	
650								16c			
								17c		Dome T = 18.7°C	
								17c		11995 MAX ADU	
								18c			
~140	1.5"							19c		some contamination by C FANS TURNED ON AT BEGIN	
610								20c			
609								11		FANS TURNED OFF BEFORE END	

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pg #3

Date 1992... July... 9/10 Observers Hdy/Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 08742	HD 155937			00 06 27					600sec
8743	"			00 16 45					"
8744	BIAS(4)								
8745	Comp							FeAr Clear	60sec
8746	FLAT							Tung A=1/2	8sec
8747	HD 155937			00 31 44					600sec
8748	"			00 42 03					600sec
8749	"			00 52 32					"
8750	"			01 02 51					"
8751	"			01 14 06					687
8752	BIAS(4)								
8753	FLAT							Tung A=1/2	8sec
8754	COMP							FeAr Clear	60sec
8755	DARK			01 31 32					600sec
8756	Comp							FeAr Clear	60sec
8757	BIAS(4)								

Spectr. Tem

Focus

Spectr. Tem

Exp. Mir.

474

37

224

34

267

167

270

Spectr. Temp. Dome Temp./Hum. $+18.0^{\circ}\text{C}/73.2\%$ Transparency Conditions *haze, some cloud* 352
 Focus 662
 Spectr. Temp. Dome Temp./Hum. FANS OFF

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
474	2-3"				1800 lq/mm	200 μ	65B3A	20ci			
337								20ci			
								21			
								22		12820 AD4 MAX	
224								23ci			
314	3"										
267											
167								23ci			
270								24ci			
								25ci		12761	
								26ci			
								27ci			
								28ci			

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Date 1992 July 9/10 Observers Hdy / Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CCO 8758	HD 177724	19 00 49	+13 43	01 51 51					
8759	COMP							FeAr/Clear	6Dsec
8760-1	FLATS x 2							Tung/A=1/2	8sec
8762								FeAr/Clear	60sec
8763	FLAT/Comp for HD 155937							Tung/A=1/2	8sec
8764	BIAS(4)								
8765	HD 155937	17 09 30	+16 29	02 17 04		04 10W			600s
8766	"	"	"	02 27 20					60/s
8767	"			02 37 51					647
8768	COMP FOR HD 155937							FeAr/Clear	60s
8769	FLAT "							Tung/A=1/2	8s
EEG/H FM00463	ADS 14636 HD 201091/92	21 06 9	+38 45	5 03		200 30W		"N" mole	
8770	Saturn			03 47 10		01 27W			166s
8771	FLAT								
8772	COMP								
8773	BIAS(4)								

Spectr. Temp. Dome Temp./Hum. $+16.5^{\circ}\text{C}$ 75% Transparency Conditions *Part cloudy* 354

Focus 6.62

Spectr. Temp. Dome Temp./Hum. $+15.6^{\circ}\text{C}$... 78%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
31033		$\checkmark$ 2.99		CASS CCD		200u	6563A	29ci	Telluric Std	X=1.26 8000 ADU	
								30ci?			
								31ci		12454 MAX	
								31ci			
								32ci			
								1ci		Dome T = $+16.4^{\circ}\text{C}$	
270	$\checkmark$ 2.3	8.29 -8.77	F8					33ci	Holy pyrn		
307								33ci			
190								33ci			
								34ci			
								35ci			
67msec				Image Acquisition & Slit views		200u view.			Brt star CAT sep = 28.7"	13555 goal 301" sep pair	
25000						200u Full length	6563A	36ci	equatorial	4K ADU MAX Ring to Ring	
								37ci		10533	

355

Emulsion Batches:

Date Observers

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