1 3

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

Focus .....

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

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

David Dunlap Observatory
74" Logbook
Vol 79
Plate Nos cc28344 - 30811
November 1994 - February 1995

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Date 1994 Nov 19/20 Observers Km/Smt

~~Emulsion Batches:~~
BG 39 FILTER IN
EXP. MTR.

CCD Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
	CONTINUED FROM BOOK			#78							
CC 28344 ~~CC 28344~~	COMP							FeNe clear	30	BG 39 FILTER	
45	HD40535	$05^h\ 54\ 18$	$-9°\ 23'$	04 29 11		—			1200	3410	
46-65	FLAT x 20					2^h W	+10°	Tung clear	10		
66	BIAS(4)				05 12						
67	COMP							FeNe clear	30		
68	HD77912	$9^h\ 00\ 12$	$+38°\ 51'$	05 30 32		$0^h\ 9^m$ W			320	4180	
69	COMP							"	30		
70	COMP							"	"		
71	HD90537	$10^h\ 22\ 06$	$+37°\ 13'$	05 44 22		$1^h\ 0^m$ ~~E~~			223	4000	4.
72	COMP							"	30		
73	COMP							"	"		
74	HD92125	$10^h\ 33\ 06$	$+32°\ 30'$	05 55 58		$0^h\ 58^m$ E			295	4010	4-
75	COMP							"	30		
76	BIAS(4)				06 04				—		

CCD
Spectr. Temp. -100.1°C Dome Temp./Hum 2.1°C / 73.2% Transparency Conditions hazy, bright fall moon 6

Focus 7.05

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

FANS OFF

430 0 50 1024 4 1 CCDFMT

anson Exp.	Exp. Mtr.	Seeing	~~V Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA	~~P.H.~~ C'	Program	Remarks	max ADU Quality
—												
30	36 39 FILTER				CASS CCD	600 ℓ/mm(C) G=2622	150μ	4220 Å	8			
1200	3410		6.12	F2 IV					9	Km MK STDS.	2nd COMP INADVERTENTLY WIPED AFTER TELESCOPE MOVED & CLOCK DRIVE TURNED OFF FOR FLATS	7.3K
10									10			13.7K – 12.5K
									½			
30									11			
300	4180		4.56	G7 Ib-II					12	"		10K
30									13			
"									14			
273	4000	4-5"	4.21	G9 IIIab					15	"		10K
30									16			
"									19			
295	4010	4-5"	4.71	G2 IIa					20	"	some emission ~ Hδ?	9.8K
30									21			
-									½			

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Date 1994 Nov 19/20 Observers Km / Smt

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mir	Sec
cc28377	COMP							FeNe clear	30		
78	HD 98 262	11^h 13 06	$+33^\circ$ 38′	06 10 59		1^h 26^m E			95	4000	
79	COMP							"	30		
80	COMP							"	"		
81	HD88009	10^h 03 42	$+19^\circ$ 01′	06 22 39		0^h 3^m E			230	330	
82	COMP							"	"		
83/84	COMP / STELLAR HARTMANN					0^h	$+42^\circ$	"	20/		
85	BIAS (4)				06 49				-		

Spectr. Temp. -100.2°C Dome Temp./Hum. 1.5°C / 74.7% Transparency Conditions fine 8

Focus 7.05

Spectr. Temp. ..... Dome Temp./Hum. 1.1°C / 76.3% @ FOCUS TEST FANS OFF

430 0 50 1024 4 1 CCDFMT

Comparison Exp.	BG 39 Exp. Mtr. FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMSHELL	~~P.H.~~ C.	Program	Remarks	max ADU Quality
30					CASS CCD	600 ℓ/mm (C) G=2622	150μ	4220Å	22			
95	4000		3.48	K3III Ba0.3					23	Km MK STDS.		8K
30									24			
11									25			
230	330		7.89	G8IIIa CN1					26	"	CCD T STARTING TO RISE NOW. T = -90°C TRY IT AGAIN	800
11									27			
20/									3/4	FOCUS TEST	TOP UP OF LN_2 BEFOREHAND – TUBE THAWING	
-									1/2			

Backed up to Persens & WORM

#L 9 Mon / Tues

Date 1994 Nov 21/22 Observers [Bln] ... Tm ... Smt ...

Emulsion Batches:

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CCD Spectr. Temp.

Focus ... 6.90

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC283 86/87	Comp / Stellar HARTMAN positions					00 00	+40°	FeAr Clear	40/70		
88	BIAS (4)										
89	Comp							FeAr Clear	60s		
90	HD 37017	05 30 25	-04 34	03 22 23		~1h 30? W					4"
91	Comp							FeAr Clear	60s		
92	Comp							"	"		
93	HD 21364	03 21 42	+09 23 00	03 46 00		4h 12m W			360	20000	5
94	Comp							FeAr Clear	60		
95	BIAS (4)										
96	Comp							FeAr Clear	60		
97	HD 42111	06 03 45	+02 30 56	04 01 47		1h 49m W			500	5150	5
98	COMP							"	60		
99	Comp							FeAr Clear	60		
400	HD 37017	05 30 25	-4 34	04 17 30		2h 34m W			282	1600	5
401	Comp							FeAr Clear	60		

CCD
~~Spectr.~~ Temp. -100°C ..... Dome Temp./Hum. +5.3°C ... 57% Transparency Conditions ... Clearing 10

Focus ... 6.90 ..... very gust SSW wind

Spectr. Temp. ..... Dome Temp./Hum. ..... C LAMBDA 422 0 50 1024 4 1 CCDFMT

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	MAX ADU Quality
40/70					CASS CCD	1800 l/m/m G4558	306u	4475Å	3/4	focus Test	Temperature dropping fast.	
									1/2			
60s									5c		MAX 2.6K	
		4"7"	6.56	B2V					6c	Bln pgm		
60s									7			
t									8			
360	20 000 ish	5"	3.66	B8p					9	Bln pgm	S/N > 300:1	7800
60									10			
									1/2			
60s									11			
500	5150	5"	5.80	A3Vn					12	Wide A-Shell	S/N 200/1	2900
60									13			
60									5			
282	1600	5"	6.56	B2V					6	Bln pgm	S/N ~ 140:1	
60									5			

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Emulsion Batches:

Date 1994 Nov 21/22 Observers [Blair/Wade] Tr./Smt

Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
CC28402-10	FLAT x 9					0h	-20°	Tung clear	13		
11/12	COMP/STELLAR	HARTMANN				0 0	+2828	FeAr clear	40/70	4.2%	
13	BIAS(4)										

Spectr. Temp. ..... Dome Temp./Hum. 3.9°C/55.5% Transparency Conditions ... thick cloud bank rolled over ... 12

Focus ..... 6.90 .....

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

parison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	maxADO Quality
13					CASS CCD	1800 l/mm G=4558	306μ	4475Å	14 C1			14.0K → 12.8K
40/70	4.2°C					"		"	3/4	focus.	Temp CSE = +3°C or T1C = 3	
									1/2			
		Backed up to Perseus & WORM										

p. 113 [Tue/Wed]

Date 1994 Nov. 22/23 Observers [Bin (wde) Tn / Smt

~~Emulsion Batches~~: BG 39 FILTER USED IN EXPOSURE METER

CSS 386 Time Reset

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 28414/15	Comp / Stellar Hartmann					00 00	+40°	FeAr clear	40/70
16	BIAS(4)				17 50				
17	COMP							"	60
18	HD 192518	20 10 08	+28 23 30	18 05 30		1h 46 W			310
19	COMP							"	60
20	COMP							"	"
21	HD 210459	22 05 33	32 41 15	18 17 39		0h 0m			140
22	COMP							"	60
23	COMP							"	"
24	HD 222368	23 34 48	+05 05	18 27 27		1h 19m E			203
25	COMP							FeAr clear	60
26	BIAS(4)				18 42				
CG 4060 1/06	HD 218525	23 03 35	+44 01	18 45		00 33 E		4x	67 ms
605 06	"							2x	133 ms
27	COMP							FeAr clear	60

CCD Spectr. Temp. -101.1°C Dome Temp./Hum. 0.8°C / 45.3% Transparency Conditions partly cloudy 14

Focus 6.9.3 FANS ON

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

422 0 50 1024 4 1 CCDEXT

~~PG 34~~ Exp. Mtr. FILTER	Seeing	~~Pig.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CCAMBDA	~~P.H.~~ C1	Program	Remarks	Quality MAX ADU
+1.6°C	Set	6.93		CASS CCD	1800 l/mm G=4558	30µ	4475Å	3/4	Focus		
								1/2			
								5		SE FAN TURNED OFF	
6550		5.18	A7IIIn					6	Wde A-shell	S/N ~ 220:1	3900
								7			
								8			
6400		4.29	F5III					9	Wde A-shell	S/N ~ 210:1	3900
								10			
								11			
9500	3"	4.13	F7V					12	Std. Vel.		4.4K
								13			
								1/2			
MAX 175, 156, 166, 168		6.43	A0	CCD GUIDE CAMERA				–	Seeing test	Medium NW wind. Dome west	
								–			
								14			

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Emulsion Batches:

Date 1994 Nov 22/23 Observers [Bln./Wade]...Tn./Smt.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
START CC28428	HD21364	03 21 42	+09 23	19 00 17		$4^h 34^m$ E			260
29	COMP							Feather clear	60
30	HD21364	"	"	19 07 59		$4^h 13^m$ E			940
31	COMP							"	60
32 — 40	FLATS x 9					0 0	-12°	Turn clear	13s
41	BIAS(4)								
42	BIAS(4)			01 36 11					
43/44	Comp/Stellar	HARTMAN				0 0	+29	Feather clear	40/70
45	COMP							"	60
46	HD37017	05 30 25	-04 34	01 50 53		$0^h 21^m$ W			900
47	COMP							"	60
48	BIAS(4)				02 09 52				
(49)									

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

Exp. Mtr.	See
2400	
1030	4
5400	

Spectr. Temp. -101.1°C Dome Temp./Hum. 0.4°C / 48.6% Transparency Conditions ..mostly cloudy cleared but STRONG NE FAN ON winds started to carry snow. 16

Focus 6.93

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

Comparison Exp.	Exp. Mtr. FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA	~~P.H.~~ ℓ	Program	Remarks	Quality
260	2400		3.66	B8p	CASS CCD	1800ℓ/mm G=4558	306μ	4475Å	15	Bin	mostly ~~some thoroughf~~ cloud.	
60									16			
940	17030	4"	"	"					17	Bin	cloudy for 1st minute. & for a bit in middle	10K
60									18			1
13s									19.		CLOUDED IN.	14.2K → ~~13.8K~~ 13.0K
									1/2		CLOSED UP.	
									1/2		FANS OFF CCDT = -101.9°C	
40/30	T = +1.1°C	set	6.93						3/4	Focus		
60									5			
900	5400		6.56	B2V					6	Bin	HIGH WINDS	2900
60									7			
									1/2		SAME SNOW IN AIR.	
	Backed up to Perseus & Worm											

17
pg#1 Wed / Thurs

Date 1994. Nov. 23/24..... Observers [Rm]..Tn./Sust.....

Emulsion Batches:
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Spectr. Temp.
Focus.....6
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mg	Exp. UltR
Cc 28449/50	Comp / Stellar HARTMAN				1736	00 11 W	+2913	FeAr Clear	60/60		
51	BIAS(4)			1740							
52	Comp							"	60sec		
53	HD173297	18 39 20	-20 45	17 52 40		3h 27m W			1602	1880	
54	COMP							"	60		
55	~~Comp~~ BIAS(4)			≈1840							
56	Comp for HD187691	19 46 12	+10 10					FeAr Clear	60s		
57	HD187691	19 46 12	+10 10	18 28 17		2 38 W			400	5200	3
58	Comp							FeAr Clear	60s		
59	Comp							"	"		
60	HD187691	19 46 12	+10 10	18 48 32		2 57 W			336	5400	3
61	Comp							FeAr Clear	60s		
62	COMP							"	60		
63	HD180583	19 12 00	+27 45	19 02 43		3 54 W			818	5000	3
64	COMP							"	60		

Spectr. Temp. -101.4°C Dome Temp./Hum. -2.6°C 46.8% Transparency Conditions ... Fine ... some cloud ...

Focus ... 6.9.0 ...

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

* Note 415 definitely has flat image centered in window.

*415 0 50 1024 4 1 CCDFMT

Comparison Exp.	Exp. Mtr. FILTER	Seeing	~~V Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CCAMBPA	~~P.H.~~ Ci	Program	Remarks	Quality max 4
60/60					CHSSCCD	1200l/mm G=5910	306u	6406Å	3/4	focus	FANS OFF	
									1/2		HR8143 in Sci a normalization	
60se									6			
1602	1580		7.48	~60Ib					7	Rm	Telescope E side	2.2K
60									8.			
									9/2			
60s									9ci		CCDT = -100.3°C	
400	5,200	3-4"	V 5.11	F8V					10ci	Std vel	Δλ -00 00 1C Δδ -00 00 0C Telescope East side	10.8
60s									11ci			
"									12ci			
336	5000	3-4"	5.11	F8V					13ci	std vel	Δλ -00 00 08 Δδ -00 01 33 Telescope West side	8350
60s									14			
60									15			
818	5000	3"	6.19	F6I -II6					16	Rm V473Lyr		8700
60									17			

19 Pg#2

Date 1994 Nov 23/24 Observers [Rm] Tn/Smt

Emulsion Batches:
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Spectr. Temp. ..
Focus 6.4
Spectr. Temp. ..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC28465	BIAS(4)				19 23						
66	COMP							FeAr clear	60		
*Edit 67	HD331970	20 08 27	+32 34 16	19 27 13		3 39 W			1800	672	3.4
68	COMP							"	60		
*edit 69	HD331970	20 0827	+32 34 16	20 00 58		4 12 W			1803	673	3.4
70	COMP							"	60		
71	BIAS(4)										
72	Comp							FeAr Clear	60		
73	HD203156	21 1523	+37 49 00	20 52 06		3 38 W			672	500	3"
74	Comp							FeAr Clear	60		
75	Comp							"	"		
76	HD214975	22 36 55	+56 18 24	21 15 55		3 10 W			2020	1600	
77	COMP							"	60		
78	HD214975			21 53 11		3 36 W			1800	1335	4"
79	COMP							"	60		
80	BIAS(4)										

Spectr. Temp. ..... Dome Temp./Hum. -4.8°C / 50.6% Transparency Conditions ..fine...but...hazy.....20

Focus .....6.90.....

FANS OFF

Spectr. Temp. ..... Dome Temp./Hum. -5.8°C / 56.2%

Comparison Exp.	Exp. Mtr. ~~GG 540~~ FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA.	P.H.	Program	Remarks	Quality
					CASS CCD	1800 g/mm G-5410	30 μm	6400 Å	1/2			
60									18			
1800	672	3"4"	9.1 -9.8	F8-G2Ib					19	Rm MW Cyg		1100
60									20			
1803	673	3"4"	9.1 - 9.8	F8 - G2Ib					21 ~~2119~~ 5	START Radial "		
60									22			
									1/2		Dome T = -5.6°C	
60									23			
672	500 s	3"	5.8 -5.9	F2					24	Rm V1334 pgm Cyg		~~7.5~~ 8.0K
60									25			
									25			
2020	~1600		8.40	~60Ib					26	Rm Z Lac		2.3K
60									27			
1800	1335	4"	8.40	~60Ib					26	Rm Z Lac		1900 K
60									27			
									1/2			

21
pg#3

Date 1994 Nov 23/24 Observers [Rm] Tm / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC284 81/89	FLATS x 9					03 45W	+56°	TUNG Ap=1/4	60s.
90	Comp							FeAr Clear	60s
91	VY Per	02 2019	+58 28 04	22 46 47		00 51W			2256
92	Comp							FeAr clear	60s
93	VY Per	02 20 19	+58 28 04	23 27 45		01 31 W			2190
94	Comp							FeAr Clear	60
95	BIAS(4)			00 08					
96	Comp							FeAr Clear	60
97	HD25361	03 56 41	+58 23 00	00 12 54		00 33 W			1833
98	comp							FeAr clear	60
CG 40607-610	HD29587	04 34 30	+41 57					4x	.067
11/12	"							2x	.133
CC28499	BIAS(4)				00 56				
CC28500	COMP							FeAr clear	60
01	HD29587	04 34 30	+41 51	01 01 18		0h 39 W			1461

(Right margin, partially visible: CCD Spectr. Temp. ... Focus 6.90 ... Spectr. Temp. ...; column entries: 300 3.5; 340 3"; 3200 3.4; 201, 190, 196, 189, 191, 211; 3416)

CCD Speetr. Temp. —100.3 °C Dome Temp./Hum. ..... Transparency Conditions ... Sl. hazy, some cloud 32

Focus ... 6.90 .....

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

MAX ADU

CG 540 Exp. Mtr. FILTER	Seeing	Pwr. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	~~5"~~			CASS CCD	1800 l/mm G=5910	306u	6400Å	28			13.2
								29			
300	* 3-5"	10.8 -11.66	F5 -F9					30	Rm pgm	*seeing worsening Some cloud too [S/N 70/1]	
								29			
340	3"	10.8 -11.66	F5 -F9					30	Rm pgm.	cloud & end	
								15			
								1/2			
								17			
3200	3-4"	7.30 -8.07	F6I5 -G2I6					19	Rm pgm	some cloud S/N > 250/1	
								20			
201, 170, 176, 189, 158, 211		7.29	d62					—	SEEING TEST	Dome W, no wind, clear, 7% cat, -6.1°C, 57.4%, 306μ slit (above)	
								—	"	but clouds on their way.	
								1/2			
								20			
3450		7.29	d62					21	RV Std.	through cloud @	6.9K

23 Pg #4

Date 1994 Nov 23/24 Observers [illegible] T.n./Smit

Emulsion Batches:

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Spectr. Temp.

Focus '69

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Time Filter	See
EC 28502	COMP							Fe Ar clear	60		
503	COMP							"	"		
504	HD 30282	04 41 05	36 32 36	01 35 21		01 09 W			1591	420	3"
505	COMP							"	60		
506	BIAS(4)				02 16						
507	COMP							Fe Ar clear	68		
508	HD 44990	06 19 48	+07° 08	02 11 55		0h 10m E			400	5010	
509	COMP							Fe Ar Clear	66		
510	COMP							"	"		
11	HD 224 [illegible] 54	03 31 48	+00 05 00	02 25 43		2 46 W			139	5200	
12	Comp							Fe Ar Clear	60		
13	Comp							"	"		
14	HD 87901	10 03 03	+12 27 00	02 40 08		2 33 E			30	700	
15	Comp							Fe Ar Clear	60		
16	BIAS(4)			02 53							

Spectr. Temp. ..... Dome Temp./Hum. -6.4°C/59.0% Transparency Conditions ..clear again..... 24

Focus ..6.9.....

Spectr. Temp. ..... Dome Temp./Hum. -6.7°C/59%

Comparison Exp.	Exp. Mtr. FILTER	Seeing	Pt. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CCAMBDA	~~P.H.~~ C1	Program	Remarks	Quality MAX ADU
60					CASS CCD	1800 l/mm G-5910	30 μ	6400 Å	22			
11									22			
1597	4200	3"	7.9 -8.8	F6 -G1					23	AW Per Rm pgm		7.8K
60									25			
									1/2			
68									25			
48	5070		B= 6.5-8.0	F7Iab -K1Iab					26	Rm T.Mon		10K
66									27			
9									28			
139	5200		V 4.28	F9IV-V					29	Std vel		9.4K
80									31			
4									31			
30	7000		V 1.36	B7V					7c	Telluric Std	Air mass 1.78	13K
60									8			
									1/2			

2S pg#5

Date 1994 Nov 23/24 Observers [illegible]

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28517	Comp							FeAr Clear	60s
18	HD65583	07 54 18	29 31 00	02 54 58		00 55 E			938
19	Comp						"	FeAr Clear	60s
20/21	Comp/Stellar	HARTMAN				00 50 E	"	"	60/60
CG406 13-16	HD65583	07 54 18	29 31 00	03 25		00 40 E	"	4x	67ms
GG40617/18	"						"	2x	133ms
CC28522/23	Comp/Stellar					00 35 E	"	FeAr Clear	40/70
24	Comp							FeAr Clear	60
25	HD65583	07 54 18	29 31 00	03 35 01		0 10 E			1200
26	Comp							FeAr Clear	60
27	BIAS(4)								—
28	COMP							"	60
29	HD42111	06 03 45	+02 30 56	04 10 52		W			1190
30	COMP							FeAr Clear	60
31-39	FLAT x9					2 30W	+2 30	Ring Clear	13
40	BIAS								

Spectr. Temp.
Focus 6.9
Spectr. Temp.

Exp. Mtr.	Seen
0G570 Filter	
4000	3
~6300	
B639 FILTER	
~4800	3
~6200	

Spectr. Temp. ..... Dome Temp./Hum. -6.5°C 59% Transparency Conditions ..Mostly clear.....
increasing cloud

Focus ....6.9..... 7.00 for 4558+H (CCDFMT for 6400Å 415 0 50 1024 41)

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

Exp. Mtr.	Seeing	Pwr. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG560 Filter				CASS CCD	1800/m G=5916	306μ	6400Å	9			
4000	3"	7.00	dG7					10	Std Vel		7-7
								11			
								3/4	focus Test		
160, 175, 190, 191 236, 249		7.00	dG7		Above	306μ	Slit		seeing test " "	No wind, no fans Dome facing W	
~6300	Set	7.00			1800/m G=4655	306μ	4475Å		CCDFMT 422 0 50 1024 4 1		
BG 39 FILTER											
~4800	3"	7.00 V	dG7					10	Std Vel		2K
								11			
								1/2			
~6200		5.73 V	A3Vn					13	A shell pgm	Half cloudy	
								1/2			13K → 12.1K
								1			

27 MHC

Date 1.994 Nov 3/24 Observers [W.d.e.] Jm / Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc2854	BIAS(4)								
42/43	Comp / stellar	Hartmann				00 01W	+37 06	Fe Ar Clear	40/70
44	BIAS(4)								
45	Comp							Fe Ar Clear	60s
46	HD77190	08 55 51	+28 17 48	04 57 57		00 07W			900
47	Comp							Fe Ar Clear	60s
48	COMP							"	"
49	HD88195	10 05 09	−01° 55 01	05 24 31		0 32 E			1071
50	Comp							Fe Ar Clear	60s
51	BIAS(4)				05 48				

Spectr. Temp.
Focus ... 7.0
Spectr. Temp.

Exp. Mtr.	Se
-6.3°	
6760	3
2115	

Spectr. Temp. ..... Dome Temp./Hum. -6.3° 60% Transparency Conditions ..... Cloudy now 28 clearing.

Focus ... 7.00 .....

Spectr. Temp. ..... Dome Temp./Hum. -5.8° / 59.6% @ close. 422 6 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800 G=4556	30u	4415	1/2			
-6.3°	SET	7.00						3/4	focus		
								1/2			
								17			
6760	3"	V 6.07	A8Vn					18	wide Asell pgm		.4K
								19			
								22			
2115		5.91	A1V					23	wide Asell	Half cloudy S/N ≥ 100:1 ~1.2K continuum	
								24			
								1/2			
	Backed up to Perseus & WORM										

29

Pg #1 Fri/Sat

Date 1994 Nov 25/26 Observers MKi / TA

Emulsion Batches:

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Spectr. Temp. cch

Focus 6

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Se
cc28557/53	Comp / Stellar Hunt Man					00 04W	43 35	FeAr Clear	60 ~~60~~	OG 570 Filter	
54	BIAS(4)			17 57							
55	Comp							FeAr Clear	60s		
56	HD 213998	22 30 13	-00 37 59	18 08 06		00 24 E			104	4000	
57	Comp							FeAr Clear	60s		
58	Comp							"	"		
59	HD 8779	01 ~~24 26~~	-00 ~~55~~ 00 ~~55~~	18 20 27		02 ~~58~~ E			393	2900	4
60	Comp							FeAr Clear	60s		
61	~~BIAS(4)~~ Comp							"	"		
62	HD 9138	01 24 54	+05 ~~38~~ 00	18 36 01		02 51 E			109	400	
63	Comp							FeAr Clear	60s		
64	BIAS(4)										
65	Comp	~~03 44 43~~	~~+16 57 06~~					FeAr Clear	60s		
66	V471 Tau	03 44 43	+16 57 06	18 48 38		4 45E			910	297	5
67	V471 ~~Comp~~ TAU	"	"	19 04 11					900	297	
68	Comp							FeAr Clear	60		

Spectr. Temp. ccd −100°C ..... Dome Temp./Hum. +29°C 58% Transparency Conditions ... Fine ... 30

Focus .... 6.84 .....

Spectr. Temp. ..... Dome Temp./Hum. +18°C 55.2% 415 6 50 1024 4 1

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG560 Filter				CHSS ccd	1800/4/mm	306u	6563Å				
								5			
4000		4.02	B9 IV-V$_n$					7	Telluric Std		8.9K
								8			
								8			
2900	4"	6.41	gK0					9	Std Vel		
								10			
								11			
4000		4.84	K4III					12	Std Vel		9.4K
								13			
								1/2			
								14			
292	5-8"	9.4 - 9.7	K0V+wd					15	V471 Tau	2.53 Air mass (S/N 75/1)	
297		1	1					16			
								17			

Pg #3
31

Date 1994 Nov 25/26... Observers ...MKi/JTn.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp. Exp. Mtr.	Spectr. Temp. See
CC28569	V471 Tau	03 44 43	+16 57 06	19 22 41		04 10E			953	311	6
70	"	"	"	19 35 58		03 55E				338	5
71	Comp							Fe/Ar Clear	60s		
72	BIAS(4)							~~Tung Ap 1/4~~			
73	FLAT					3 51E		Tung Ap 1/4	6s		
74	V471 Tau	03 44 43	+16 57 06	19 59 29		3 34 30E			900	340	
75	"			20 14 44		3 19E					
76	Comp							Fe/Ar Clear	60s		
77	V471 Tau	03 44 43	+16 57 06	20 30 42		3 01E			916	377	
78	"			20 48 18		2 48E			728	300	
79	Comp							Fe/Ar Clear	60s		
80	BIAS(4)										
81 → 86	FLATS x 6					2 40E	+17 13	Tung Ap 1/4	6s		
87	DARK	Lights off		21 35 44							
88	BIAS(4)			22 48							

Spectr. Temp. ..... Dome Temp./Hum. +1.8°C 55% Transparency Conditions ..Fine ... some cloud 32

Focus ..6.8.4.....

Then SNOW & Haze

Spectr. Temp. ..... Dome Temp./Hum. +1.1°C 69.3% medium → strong SW wind MAX ADU

06560

Exp. Mtr.	Seeing	Rtg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
311	6"	9.4 -9.71	KO V + wd	CASSCCD	1800 l/mm G-6035	306u	6563A	18	V471 Tau pgm		
338	5"							19			
								20			
								1/2			
								21			137K
340								22.		S/N = 90/1	
								23			
								24			
377								25		cloud at end.	
300								26		more cloud..	
								27			
								1/2c			
								28c			133K
								29			
								1/2			

33
Pg #2

Date 1.9.94..Nov 25/26.. Observers ..M.K.i../.T.y.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28589	Comp							FeAr Clear	60s
90	V 471 Tau	03 44 43	+16 57 06	22 57 47		00 44 E			394
91	Comp							FeAr Clear	60s
92/93	Comp / Stellar	HARTMAN positions.				00 40 E	+18°	"	60/60
	Nov 28/29/94			00 50					
CC28754/55	Comp / Stellar			1st ORDER	no filter	0 0	+30°	FeAr Clear	50/85
56	FLAT				"	"	"	TUNG Clear	4s
57/58	Comp / Stellar				"	"	"	FeAr Clear	50/85
59/60	Comp / Stellar	HARTMAN			OG 560 filter	"	"	FeNe Ap V2	9/13
61	FLAT				"		Ap = 1/4	TUNG	3sec
62/63	Comp / Stellar	HARTMAN			"			FeNe Ap V2	9/14

Spectr. Temp.
Focus....6.2
Spectr. Temp.

Exp. Mtr.	Sec
OG560 Filter	
160	3
+00.2°	
T=+37°C	
T=+37°	6
T=+34°C	6
T=+3 °C	6

Spectr. Temp. ..... Dome Temp./Hum. 00:3°C ... 70:26% Transparency Conditions .. P.a.r.t. cloudy 34

Focus .... 6:84 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Then snow again.

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG560 Filter				CHSS CCD	1800 l/mm G=6035	306u	6563Å	8c			
160	3"	9.4 -9.7	150 V + wd					9c	V471 Tau pgm cloud again		
								10c			
+00.2°C	Set 6.84							3/4	focus test Righton @ Row #300		
All To WORM, OTHER SIDE Formatted 94-11B → Perseus too.											
T=+3.4°C	7.00 set		(stellar=.5 pixel Red)		1200 l/mm G=3770	306u	4879Å	3/4	focus Test	for Shift/set scale	
					"		"	5c	FLAT	Grating Shift/set test	
T=+3.4	6.60 set		stellar=2.5 pixel Blue		"		"	6/7	focus test	CCDFMT=415 0 50 1024	4 1
T=+3.4°C	6.90		stellar=3 pixel Red		1200 l/mm G=5520	306u	8760Å	8/9	" "	370 0 50 1024 4 1 CCD Fmt	
					"	"	"	10		max 8.2K ADU	
T=+3 °C	6.60		stellar 2.0 pixel Blue		"	"	"	11/12			

35 Pg#1 Sat/Sun

Date 1994 Nov. 26/27 Observers K.M./I.T.

Emulsion Batches:

CCD Spectr. Temp. -7
Focus 7.03
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp. Mtr.	Seeing
cc285 94/95	Comp / Stellar	Hvat	mtn			00 42W	+58 43	FeNe clear	20/40	8639	
99	B(AS(4) Note, done after cc2859			18 03 25							
96	comp							FeNe clear	30s		
97	HD 201091	21 02 25	+38 15 27	17 54 28					396	5/00	
98	Comp							FeNe clear	30		
cc28600	Comp							"	"		
01	HD 197345	20 38 01	+44 55 22	18 08 58		+1 33 W			15	5500	
02	"			18 10 00					17	6000	
03	comp							FeNe clear	30		
04	Comp.							"	"		
05	HD 197989	20 42 10	+33 35 44	18 17 35					44	6000	
06	"	"	"	18 19 26					42		
07	comp							FeNe clear	30		
08	Comp							"	"		
09	HD 206165	21 35 14	+61 37 51	18 27 20		00 58W			249	5900	3

CCD
Spectr. Temp. -100.3°C ..... Dome Temp./Hum. -20°C 63% Transparency Conditions ..... Fine 36

Focus ~~7.03~~ [Note left to be 7.13 Nov 29]

Spectr. Temp. ..... Dome Temp./Hum. -3.5°C 64%

CCD FINT

*415 0 50 1024 41 MAX

Exp. Mtr.	Seeing	Pt. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39	~~-20~~°C for Test Temp dropping fast			CASS CCD	600ln/mm G=2622	306u	4700Å	3/4	focus test	*Note This grating, when Firmly mounted, projects Spectrum centered in window with column origin of 415	
								5			
5100		5.24	K5V				4700Å	6	MK standard	Otherwise a much larger column origin	9K
								7			
								8		Blue comp lines	10K
5500		1.25	A2Ia					9		Both fast guided in Dec's Hr L	14K
6000		"	"					10			13K
								11			
								11			
6000		2.46	KoIII					12			10K
								12			
								13			
								13			
5750	3"4"	4.73	B2I					14			MAX 12K
								15			

37 pg 42

SAT / Sun

Date ..1994.Nov.26/27. Observers .Kim./..Ty.....

Emulsion Batches:

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CCD Spectr. Temp.

Focus ...k 7.0...

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
cc28610	HD206165	21 35 14	+61 37 51	18 32 18					230	6539 f/6.8	
11	Comp							FeNe Clear	60s		
12	Bias(4)			18 38							
13	comp	22 52 08						FeNe	30		
14	HD216956	~~21 40 27~~	-30 09 08	18 46 38	~~08~~	-00 04 E			27	5600	
15	"	"	"	18 48 00		-00 03 E			27	5500	
16	comp							FeNe	30		
17	comp										
18	HD 204867	21 26 18	-06 00 40	18 56 15		+01 31 W			64	5300	
19	~~comp~~ "	"	"						69		
20	COMP							FeNe Clear			
21	COMP										
22	HD 206859	21 39 47	16 53 28	19 04 21		+01 28 W			213	5300	
23	"	"	"	19 08 31		+01 33 W			231	5600	
24	Comp							FeNe Clear	30s		

CCD
Spectr. Temp. -100.3°C Dome Temp./Hum. ..... Transparency Conditions ... Fair ... 38

Focus 7.03 [Noted to be 7.13 Nov 29]

Spectr. Temp. ..... Dome Temp./Hum. -4.0°C 66%H C. LAMBERT

CCDFMT
415 0 50 1024 4 1

Comparison Iter	Comparison Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	238	BG39 Filter		4.73	B2I	CHSS CCD	600 G=2672	306	4200Å	15.	MK std		12.6K
	63									16			
										1.12			
	36									17			
	27	5600		1.16	A3V					18			13.2K
	27	5500								19			12.0K
	30									20		Comp	13K
										20			13.2K
	64	5350		2.91	G0Ib					21			10.0K
	69									22			
										23			
										23			13.3K
	28	5300		4.34	G5Ib					24			8.4K
	21	5600								24			8.0K
	30												

39 pg #3

Date 1954 Nov 26/27 Observers Hm./Tu

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc28625-44	~~Comp~~ FLATS x 20				cc28645 Comp	0200W	58°47	Clear FeNe	30s
46	HD 206936	21 40 27	58 19 17	19 49 41		+02 10 W			360
47	HD 206936	21 40 27	+58 19 17	19 49 41					600
48	Comp							FeNe Clear	30s
49	BIAS 4			20 02 38					
50	Comp								
51	HD 218329	23h 1.9m	+8° 52'	20 27 56		+01 36 W			600
52	~~Comp~~ Comp	"	"	"				FeNe Clear	30
53	Comp							"	30
54	HD 219215	23h 9.1m	-06° 35'	20 50 35		01 50 W			451
55	"	"	"	20 58 35		0200W			556
56	Comp							FeNe Clear	30
57	BIAS (4)			21 10					
58	Comp							FeNe Clear	30s
59	HD 219734	23 13 06	+48 28	21 16 58		2 16 W			624
	Comp							~~FeNe Clear~~	~~30~~

Spectr. Temp.
Focus ... 70
Spectr. Temp.

Exp. Mtr.	See
BG39 Filter	
13200	
22500	
9500	
9,400	
9,100	2-
9,600	2-

Spectr. Temp. ..... Dome Temp./Hum. -39°C 66% Transparency Conditions ..... some cloud 40

Focus ..... 7.03 .....

Spectr. Temp. ..... Dome Temp./Hum. -48°C 67.8% CCDFMT 415 0 50 1024 4 1 MAX

Exp. Mtr.	Seeing	Rtg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter					600 h/mm G2622	306μ	4200Å	26 27		FLAT MAX	13.5K
13200		4.08	M2Ia					28			7.3K
22500		"	"					28			12.9K
								28			
								1/2			
								5			
10500											
~~11000~~		4.52	M1IIIab					5		MAX 14.6K ~~SATURATED 16.0K~~ ~ ~~16.3K~~	
								6			
								6			
9,400		4.22	M1.5III					7		S/N=170/1 @ 4200Å	12K
9,100	2"-3"							7			9.5K
								8			13.8K
								1/2		CCDT = -100.5°C	
								11			12.7K
10,600	2"-3"	B 6.52 V 4.85	M2III					12			14.4

4 pg #4

Date 1994 Nov 26/27 Observers K.M. / J.T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28660	HD219734	23 13 06	+48 28	21 28 15		2 31 W			90
61	Comp							FeNe Clear	30s
62	Comp							4	4
63	HD223173	23 42 06	+56 54 00	21 50 33		2 31 W			120
64	comp							FeNe Clear	30
65	bias 4			22 15					
CG40 620 – 623	HD13013	02 02 18	+43 59 07	~2220		00 18 W	+44 25	4x	67½
624 625	"							2x	133½
CC28666	Comp							FeNe Clear	
67	HD10761	01 40 06	+8 39	22 34 21		00 58 W			173 ~~90~~ 173
68	"	"	"	22 38 04		01 01 W			180
69	comp								30
70	comp								30
71	HD14469	02h 15.1m	+56° 9'	22 48 50		01 07 W			~~150~~ 200
72	Comp								
73	BIAS (4)			23 24					

Spectr. Temp.
Focus 7
CCD Spectr. Temp.

Exp. Mtr.	Seen
9100	2
3754	2
	2
4200	
5500	
1773	2

Spectr. Temp. ..... Dome Temp./Hum. -4.7°C 68% Transparency Conditions increasing haze / clouds 42

Focus 7.03

~~Spectr~~ CCD Temp. -100.5°C Dome Temp./Hum. -5.2°C 67.6%H

c Lambda

MAX A04

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
9,100	2"	B 6.52	M2III		600 l/mm G=2622	306u	4200Å	14ci			12.5
								13			
								13			12.7K
3754	2"	B 7.16	K3II b					15			6.6K
								15			
								1/2			
	2"-3"	V 6.40	G8III		HBwd	306u	Slit		Seeing	Dome west, Light NW wind only NE FAN on now	
								16ci			
5200	-	B 5.22	G8III					18ci			max 10K
5500								19 ci			11K
								20 ci			
								23 ci			
1773	2"	B 8.76	M3-M4 Iab					21ci		Part Cloudy	1.2K
								23ci			
								1/2			

43 PyH5

Date 1994 Nov 26/27 Observers K.m / J.T

Emulsion Batches:
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Spectr. Temp.
Focus 70
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
cc 28 74	COMP							FeNe Clear	30		
75	HD 47839	06h 35.5m	+09° 59'	233220		2 58 E			274	4006	3
76	"	"	"	233813					~~348~~	3800	
77	COMP							FeNe Clear	30 ~~[illegible]~~	~~[illegible]~~	
78	COMP							"	30		
79	HD ~~46150~~ 46223	06 ~~27m 36~~	+04° 53' ~~+5 00~~	00 00 39 ~~0 23 50 19~~		01 59 E			1570	1460	3
80	comp								30		
81	bias 4.			00 30							
82	comp							FeNe Clear	30		
83	HD 70272	08h 15.9m	+43° 31'	00 43 19		~~03~~ 16 E			922	6200	3
84	"	"	"	00 59 37		03 08 E		1	501	6300	
85	Comp										
86	~~0~~ comp										
87	HD 82210	09h 25.6m	+70° 16'	01 15 03		04 07 E			315	5400	
88	~~comp~~ "	"	"	01 26 01					200	4400	
89	comp										

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. Part cloudy 44

Focus .... 7.03 .....

Spectr. Temp. ..... Dome Temp./Hum. -5.1°C 64.4%H

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30					CASS CCD	600 G=2622	~~306~~ u	4200A	25			
274	4006	3"	B 4.41	O7Ve					24			12.4K
~~248~~	3800								26			
20 ~~300~~	~~29000~~								27			8.7K
30									29c			
157c	146P	3"	B 7.47	B2					~~30~~ G		cloudy $\Delta\alpha$ -00 00 10 $\Delta\delta$ -00 03 18	3.4K
30									8c			
30									8			
92	~~6~~6200	3"	B 5.80	K4.5 III					9		cloudy	9.6K
101	6500								10			9K
									11			
									11			
315	5400		B 5.31	G4 III-IV					12			12.9K
200	~~4~~600								14			13.2K
									16			

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Date 1994 Nov 26/27 Observers Km/Tm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp. / Exp. Mtr.
28690	bias 4				01:33					
91	comp							FeNe clear	30	
92	HD 62285	07h 38m 8.0	+26° 01'	01:40:02		01 51 E			360	2900
93	"	"	"	01:47:18		01 39E			676	6240 2
94	Comp							FeNe clear	30	
95	Comp							"	"	
96	HD 46150	06 2636	+5 00	02 07 56		00 01 W			1084	700 3
97	Comp							FeNe clear	30	
98	Comp							"	"	
99	HD 74395	08 38 48	+6 52	02 34 08		01 58 E			274	5370 3
cc28700	HD ~~74395~~	"	"	02 39 18		01 53E			257	5500
01	~~BIAS~~ Comp							FeNe clear	30s	
02	BIAS (4)			02:47						
03	comp								30	
04	HD 89025	10 11 08	23 54 57	02:54:47		315E			64	4000
05	"			02:57 48					65	2700

Spectr. Temp. ..... Dome Temp./Hum. -4.8°C 63% Transparency Conditions ... Past. Cloudy 46

Focus .... 7.03 .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	600 h/mm G=2622	306	4200Å				
								8			
2900	·	B 6.85	K4.5 III.					9		sunset cloud	4.4K
6,240	2¾"							10			9.7K
								11			
								11			
700	3"	B 6.60	O6f V/e					12	Looks very early however	only (seems too faint) thin cloud this time	1.8K
								13			13.5K
								13			
5370	3"	B 5.46	G1 Ib					14			
5500								14			10.9
								16			
								1/2			
								16			
4000		V 3.44	F0 III					17			12.3K
2700								18			7K

47 pg # 7

Date 1994 Nov 26/27 Observers K.m./T.T.

Emulsion Batches:

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Spectr. Temp.

Focus 7

Spectr. Temp.

38

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CC 28706	Comp										
707	comp										
708	HD 87737	10 01 53	+17 15 01	03 04 47					62	3570	
709	"	"	"	03 09 11					3F 50	4200	
710	comp										
711	comp										
712	HD102212	$11^h\ 40.^m7$	+07°05'	03 16 29		04 19 E			200	5150	
713	"	"	"	20:4P		04 10 E			418	9800	
714	Comp							Fe Ne clear	30s		
715	BIAS(4)										
716	comp								30		
717	HD52938	$06^h\ 58.^m0$	-08°19'	03 37 06		N			22.07	1915	3
718	Comp										
~~719~~	~~HD101501~~	~~$11^h\ 35^m\ 47^s$~~	~~+34° 46'~~	~~Comp.~~							
720	HD101501	$11^h\ 35^m\ 47^s$	+34° 46'	04 24 39		02 52 E			100	3340	
724	comp										

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions . P.C.R.T. Cloudy 48

Focus .....7.03.....

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

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								4200Å	20			
									20			
62	3500		V 3.52	1 OJ b					21			8.7K
36	4000								22			11.2K
									23			
									25			
200	5150		B 5.54	M1 III b					26			6K
48	9800								27			12.5K
38									28			
									1/2		CCDT = −100.6°C	
30									29			
22.07	1715	3"	V 7.8	K3 5 III b					30			S/N ~70/1
									8			
									8			
10	3340		V 5.33	G8V					9			6.7K
									10			

pg #849

Date 1994 Nov 26/27 Observers Km/TG

Emulsion Batches:

Spectr. Temp.
Focus 70
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
722	bias(4)				04:45						
723	comp										
24	HD103287	11 48 34	+54 15 03	04 51 30		02 54 E			28	3500	
25	"	"	"	04 52 53					22	3500	
26	comp							FeNe clear	30		
27	comp							"	"		
28	HD113226	12 57 12	+11 29 48	05 00 21		03 53 E			60	3600	
29	"	"	"	05 02 07					110	~7100	
30	comp								30s		
31	comp								30		
32	HD109358	12 29 00	+41 54 03	05 11 43		03 12 E			115	4100	
33	"	"	"	05 14 59					116	4100	
34	comp								30		
35	comp								30		
36	HD113139	12 56 24	+56 54 08	05 22 20		03 31 E			180	2900	
37	"			05 26 41					20p	4600	

Spectr. Temp. ..... Dome Temp./Hum. -5.5° 63.6° Transparency Conditions ... mostly cloudy ... 50

Focus ... 7.03 .....

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

MAT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						306u		1/2			
								8			
3500		V 2.44	A0V					9			
3500								10			12K
								11			
								12			
3600		V 2.83	G8III					14			9
7100								15			16.2K
								16			
								16			
4100		V 4.26	G0V					17			11.5K
4100								17			11.5K
								20			
								20			
2900		V 4.93	F2V					21			8.5K
4600								22			14.2K

51 ps 9

Date 1994 Nov 26/27 Observers K.m. / J.T.

Emulsion Batches:
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Spectr. Temp. ...
Focus ... 7.03
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
cc28738	Comp							FeNe Clear	30		
39	comp							"	"		
40	HD 120315	13 43 36	+49 48 45	05 36 40		← 03E			5	400	
41	"	"	"						12	4200	
42	Comp							FeNe	30		
43	Comp							"	"		
44	HD 127665	14 27 31	+30 48 37	05 45 59		04 29 E			564	5500	
45	"			05 55 39					147	5400	
46	Comp							FeNe	30s		
47	BIAS(4)										
48	Comp								30s		
49	HD121370	13 49 55	18 53 56	06 03 57		03 39 E			215	3400	
50	Comp										
51	BIAS(4)										
52/53	Comp / Stellar					0 0	+40°	FeNe Clear	30/40		-515

Spectr. Temp. ..... Dome Temp./Hum. -5.7°C 63.6% Transparency Conditions ... cloud from SE now 52

Focus ... 7.03 ... Note on Nov 29 set was 7.13 Dome Temp./Hum. -5.5°C 64%

Spectr. Temp. ..... [note Nov 29, But focus was OK] max

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	30							306a	4200	23c			
	"									23			
	5	4000		V 1.86	B3V					~~24~~			14K
	12	4200								25			15K
	30									8			
	4									8			
	564	5900		V 3.58	K3III					9		cloud again (thick)	8.5K
	147	5900								10		(thin)	9.2K
	30									11			
										1/2			
	30									8			
	215	3200		V 2.68	G0IV					9		Thick cloud	7.3K
										11		CCD warning – 98°C	
	30/44	-5.5°C			7.03 set					3/4		All to workers persons	

p. 53 note Last CC # is a 28763, back 10 pages (Tests)
Also Current wagon dir is 94-11B

Date 1994 Dec. 1 Observers {Vys} Smt ... with one [Hlw]

~~Emulsion Batches~~: no filters anywhere

WWV clock unavailable

CCD Spectr. Temp. ...
Focus ... 6.9
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(s) Exp.	Exp. Mtr.	Seen
CC28764/5	COMP/STELLAR HARTMANN					0^h	$-3°$	Fe Ne clear	20/30		
66	BIAS x 4				01 13						
67	COMP							"	20		
68	HD 36395	05 26 18	-03 41	01 18 56		$0^h 31^m$ W			1300	1225	
69	COMP							"	20		
70	BIAS x 4				01 44						
71	COMP							"	20		
72	AC+16 777-164	05 36 15	+15 17 17	01 54 42					2520	280	
73	COMP							"	20		
74	BIAS x 4				02 40						
75	COMP							"	20		
76	BD-2 3000	corrected for precession from 2000 09 48 10	-03 13 04	02 48 11		$2^h 9^m$ E			2000	316	
77	COMP							"	20		
78	COMP							"	11		
79	HD 95135	10 57 54	+36 38	03 39 52		$2^h 45^m$ E			930	1508	

CCD Spectr. Temp. −100.4°C Dome Temp./Hum. −0.8°C/63.9% Transparency Conditions just cleared 54

Focus 6.93

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

FANS ON

420 0 50 1024 4 1 CCDFMT

Comparison Filter(s) Exp.	Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CAMBOA	P.H.	Program	Remarks	~~Quality~~ MAG AOV
20/30					CASS CCD	1800 l/mm G=5115	306μ	5303 Å	3/4	FOCUS TEST	HOT PIXEL @ COL 26	
									1/2			
20									5			
1300	1225		7.97	M1					6	Vys 9 Marcy Standard	close to hot.	3000
20									7			
									~~7~~ 1/2			
20									8			
2500	280		10.61	M0					9	Vys 467 Smrt {Vys3}	not guided @ beginning (drawing field #) no published RV	370 above b/g
20									10			
									1/2			
20									11			
2000	216		10.54	M0					12	Vys 560 Hlw {Vys3}		300 above b/g
20									13			
11									14			
930	1508		7.48	M2					15	Vys 594 Marcy Standard	high proper motion	4300

p. 255

Date 1994 Dec 1 Observers [Hlw] Smt / EVG's 3 ... iks backup

Emulsion Batches:
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CCD
~~Spectr.~~ Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(S) Exp.	Exp. Mtr.	See
cc28780	COMP							FeNe clear	20		
81	BIAS x4				03 58						
82-90	ELAT x9					0^h	+24°	Tung ½ Ap.	4		
91/92	COMP/STELLAR HARTMANN					"	"	FeNe clear	20/30		

CCD
~~Spectr~~. Temp. -100.4°C Dome Temp./Hum. -1.5°C / 66.8% Transparency Conditions the proverbial "fine" 56

Focus 6.93 FANS ON

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

mparison er (S) Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20									16			
									1/2			
4									17		median ADU max ~ 12.8K	13.4K → 12.5K
2430									18/19	FOCUS TEST		
		Backed up to Perseus & WORM										

57 Thurs / Fri

Date 1994 Dec 1/2 ... Observers KK / SMT .....

Emulsion Batches:
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Spectr. Temp. ...
Focus .....
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CE08278	Hartmann Test IN							ThAr	20		
9	OUT								20		

following day: 3 sets of 1800s dark followed by 3 biases
full 1024 x 1024 format

labeled fdark_b1-b.fts

last dark & biases spoiled
Telescope slew during readout apparently killed readout sequence

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 58

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1200/	60μ	3960Å			T = 2.2°C focus = [illegible]. 240 (?)	

59 pg#2

Date 1994 Dec 2/3 Observers KK/TH/SMT

Emulsion Batches:
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CCD Spectr. Temp.
Focus 124
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
CE08280	BIAS(4)				22 30 isL						
81	COMP							ThAr Clear	15s		
82	HD202109	21 087	+29 49	~~18 0027~~	~~17 55 30~~	0144 W			1633	3500	
83	Comp							ThAr Clear	15		
84	BIAS(4)				23 33						
85	COMP							"	"		
86	HD215182	22 3818	+29 4200	18 4003	F	0042W			930s	2222	
87	Comp							ThAr Clear	15s		
88	Comp							"	"		
84	HD182640	19 2030	+2 55	19 07 46		04 51 W			2377	841	
90	Comp							ThAr Clear	15s		
91	BIAS(4)			19 48							
92	Comp							ThAr Clear	15s		
93	HD183192	19 26 42	+27 4501	19 5736		05 24 W			1660	1560	
94	Comp							Th Ar	15s		

CCD
~~Spectr~~. Temp. -101.8°C Dome Temp./Hum. +6.5°C 58% Transparency Conditions Fine 60

Focus 1240

Spectr. Temp. Dome Temp./Hum.

Note that No Filter was in Exposure meter slide.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle CCD 17.80 tilt	1200 l/mm ~~1350~~ .4460	60u 400u Height=.225	=.277 3960Å	1/2c.			
15s								2			
1633 3500 ~~3200~~	<2"	~~4.2~~	G8 II					3ci	H&K pgm	CSS 386 time Reset during exposure.	1900.
15								4			7.3K
								1/2			
11								4			
930s 2222		B 3.8	G8 II +F	?				5c.		(S/N 140/1 @ center)	1.3K
15s								4			
11								4			6.1K
2317 841	2"-3"	3.68	F0 IV					6		(at center ~~<~~ 30/1 S/N) * Telescope East Side * above	40AD4
15s								4		* Counts too Low / Background	
								1/2			
15s								4ci			5.9K
1660 1550	2-4"	4.2	K5 II +B	?				2ci		Trailed (guidal) to hopefully account for refraction. Blue should be East side of image.	(100 MM ABOVE Background
15s								4ci			

G1
1942

Date 1994 Dec 21 3... Observers [HK] Th. I. Sm 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	Comparison Exp.
CE08295	Comp for HD 186 791	19 41 30						ThAr	15s
96	HD186791	19 41 30	+10 22	20 38 01		5 47 W			
97	Comp CE08298 BIAS(4)			21 06				ThAr	15s
98	Comp							"	"
300	HD172167	18 33 36	+38 41	21 11 36		7 31 W			1615
301	Comp							ThAr	15s
02	COMP							"	"
03	HD209790	22 00 54	+64 08 00	21 49 07		5 08 W			3161
04	Comp							ThAr	15s
05	BIAS(4)				22 44				
06	COMP							ThAr	15s
07	HD6961	01 05 00	+54 37	22 55		3 11 W			3385
08	Comp							ThAr	15s
09	BIAS(4)				23 55				
10	COMP							"	15

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

Exp. Mu.	Se
640	4
6920	
1431	
2000	

Spectr. Temp. ..... Dome Temp./Hum. ~~14.8°C~~ ... ~~65.3%~~ Transparency Conditions ... slightly hazy 62

Focus ... 24.0 .....

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

MAX HA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Echelle	~~X~~ Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
				17.80°	1200 l/mm x: 4460	~~300~~ 400μ = H	3960Å	4ci			4.2
640	4"-6"	2.72	~~K~~ 3II					5ci	Std Vel	Telescope Still East Side PROBLEM →	very weak
								4co			
	extreme							4ci			
6920	?	0	A0V					3e.	Vega	S/N 140/1 at center	1.5K
								4ci			
								4			
1431	<2"	B 463	A3m					5	KK pgm	Telescope Still East Side	6.5K above b/g
								4			
								1/2			
								4			8.5K
2000	1"	4.33	A7V					6	KK pgm		2.0K
								4			8.4K
								1/2		clean!	
								4			

63 pg#3

Date 1994 Dec 21 3.... Observers [KK]./Smt./T.....

Emulsion Batches:

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CCD Spectr. Temp.

Focus ...24

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
CCD 8321	HD 29316	04 32 00	+53 17 00	00 08 36		0 53 W			3256	796	1
12	Comp							ThAr	15sec		
13	BIAS(4)				01 06						
14	Comp										
15	HD 34029	05 09 18	+14 55 00	01 19 54		00 48 W			837	20 000	OK
16	Comp							ThAr	15s		
17	HD 34029			01 36 19		01 02 W			688	20 000	
18	COMP							"	15		
19	HD 34029			01 51 25		01 15 W			554	20 000	
20	COMP							"	15		
21	BIAS(4)				02 05						
22	COMP							"	15		
23	HD 47105	6 31 54	+16 29	02 13 04		00 18 W				107	1.2
24	COMP							"	15		
25-29	FLAT x5					2 40 E	+23 40	Tung clear	200		

CCD Spectr. Temp. -101.5 ..... Dome Temp./Hum. +3.9°C ... 67%H Transparency Conditions ... Fine, ... v. hazy, slight haze 64

Focus ... 240 .....

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

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	× Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max Quality
3256	796	1"	V_{AB} 5.36	A5n	echelle 17.80	1200 till=.4460	60u 400uH	3960Å	3c	KK pgm		700 above b/g
15se									4			8.0K
									1/2			
			V 0.08	G5III e +G0III					4			
837	20,000	OK	↓	↓					5c	KK Capella		12.3K
15s									4			
688	20 000								5	KK Capella		14.2K
15									4			
554	20 000								5	"		14.3K
15									4			
									1/2			
15									4			
	107	1-2"	B 1.9	A0V					6	KK γGem	Cloud now	500
15									4			above Background
200							60u watk 100u = .195 height		2		TOPPED UP DEWAR BEFOREHAND.	7600 →8100

6S #4

Emulsion Batches:

Date 1994 Dec 2/3 Observers [K.K.] Ta/Smt

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
CCD 83 30/31	Inboard/Outboard Hartman			0340		0240E	+24°	THA	30/40	(Stellar Spectr.	
32	BHS(4)										
	~~More Dem motion tests by Bateh from 3Hmpec3 To 2Hmpec~~										

CCD
~~Spectr~~. Temp. ..... Dome Temp./Hum. +35°C 66.8%H Transparency Conditions ... Mostly cloudy 66

Focus ... 240 .....

Spectr. Temp. ..... Dome Temp./Hum. +36°C 66.3% — completely so.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	× Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
(Still set for too cool a temp)				echelle CCD	1200 ~~Height~~ Height	60u width 400u	3960A°	7/8c	focus test;	CCD fmt 0 0 128 1024 8 1 Telescope East Side	
						"		1/2c		6 0 256 1024 4 1	

67

Night SAT/SUN

Date 1994 Dec 3/4 ... Observers [illegible] / Smt / Tn .....

Emulsion Batches:

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Spectr. Temp. 40

Focus ... 24

Spectr. Temp. .

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seein
33 cc0083 34	in board / out board					2 25 W	+5°	ThAr	20/20		
35	BIAS(4)			00 11							
36	Comp							ThAr	15s		
37	HD 34029	05 09 18	+45 54 00	00 16 37		0 17 E			530	18400	
38	Comp							ThAr	15s		
39	HD 34029			00 27 13		0 02 E			811	25433	
40	COMP							"	15		
41	HD 34029			00 42 36		0 12 W			742	22100	
42	COMP							"	15		
43	BIAS(4)			00 57					—		
44	COMP							"	15		
45	HD 209790	22 00 54	+64 08 00	01 01 09		08 05 W			1606	265	3-4"
46	COMP							"	15		
47	Comp							"	15		
48	HD 56486	07 14 12	+22 10 00	01 42 47		00 44 E			1123	522	4"

Spectr. Temp. CCD −100°C ..... Dome Temp./Hum. +6.3°C 73%H Transparency Conditions .clear..−cloudy.....

Focus ...244.....

Spectr. Temp. ..... Dome Temp./Hum. +5.7°C 74.8%

mparison ler Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Echelle CCD	X Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA	P.H. Ci	Program	Remarks	max Quality ADU
20/30					17.80 tilt	1200 l/mm .4460	60μ width 400μ Height	3960Å	4/5c.	focus	CCD FITS 0 128 1024 8 1 J45 Right	
									1/2		0 0 256 1024 41	
155							500μ Height		3c.			
530	18500		V 0.08	G5 IIIe +G0 IV					4c.	Cygella	S/N > 300:1 near centre.	8K
155									3			
811	25433								4	"		14.3K
15									3			7.5K
742	22100								4	"		11.0K
15									3			
–									1/2		clean!	
15									3			6.4K
1106	265	3-4"	B 4.63	A3 n					5	KK	Tel E side. - dedicated	ADU = 700 max
15									3			
15									3		Tel westside again	
1123	522	4"	3.9	F0 IV					6c.		cloud again	200 above backgnd

69
pg 42

Date 1994 Dec 3/4 Observers [K.K.] Th. / Sant

Emulsion Batches:
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CCD
Spectr. Temp.
Focus 244
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
ce08349	Comp							ThAr	15s		
50	BIAS(4)										
51	BIAS(4)										
52 – 56	FLATS x 5					2 55W	+1613	TUNG	20s		
57	BIAS(4)										
Then Non motion Tests from ~3Am Dec 4 to 2Am Dec 5, with one Topup ~1.7 EST											
ce08358	BIAS(4)			03 104							
59	FLAT					W 00 0030	−33°	TUNG	10s		
60 → 93	Comps	By Batch	separated By 1440sec DARK					ThAr	20s		
ce08394	FLAT			17 05				TUNG	60s		
ce08395	Comps	By Batch		17:29 → 01:22				ThAr	20s		
414											
415	FLAT							TUNG	10s		
416	Comp (one only)			01 47				ThAr	90		
417	BIAS(4)										

CCD
~~Spectr~~. Temp. —101.8°C. Dome Temp./Hum. +6.0°C 74%H Transparency Conditions Cloudy mostly 70

Focus 1244

Spectr. Temp. ..... Dome Temp./Hum. +6.2°C 75%

MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					W H	60u 500u	3960A	3			
								1/2			
								1/2			
					W=60u H=700u			3			7.1K→7.6K
								1/2ci			
Backed up to WORM & Perseus											
Dome T=+6.0°C						60u H 700u	3960A	1/2	Non Motion Tests	CCDFMT: 340 415 125 220 1 1	
								3ci		(CCD Temp at Bottom ie no Regulation)	
										Dome T=+6.9°C @ 0330	
								7ci		CCD Now −108°C	
Note - Throughout Period, checks with weather Radio indicated little Air pressure change. — Then Topay and continuation.										Temp 6.8°C @ 20:26 Dec 4 6.6°C @ 00:32 Dec 5 Dome T = 6.7°C @ 02AM H=86% Dec 5	

71

Date 1994 Dec 5/6 Observers KK

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
CE08418/9	Hartmann test			17:				Thar	10s		
20/1	Hartmann test			18:31							
22/23	"										
24/25	"										
26/27	"			18:45							
CE08428/29	DARK	Note: CCD Temp probably x-116°C for this one,		21 06					1800s		
30-32	Biases x 3	Run by batch *KKTNDK.BAT		01 4650	(Dark is 1st in batch it seems)						
33	Dark								1800		
34-36	Biases										
37	Dark										
38-40	Biases										
41	Dark										
42-44	Biases										
45	Dark										
46-48	Biases										

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 72

Focus .....

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

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10s											F=.244 T=7.6	
											F=.244 T=7.6	3060 4232 3165 4589 ~~3390~~
											F=.224 "	3290
											F=.264	
1800s											FULL Chip	
	Topup Complete by 01:36 - CCDT Set to -100°C									* Renamed KKOHRK.BHT because there is a KKOHRK.FOR in same directory (just to be safe)		
km												
										* Log File of problem batch Run is "~~KKlog~~." "CCDLOG.KK"		

73 Pg #1 Wed / Thur

Date ..1994 Dec. 7/8.... Observers [Bln]..T.a.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC28793/94	Comp / Stellar Hartmann					0 0	+42 37	FeAr Clear	30/60
cc28795	BIAS(4)								
96	Comp							FeAr Clear	60s
97	HD 37017	05 30 24	-04 34	230857		01 18 E			1160
98	Comp							FeAr Clear	60s
99	BIAS(4)			23 32					
cc28800	Comp							FeAr Clear	60s
01	HD21364	03 21 42	+09 23	233743		01 07 W			
02	Comp							FeAr Clear	60s
EG 40 628 631	HD29587	04 34 30	+41 57	2355				4x	67ms
632 633	"					00 03 W		2x	133ms
CC28803	Comp							FeAr Clear	60s
804	HD29587	04 34 30	+41 57	235658		00 22 W			1016
805	Comp							FeAr Clear	60s
806	BIAS(4)			00 16					

CCD Spectr. Temp. −100°C Dome Temp./Hum. −4.3°C 50%H Transparency Conditions Clear but hazy 74

Focus 7.00

Spectr. Temp. ..... Dome Temp./Hum. −6.2°C 62.5%H

medium & cold NNW wind

Telescope focus set to 2745

432 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				CASSCCD *	1800 l/m 42.7→42.8	306μ	4475Å	3/4	*	No grating tilt 'G' setting Tonight	
								1/2			
								6c			
4010	very poor 8"?	656	B2V					7c	Bln pgm	S/N = 170/1	
								8c			
								1/2c			
								9			
20,700	5"	366	B8p					10	Bln pgm		max 8K
								11		Wind NW 19 Kms/hr at Pearson (weather Radio)	
	8"	7.29	dG2		ABOVE 306μ slit				Seeing test n, Cold	medium / Light NNW wind Dome west, High pressure coming in	
								11		No Fans	
1400	6"	7.29	dG2					12	Stf/vel	Same as seeing test	
								13			

75 Pg #2

Date 1994 Dec 7/8 Observers [illegible] T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Spectr. Temp.
cc25807	Comp							FeAr Clear	60s	BG39 Filter	
08	HD 37017	05 30 24	-4 34 00	00 22 19		00 03 E			1200	4550	
09	Comp							FeAr Clear	60s		
10	Comp							"	60s		
11	HD 42111	06 03 48	+02 31 00	00 48 12		00 20 E			575	5800	
12	Comp							FeAr Clear	60s		
13	HD 42111	06 03 48	+02 31 00	01 01 42		00 07 E			632	5540	
14	Comp							FeAr Clear	60s		
15	BIAS (4)										
16	Comp							FeAr Clear	60s		
17	HD 37017	05 30 24	-4 34 00	01 18 40		00 51 W			1091	4830	
18	Comp							FeAr Clear	60s		
19 → 27	FLATS x 9					00 55 W	-4 31	TUNG Clear	13		
28/29	Comp / stellar	HARTMAN				00 01 W	+26°	FeAr Clear	50/80		-72°C
30	BIAS (4)										

Spectr. Temp. ..... Dome Temp./Hum. -6.2°C 62.4%H Transparency Conditions .. PART. cloudy ..... 76.

Focus .... 7.00 .....

~~Spectr~~ CCD Temp. ... -100.4°C ..... Dome Temp./Hum. -7.2°C 67.5%H occasional SNOW @ End

c +Amb 0/4

MAX 404

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				CHSSCCD	1800 l/mm 42.75°/H	306a	4475H	14			
4550	5½"	6.56	B2V					15	Bln pgm		
								16			
								17			
5800	6"	B 5.80	A3V$_n$					18	Ashell wide	(S/N ≈ < 200 / 1 ½ nearby companion got on slit ≈ 10 secs.	1800
								19			
5540	5"	5.80	A3V$_n$					20	A shell wide	(Repeat)	
								21			
								1/2			
								22ci			
4830	6"	6.56	B2V					23	Bln pgm		
								24ci			
								25ci			13.7
-7.2°C	Set 7.00			Righton @ 300 Row H				26/27			
				All to Perseus & WARM							

p. 177

Date 1994 Dec 8/9 Observers Smt/Evans

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(s) Exp.	Exp. Mtr.
CC28831/2	COMP/STELLAR HARTMANN					0^h	+43°	FeNe clear Ap	20/30	
33	BIAS x4			18 48						
34	COMP							"	20	
35	Vas 351 AC+17 303-138	00 03 19	+16 52 12	19 10 08		0 17 W			1367	500
36	COMP							"	20	
CG40634-7	HD3765	00 35 18	+39 40			$0^h 02^m$ W			4x.067	190, 150 216, 201 223,
CG40638/9	"	"	"		19 50				4x.133	
CC28837	BIAS x4			19 53						
38	COMP							"	20	
39	Vas 84 BD+40 45	00 17 06 (2000)	+40 56 54	20 02 41		$1^h 2^m$ W			1460	2100
40	COMP							"	20	
41	BIAS x4			20 42						
42	COMP							"	20	
43	Vas 364 AC+71 532	00 55 26	+71 08 49	20 44 50		$1^h 05^m$ W			1800	840
44	COMP							"	20	

Spectr. Temp. -100.4°C ... Dome Temp./Hum. ~~6.4~~ / -4.2°C/64.1% arising ... Transparency Conditions ... hazy ... thin cloud ... TB.

Focus ... 6.97 ...

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

430 0 50 1024 4 1 CCDEMI

parison (s) Exp.	Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	~~P.H.~~ C.	Program	Remarks	Quality max ADU
20/30					CASS CCD	1800 ℓ/mm 47.8 degrees tilt.	30μ	5300 Å	3/4 C1	FOCUS TEST.	DONE @ CCD T = -125°C	
									1/2		DONE @ CCD T = -100°C SE FAN OFF	
20									5			
1367	500	~3"	10.73	MO					6	{Uys}	lots of sky, close to hot cloud increasing.	800 above b/g
20									7			
4x.167	190, 180 215, 201	~3"	7.36	dK5					-	SEEING TEST	Dome W, no wind, thin cloud, 80% + on catwalk	
4x.133	223, 160								-	"	-3.7°C, 68.3% at end	
									1/2			
20									8			
1440	2100	~3"	9.00	MO					9	Marcy Standard	thin cloud. close to hot again	1100
20									10			
									1/2			
20									11			
1500	840	3-4"	10.06	dM4e					12	{Uys}	thin cloud.	600 above b/g
20									13			

p. 279

Date 1994 Dec 8/9 Observers Smt./E.Vys.3

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	(s) Exp.
CC28845	COMP							FeNe clear Ap.	20
46	Vys 395 AC+20 821-180	02 30 14	+19 47 07	21 30 21		0h 24m W			2200
47	COMP							"	20
48	BIAS x4			22 09					
CG40640-3	MD19509								
44/45	"				22 20.	0h 4m W		4x	.067
								2x	.133
49	COMP							FeNe clear Ap	20
50	Vys 416A/B AC+58 20564 1/5	03 08 25	+57 48 08	22 41 22		0h 49m W			1801
51	COMP							"	20
52	Vys 416 A/B AC+58 20564/5	"	"	23 14 38		1h 30m W			2189
53	COMP							"	20
54	BIAS x4			23 54					—
55-63	FLAT x 9					0h	+35°	Turq ½ Ap.	4
64/65	COMP/STELLAR HARTMANN					"	"	FeNe Clear	20/30
66	BIAS x4			00 43					

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr. See
684
499
500

Spectr. Temp. ...-10.1°C..... Dome Temp./Hum. -5.1°C / 73.3% Transparency Conditions. thin cloud.....

Focus .....6.97.....

Spectr. Temp. ..... Dome Temp./Hum. -5.3°C / 73.1% @ FOCUS TEST

NE FAN ON.

parison λ(Å) Exp.	Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CAM3D4	~~P.H.~~ C1	Program	Remarks	Quality max ADU
20					CASS CCD	1800 l/mm tilt = 47.8°	306μ	5300 Å	14			
2200	684	?	10.7	M2					15	{V45}	Secondary might be out of focus, too dim to tell.	250 above b/g
20									16			
2091	~~220, 209~~								½			
21831	~~220, 209~~								—			
1917	220, 209 210, 198								—	SEEING TEST		
1833	220, 197								—	"		
20									17		spec. controller reset beforehand.	
1801	499		combined? 10.0	M0	S/N	≥ 50:1			18	{V45} 416 A/B	Southern one. just barely separated.	280 above b/g
20									19			
2189	500		"	"					20	{V45} 416 A/B	Northern one just barely separable.	225 above b/g
20									21			
—									½		CLOUDED IN	
4									22		CLOCK DRIVE OFF	13.2K → 12.3K
20/30		Backed up to WORM & Persens							23/24	FOCUS TEST	T = -5.3°C FOCUS = 6.99	

81 Pg#1 Sun Mon

Emulsion Batches: ....

Date Dec 11/12 ~~Day~~/94 Observers ... [Bh] ... T.H. ... / Smt.   CSS Time   Ahead ~ 9 secs. from WWV Time ~~set to WWV Time~~

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC288 67/68	Comp / Stellar Hartman						+35°	FeAr clear	40/70
69	BIAS(4)								
70	Comp							FeAr Clear	60s
71	HD 37017	05 30 24	-04 34 00	23 08 27		00 51 E			1834
72	Comp							FeAr Clear	60
73	BIAS (4)			23 46					
74	Comp							FeAr Clear	60s
75	HD 21364	03 21 42	+09 23	23 51 15		01 38 W			530
76	Comp							FeAr Clear	60s
77	COMP							"	"
78	HD37017	05 30 24	-04 34 00	00 14 56		0 15 W			1815
79	COMP							FeAr Clear	60s
80	BIAS(4)			00 47					
81	COMP							FeAr Clear	60s
82	HD 42111	06 03 48	+02 31 00	00 55 31		0h 1m W			920
83	Comp							FeAr Clear	60s

(cc) Spectr. Temp.	Focus ... 7.C.	Spectr. Temp.
Exp. Mtr.	Se	
BG3 Filter		
4025		
23150		
6010		
6200		

Spectr. Temp. ccd −100°C ..... Dome Temp./Hum. −11.5° 59% Transparency Conditions .. Hazy.. clearing 82

Focus .. 7.03 .....

Spectr. Temp. ..... Dome Temp./Hum. −12.5°C 61.3% Nite - Tonight, we did not see slit in guiding view, but maximized with Exposure meter (South edge of STAR MAX ADU at bottom of view)

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	~~P.H.~~ ci	Program	Remarks	Quality
BG39 Filter	~~very~~			CASS CCD	1800 l/mm Tilt 42.8	306m	4475	3/4	Rapid Temp drop	Spectrograph probably warmed	
								1/2			
								5			
4025	10"	6.56	B2V					6	Bln pgm	Slit view below monitor view. ∴ guiding by exposure meter.	See above b/g
								7			
								1/2			
								8			
23150	Bad	3.66	B8p					9	Bln pgm		75k
								10			
								11			
6070		6.56	B2V					12	Bln pgm		2100
								13			
								1/2			
								14			
6200		5.80	A3Vn					15	A shell star	wide	1900
								16			

83
pg #2

Emulsion Batches: .....

Date 1994 Dec 11/12 .... Observers [Bln/Wade] T.S. / Smt. .....

CCD Spectr. Temp. .....
Focus ... 7.0
Spectr. Temp. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CC28884	COMP							FeAr clear	60	BG 39 Filter	
85	HD37017	05 30 24	-4 34	01 20 05		$1^h\ 16^m$ W			1528	5400	
86	COMP							"	60		
87	BIAS (4)			01 49					—		
88	COMP							"	60		
89	HD77190	08 55 51	+28 17 48	01 56 24		$1^h\ 43^h$ E			970	5020	
90	COMP							"	60		
91	COMP							"	"		
92	HD37017	05 30 24	-4 34	02 24 39		2 20 W			1487	5530	
93	Comp							FeAr Clear	60s		
94	BIAS (4)										
95	Comp							FeAr Clear	60s		
96	HD89449	10 14 18	+19 59 00	02 59 10		0208 E			417	6360	
97	Comp							FeAr Clear	60s		
98	Comp for next HD37017							"	4		

CCD
Spectr. Temp. ~~...~~ −100°C ..... Dome Temp./Hum. −14.1°C / 64.4% Transparency Conditions ... Slightly Hazy 84

Focus ... 7.03 .....

Spectr. Temp. ..... Dome Temp./Hum. −14.5°C / 65.3% 430 0 50 1024 4 1 CCDFMT
C CHMBDH C

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
60	BG 39 Filter				CHSS CCD	1800 l/mm Till 4708°	306a	4475Å	17			
1578	5400		6.56	B8p					18	Bln	Slightly < 200/1 S/N	1700
60									19			
—									½			
60									20			
970	5020	still extreme	V 6.07	A8V$_n$					21	Wide A-shell		1700
60									22			
"									23			
1487	5530		6.56	B8p					24	Bln pgm		
605			~~6.56~~	~~B8p~~					25	Bln pgm		
									½			
605									26			
417	6300		V 4.79	F6V					27	Std vel	(Wide Request)	
605									28			
4									29			

85 pg #3 Sun/Mon

Date 1994 Dec 11/12 ... Observers [Blu/Jude] Tu/Sat

Emulsion Batches:

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CCD Spectr. Temp.

Focus ....

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
cc28899	HD37017	05 30 24	-4 34 00	03 14 44		3 09 W			146	BG39 Filter 4400	
cc28900	Comp							Feth Clear	60s		
901	BIAS(4)			03 40							
902	Comp	Astrometric 2000						"	"		
903	Vesta	06 27 06	+20 33 36	03 46 43		2h 56m W			1839	4500	
904	COMP							"	60		
905	COMP							"	"		
906	HD88195	10 05 09	-07 55 01	04 29 35		0 21 E			766	5000	
907	COMP							"	60		
908	BIAS(4)			04 45				~~"~~	~~60~~		
909	Comp							"	"		
910	HD98058	11 11 36	-03 06 00	04 53 24		01 12 E			313	4250	
911	Comp							Feth Clear	60s		
912	Comp							"	60s		
913	HD108283	12 21 24	+27 49 00	05 07 42		02 07 E		Feth	334	5150	
914	COMP								60		

CCD
Spectr. Temp. −99.7 °C ... Dome Temp./Hum. −14.5°C 65.5% Transparency Conditions ... slight haze ... 86

Focus ... 7.03 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... MAY ADU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter 4400	Horrible ghastly	6-56	B8p	CHSCCD	1800/m 42.8°	306	4475Å	9c.	Bln pgm		
								10c;			
								1/2			
								11			
4500		✓ 1.65	G solar					12	std. Vel.	Field DRown is checks out nicely.	
								13			
								14			
5000		5.11	A1V					15	Wide A-shell		1.7K
								16			
								17			
7450		✓ 4.47	A7IVn					18	Wide A-Shell		4K
								19			
								20			
5750		✓ 4.95	F0p					21	Wide A Shell		2K
								22			

87 pg #4

Date 1994 Dec 11/12 Observers [Wide] Tn. / Smt.

Emulsion Batches:

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Spectr. Temp.

Focus 7.0

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
CC28915	COMP							FeAr Clear	60		
16	HD108283	12 21 24	+27 49 20	05 24 29		2 12 E			430	5110	
17	COMP							FeAr Clear	60		
18	COMP							"	"		
19	HD118232	13 30 24	+49 32	05 41 14		2 42 E			296	7000	
20	COMP							"	60		
21	BIAS(4)								—		
22-30	FLAT x 9					2 36 E	+49°	Tung Clear	13		
31	Comp							FeAr Clear	60		
32	HD118232	13 30 24	+49 32	05 59 23		3 24 E			30	7130	
33	Comp							FeAr Clear	60		
34	COMP							"	"		
35	HD138629	15 28 12	+41 14 19	06 12 02		4 07 E			405	9480	
36	Comp							FeAr Clear	60		
37	COMP							"	"		

Spectr. Temp. ..... Dome Temp./Hum. ~15°C 67% Transparency Conditions ... Hazy 88

Focus ... 7.03 .....

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

MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								23			
5170		V 5.28	A1 III			306μ	4475Å	24	Wide A shell	Δα +00 01 07 Δδ +00 01 30	2.1K
								25		South the BAighter of pair	
								26			
7000		V 4.70	A5 V	House Lights Left on for this exposure				27	Wide A shell	S/N > 200 : 1	
								28			
								½			
								2			14.4K → 13.2K
7,130		V 4.70	A5V					27	Wide A shell		
								28			
								28			
6980		V 5.02	A5V					~~26~~ 7	Wide A-shell		
								7			
								10			

p. 589

Date 1994 Dec 11/12 Observers [Wade] Tn/Smt

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
cc26938	HD102870	11 45 30	+02 20	06 26 45		0h15 E			170	8500	
39	COMP							FeAr clear	60		
40	~~COMP~~ BIAS (4)										
41/42	COMP/STELLAR	HARTMANN				0h	+35°	"	50/80		

Spectr. Temp. ..... Dome Temp./Hum. -14.9°C/69.1% Transparency Conditions ... hazy ... 90

Focus ..... 7.03 .....

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

m4x

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8500		361	F9V	CASS CCD	1800 l/mm tilt=42.8°	306μ	4475Å	11	Std. Vel.		2.6
								13			
		All to Perseus & WORM.									

mparison
ler Exp.
170
60
500

91 pg#1 Mon/Tues

Date 1994 Dec 12/13 Observers ... [illegible] Sast. I.Tg.

Emulsion Batches:

CSS Time 2 10 secs Ahead Sta. 11

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Exp. Mtr.	Spectr. Sc
cc284 43/44	Comp / Stellar					0 0	+36°	FeAr Clear	~~60~~ 60	No exp meter filter	
45	BIAS (4)			17 54							
46	Comp							FeAr Clear	60s		
47	HD 180583	19 12 00	+27 45 00	18 06 57		4 26 W			1600	3930	
46	Comp							FeAr Clear	60s		
49	BIAS (4)			18 38					—		
50	COMP							FeAr Clear	60s		
51	HD 204867	21 26 18	−06 01	18 41 52		2 22 W			208	5000	
52	Comp							FeAr Clear	60s		
53	Comp							〃	〃		
54	HD 203156	21 15 23	+37 49	18 53 48		2 49 W			400	5340	
55	Comp							FeAr Clear	60s		
56	COMP							〃	〃	OG560 Filter installed	
57	HD 214975	22 36 54	+56 19	19 09 26		2 20 W			2568	23000	
58	COMP							FeAr Clear	60s		

Spectr. Temp. ..... Dome Temp./Hum. -9.8°C 70%H Transparency Conditions . PART cloudy .....
increasing cloud

Focus 6.95 .....

Spectr. Temp. ..... Dome Temp./Hum. -11.0°C 72.3%H

424 0 50 1024 4 1 CCOFMT

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Index ADU Quality
160	no exp meter Filter				CASS CCD	1800l/mm T.I.T 550	306u	6400Å	3/4		Actual center 6406Å	
									1/2			
80s									5			
1600	3930	8"	V 6.14	F6I-IIb					6	V473Lyr Rm pgm		2200
60s									7			
—									1/2			
60s									8			
208	5000		V 2.97	G0Ib					9	std vel	Cloudy	4K
60s									10			
9									11			
400	5260		V 5.8 – 5.9	F2					12	Rm V... Cyg pgm	Cloudy	4.4K
60s									13			
11	OG560 Filter ~~removed~~ installed								14			
2568	≥3000		V 8.40	G0Ib					15	Rm Z Lac	PART clear now.	5.0K
60s									16			

93
8942

Emulsion Batches:

Date 1.9.94. Dec. 12/13 Observers [Ron] Scott/Tom

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc28959	BIAS(4)			1954					
60	COMP							Fe Ar clear	60
61	HD 25361	03 56 42	+58 23	20 01 07		2 34 E			1280
62	COMP							"	60
63	Comp							"	"
64	HD 30282	04 41 06	+36 3200	20 30 56		2 48 E			1217
65	Comp	04 41 06	+36 3200					Fe Ar clear	60s
66	BIAS(4)			20 53					
67	Comp							Fe Ar clear	60s
68	Vesta	Astrometric J2000 06 2620	+20 3608	20 59 43		3 59 E			1140
69	Comp							Fe Ar clear	60s
70	COMP							"	"
71	HD 44990	06 19 48	+07 08	21 28 04		3 35 E			787
72	COMP							"	60
73	BIAS(4)			21 44					

Spectr. Temp. -102.0°C Dome Temp./Hum. -11.0°C / 72.4% Transparency Conditions .. fine, now Thin Real cloud 94

Focus 6.95

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

Comparison Exp.	Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA	P.H.	Program	Remarks	Max ADU Quality
	0G560 Filter				CASS CCD	1800 l/mm ~~25~~ tilt 550°	30μ	6400°A*	~~17~~		* actually ~6406 Å	
60									17			
120	4078	good	7.30 -8.07	F6 Ib -G2Ib					18	Rm RX Cam	≈ 250/1 S/N	6K
60									19			
4									19.			
127	2300	4"	V ≈7	F6 -G1					20	Rm AW Per		4K
60s									21			
									1/2			
									22			
60s			V									
1140	2000		≈6.5	G					23	For Std Vel use.	It moved west Relative to Last night's Field. as it should of course.	
60s									24			
									24			
167	1580		B 6.5-8.0	F7Iab -K1Iab					25	Rm T Mon		
60									26			
									1/2			

95 pg #3 Mon / Tues

Date 1994 Dec 12/13 Observers [Rm] Tm / Smt

Emulsion Batches:

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Spectr. Temp.

Focus 6

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC28974-82	FLAT x 9					0h		Tung ¼ Ap	6		
83/84	COMP/STELLAR	HARTMANN				"		Fed clear	60/60		

Spectr. Temp. −100°C Dome Temp./Hum. −11.0°C 77% Transparency Conditions ... Cloudy → Snow! 96

Focus ... 6.95 ...

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm tilt = 550°	30μ	6400Å*	27		*actually 6606Å tonight.	13.5K →12.8K
								28/29	FOCUS TEST		
				Hit to warm persons							

97

Tues/Wed

Date 1994 Dec. 13/14 Observers [Bh/wde] Jh/Smt.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc289 85/86	Comp / Stellar	Hartman				00 00	+46 34		50/80
87	BIAS(4)			18 26					
88	Comp							FeAr clear	60
89	~~HD 37017~~ BD+26 3835	20 09 36	+26 27	18 38 10		3h 57 W			~~1220~~ 1200
90	COMP							FeAr clear	60
91 – 99	FLATS x 9	using	FLAT13.BAT			4 03 W	+26 53	TUNG clear	13sec
cc29000	BIAS(4)			21 35					

Spectr. Temp.
Focus ...7.0
Spectr. Temp.
Exp. Mtr.
1036

Spectr. Temp. ..... Dome Temp./Hum. -60°C 63&4 Transparency Conditions ... Clearing Partially 88

Focus ... 7.03 .....

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

430 0 50 1024 4 1 CCDFMT

Then much cloud MAX

arison Exp.	Exp. Mtr.	Seeing	V ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50/60						1800 l/mm Tilt 42.85	306 μ	4475Å	3/4	focus		
									1/2			
60									5c;			
120	1036		8.6 -9.3	B8					6	DR Vul		140 above bkg
60									7			
135a									8c;			12.7k
									1/2	All to Perseus & Worm		

99
pg #1

Emulsion Batches: .....

Date 1954 Dec 18/19 Observers B.M./T.H. .....

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TIME Reset to WWV Time .....

CCD Spectr. Temp.
Focus 6.9
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
cc290 01/02	Comp / Stellar Iker Finan					00 00	+44°	FeAr Clear	60/60	06560	
03	BIAS(4)										
04	Comp							FeAr Clear	60		
05	HD 19275	030105	+740049	220727		00 49 W		1276	~~FE~~		
06	Comp							FeAr Clear	60s		
07	~~HD 19275~~ BIAS(4)										
08	Comp							FeAr Clear	60s		
09	HD ~~30614~~	04~~44~~06	661000	01 5635		W			12	5000	
10	"			01 5946		02 43W		~~FE~~	~~125~~	4000	
11	"			02 0248					120	4015	3'
12	"			02 0544					27	4023	
13	"			02 0845					236	4000	
14	Comp							FeAr Clear	60s		
15	BIAS(4)										
16	HD 30614	044406	+661000	021658					153	4000	

CCD
Spectr. Temp. ~100°C Dome Temp./Hum. +01.0°C 87% Transparency Conditions .....Partial clearing .100

Focus ....6.95.....

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

CCD FMT
427 0 50 1024 4 1 MAXAD4

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG560 Filter				CASS CCD	1800l/mm Tilt 55.4° ?	306u	6604Å°	3/4	focus		
								1/2.			
(8000 cnts)	slightly saturated. (2 strong columns)							5c	1st Try = SATURATED		
~~8000~~ 2300	2-3" 4"	V 427	A2V un		(very cloudy)			6c	Telluric Std. AIRMASS 1.11	some cloud (lots)	4.1K
								7c.			
								1/2c			
								8c		Telescope East Side	
5000		V 429	09.5Ia					9c	d Campgn	Hd can saturated	
4000								9c			8.7K
4015	3"							10c			12.5K
4023								11		7300/1 S/N	
4000								12		some cloud	
								13.		AIRMASS 1.18	
								1/2			
4000								14			12.5

101

Pg #2

Date 1994 Dec 18/19 Observers Bln / Tg

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29017	HD 30614	04 44 06	+66 10 00	02 20 30		3 09			475
18	Comp								
19 → 38	FLATS x 20					≈3 25W	+66 19	TUNG Ap=1/4	
39	BIAS (4)								
40/41	Comp / Stellar Hartman					0 0	+31°	FeAr Clear	60/60

Spectr. Temp.

Focus 6

Spectr. Temp.

Exp. Mtr.	Seei
276	
	+10

Spectr. Temp. −10.4°C Dome Temp./Hum. +00.3°C 82% Transparency Conditions Cloud 102

Focus 6.95

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2576						30μm	6604Å	15			
								16			
								17			13K
										*	
	+10.4°C		Set 6.95					19/20	focus test	Note we should have been set more like 6.88	
									stellar = .3 Pixel Rad		
	All to		Perseus E WORM						It didn't cool down as much as I thought it would		

p. 1 103

Date 1994 Dec. 20/21 Observers Bln / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc2904 2/43	COMP / STELLAR HARTMANN							FeAr clear	60/60
44	BIAS(4)			not 21 38					
45	COMP							FeAr clear	60
46	HD30614	04 44 06	+66 10	21 27 29		1 44 E			140
47	COMP							"	60
48	HD30614			21 42 49		~1 30 E			225
49	"			21 48 15		1 22 E			218
50	"			21 53 26		—			221
51	COMP							"	60
52	BIAS(4)			21 38					
53	HD30614			22 01 26		1 09 E			230
54	"			22 06 55		—			223
55	"			22 11 50		0 58 E			227
56	COMP							"	60
57	HD30614			22 19 44		0 49 E			247

CCD
~~Spectr.~~ Temp.
Focus
Spectr. Temp.
Exp. Mtr. FILTER

CCD
~~Spectr.~~ Temp. -101.0°C ..... Dome Temp./Hum. +2,4°C/78.2% Transparency Conditions ..just..cleared..... 104
BOTH FANS ON

Focus .....6.90.....

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

422 0 50 1024 41 CCDFMT

Comparison Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADO Quality
60/60					CASS CCD	1800 ll/mm HH=56.3°	306μ	6604 Å	3/4	FOCUS TEST		all @ HD die to emissio
									1/2			
60									5			
140	4000		4.29 ✓	09.5Ia					6	B/n	→ HUERIKON RESET DUE TO "UNDOCUMENTED SYSTEM ERROR"	
60									3			
225	8000								4	B/n		13K
218	"								5	"		13.4K
221	8120								6			14.2K
60									7			
									1/2		TAKEN BEFOREHAND	
230	8000								8	B/n		12.0K
223	8000								9			11.9K
227	"								10			11.7K
60									11			
247	8000								12	B/n		13.4K

p. 2 105

Date 1994 Dec 20/21 Observers Bln/Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29058	HD30614	04 44 06	+66 10	22 24 54		0 44 E			259
59	"			22 30 39		0 38 E			264
60	COMP							Fe Ar clear	60
61	BIAS(4)			22 38					—
62	COMP							"	60
63	HD19275	03 01 05	(+74 01 in HD) +74 00 49	22 44 28		1 19 W			403
64	COMP							"	60
65	COMP							"	"
66	HD30614	04 44 06	+66 10	22 59 21	~	0 11 E			211
67	"			23 04 30					226
68	"			23 10 34		0 01 W			225
69	COMP							"	60
70	HD30614			23 18 11		0 08 W			208
71	"			23 23 15		—			197
72	"			23 27 27		0 18 W			198

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

05 560 Exp. Mtr. FILTER	See
8010	
8000	
8010	
6000	
"	
"	
8000	
"	
"	

Spectr. Temp. ..... Dome Temp./Hum. +2.0°C/77.1% Transparency Conditions ..hazy..but..clear..... 106

Focus .....6.90.....

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

BOTH FANS ON

422 0 50 1024 4 1 CCDFMT

apanson er Exp.	06 560 Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADU Quality
59	5010		V 4.29	O9.5Ia	CASS CCD	1800 ℓ/mm tilt=56.3°	306μ	6604 Å	13	Bin		12.6K
249	8000								14	"		14.3K
60									15			
–									½			
60									16			
403	8010		V 4.87	A2Vnn					17	Telluric Std.		10.5K
60									18			
"									19			
211	8000		V 4.29	O9.5Ia					20	Bin		14.7K
226	"								21			10.2K
225	"								22			11.2K
60									23			
208	8000								24	Bin	some high cloud.	10.9K
197	"								25			13.0K
198	"								26			10.5K

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Date 1994 Dec 20/21 Observers Bln/Smt

Emulsion Batches:
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Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	3¼ Sec Exp. Mtr. FILTER
CC29073	COMP							FeAr clear	60	
74	BIAS(4)			23 34					—	
75	HP30614	04 44 06	+66 10	23 36 14		0 26 W			210	8052
76	"			23 40 45		—			205	8010
77	"			23 45 08		0 35 W			209	8000
78	COMP							FeAr clear	60	
79	HD30614			23 54 19		0 43 W			206	8000
80	"			23 59 24		~			239	"
81	"			00 04 21		0 55 W			236	"
82	COMP							"	60	
83	HD30614			00 12 45		1 03 W			243	8000
84	"			00 18 02		~			282	"
85	"			00 23 58		1 16 W			270	8090
86	COMP							FeAr clear	60	
87	BIAS(4)			00 31					—	

Spectr. Temp. ..... Dome Temp./Hum. +1.9°C/72.6% Transparency Conditions still hazy 108

Focus ..... 6.9.0 .....

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

BOTH FANS ON

422 0 50 1024 #1 CCD FMT.

Comparison Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADU Quality
60					CASS CCD	1800 ℓ/mm filt=56.3°	306μ	6604 Å	27	Bln		
-									½			
210	8052	~3"	4.29	O9.5Ia					28		clear.	10.7K
205	8010								29			14.3K
209	8000								30			11.1K
60									31			
206	8000								4			10.4K
239	"								5		~9K continuum. →	11.5K
236	"								6			10.2K
60									7		SE DOME FAN TURNED OFF	
243	8000								8			11.2K
252	"								9			9.4K
270	8090								10			10.6K
60									11			
~									½			

p. 4. 109

Date 1994 Dec 20/21 Observers Bln / Smt

Emulsion Batches:
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CCD Spectr. Temp.
Focus .....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Ok Sup Exp. Mtr. FILTER	Sec
CC29088	HD30614	04 44 06	+66 10	00 33 49		1 25 W			257	8188	~5
89	"			00 39 14		1 30 W			241	8000	
90	"			00 44 32		1 36 W			281	"	
91	COMP							FeAr clear	60		
92	HD30614			00 53 54		01 45 W			243	3000	
93	"			00 59 24		01 50 W			236	3000	
94	"			01 04 33		~1 55 W			242	3000	
95	COMP							"	60		
CG40646-9	HD52860	06 57 39	+47 55 21					4x	.067	173, 238, 193, 181	
90/91	"					0h 5m W		2x	.133	242, 246	
CC29096	COMP							FeAr clear	60		
97	HD19275	03 01 00	+74 00 00	01 39 33		4h 19 W			537	8000	
98	COMP							"	60		
99	BIAS(4)			01 53 58					—		
CC29100	COMP							"	60		

CCD
Spectr. Temp. -100.0°C Dome Temp./Hum. +17.7°C / 71.6% Transparency Conditions . hazy 110

Focus 6.90 NE FAN ON ONLY

Spectr. Temp. Dome Temp./Hum. 422 0 50 1024 4 1 CCDFMT.

parison Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ LAMBDA	~~P.H.~~ #	Program	Remarks	Quality MUX AOV
251	8188	~5"	V 4.29	09,5Ia	CASS CCD	1800 ℓ/mm tilt=56.3°	306μ	6400 Å	12	B/n		14.9K
241	8000								13			12.2K
281	"								14			11.3K
60									15			
243	8000	~5"							20			
231	8000								21			
242	8000								22			
60									23			
.067	1073, 238, 193, 181		6.34R	B&Ch					-	SEEING TEST	Done W, lite SW wind, above 30km slit, hazy, cloudy until 21 20 or so, 83% catwalk. trailed star off screen & lost it between 1st & 2nd	
.133	242, 246		"	"					—	"		
60									16		TELESCOPE ON E SIDE NOW.	
537	8000	1'-8"	V 4.87	A2Vnn					17	Telluric Std.	1.3 ... airmass.	10.7K
60									18			
-									1/2			
60									23			

p. 5 111

Date 1994 Dec 20/21 Observers Bln/Smt

Emulsion Batches:
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.....
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Spectr. Temp.
Focus .....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr. FILTER	See
CC29101	HD30614	04 44 06	+66 10	02 02 39		2 56 W			294	8030	~6
02	"			02 08 54		—			231	8000	
03	"			02 13 46		3 05 W			227	8135	
04	COMP							FeAr clear	60	9812	
05	HD30614			02 21 48		3 14 W			217	8000	
06	"			02 27 12		3 19 W			213	8000	
07	"			02 32 13		3 24 W			230	8000	
08	COMP							"	60		
09	HD30614			02 40 45		—			239	7000	
10	"			02 46 54		3 39 W			264	"	
11	"			02 53 14		3 47 W			305	"	
12	COMP							"	60		
13	BIAS(4)			03 04 33					—		
14	HD30614			03 08 50		04 03 W	?		380	8000	
15	"			03 11 41		04 08 W	?		281	8020	

Spectr. Temp. ..... Dome Temp./Hum. 11.4°C / 72.5% Transparency Conditions ..hazy..... 112

Focus .....6.90..... NE DOME FAN ON

Spectr. Temp. ..... Dome Temp./Hum. ..... 422 0 50 1024 41 CCDEMT

parison Exp.	Exp. Mtr. OG 560 FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA	~~P.H.~~ Ci	Program	Remarks	Quality MAX HON
294	8030	~6"	✓ 4.29	09.5Ia	CASS CCD	1800 l/mm tiH=56.5°	300μ	6604 Å	24	B/M	TELESCOPE ON E	7.8K
231	8000								25		SIDE	9.4K
227	8135								26			9.1K
60	9812								27			
217	8000								28			12.1K
213	8000								29		seeing improved.	14.6K
230	8000								30			10.8K
60									31			
239	8000								4			10.6K
264	"								5			11.4K
305	"								6			10.0K
60									7			
-									½			
380	8000								8			9.2K
291	8020								9			10.7K

p. 6 113

Date 1994 Dec 20/21 Observers Bln / Smt

Emulsion Batches:
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.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
cc29116	HD30614	04 44 06	+66 10	03 25 14		4 18 W			249	8000
17	COMP							FeAr clear	60	
18	HD30614			03 33 38		4 26 W			235	8000
19	"			03 38 45					237	8010
20	"			03 45 05		4 37 W			221	"
21	COMP							FeAr clear	60	
22	HD30614			03 53 05		~4 45 W			237	8000
23	"			03 58 47		4 51 W			245	"
24	"			04 04 05		4 56 W			236	"
25	COMP							"	60	
26	BIAS (4)			04 11					—	
27	HD30614			04 14 41		5 07 W			225	8000
28	"			04 19 28		5 12 W			243	8042
29	"			04 24 45		5 17 W			269	8300
30	COMP							FeAr clear	60	

Spectr. Temp. ..... Dome Temp./Hum. +1.1°C / 74.7% Transparency Conditions ... hazy ... 1.14

Focus ..... 6.90 .....

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

arison Exp.	Exp. Mtr. FILTR	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAM DA	~~P.H.~~ C.	Program	Remarks	Quality
249	8000		V 4.29	09.5Ia	CASS CCD	1800 l/mm 4/H=56.3°	306μ	6604 Å	10	Bln	TELESCOPE ON EAST SIDE STILL	11.0K
60									11			
235	8000								12			11.2K
237	8010								13			12.5K
221	11								14			11.9K
60									15			
237	8000								20			11.1K
245	11								21			13.0K
216	11								22			11.1K
60									23			
-									½			
225	8000								24			11.7K
243	8042								25			11.4K
269	8000								26			12.9K
60									27			

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Date 1994 Dec. 20/21 Observers B.In./Smt

Emulsion Batches:

Spectr. Temp.
Focus 6.
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp.	Seeing
CC29131	HD30614	04 44 06	+66 10	04 33 54		5 27 W			219	8000	3-4
32	"			04 40 01		5 34 W			376	"	
33	COMP							Fe Ar clear	60		
34-53	FLAT x 20					5 38 W	+66° 19'	Tung ¼ Ap.	6		
54	BIAS(4)			05 02							
55/56	COMP/STELLAR HARTMANN					"	"	Fe Ar clear	60/60		

Spectr. Temp. ..... Dome Temp./Hum. +0.8°C/77.1% Transparency Conditions . still hazy .....

Focus ..... 6.90 .....

Spectr. Temp. ..... Dome Temp./Hum. +0.7°C/78.2% and overcast @ focus test.

Comparison Exp.	Exp.	Mtr. / FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CLAMBDA	~~P.H.~~ C.	Program	Remarks	Quality MAX ADU
	219	8000	3-4"	V 4.29	09.5Ia	CASS CCD	1800 ll/mm 4H=56.3°	306μ	6604 Å	28	B/n		13.0K
	316	-11								29			10.6K
	60									30			
	6									~~3~~ 1/2			13K → 12.3K
	60/60									3/4	FOCUS TEST		

All to Perseus & WORM.

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Emulsion Batches:

Date 1994 Dec 21/22 Observers KK./Smt

CCD
Spectr. Temp. ...
Focus 1.90 ...
Spectr. Temp. ...

Plate No.	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.	Seeing
C000109-16	SKY FLATS x 7					$0^h\ 10^m$ W	+42 55	sky H2 filter	4→22		
17-22	SKY FLATS x 6					"	"	sky no filter	6→		
123-4	BIAS (4)										
25	CAS A	1950.0 23 21 12	+58 32	18 24 12					300	-	
26	CAS A			18 35 56					300	-	
27	"			18 43 07					300	-	
28	"			18 50 14					300	-	
29	"			19 03 09					300	-	
30	"			-					20		
31-39	CASA x 9			-		1 35 W			20	-	
140	GK Per	3 24 24	+43 33 32	~~19~~ 43 25 ~~19 30 25~~		2 06 W			~~300~~ 60		
141	"			19 51 46					360		
142	"								600		
143	"			20: 18 42					600		
144-161	M1	5 28.5	+21 57	20 52 05					20^s		

CCD
Spectr. Temp. ...-101.0°C... Dome Temp./Hum. +5.7°C/63.9% Transparency Conditions ...clear.....118

Focus 6.90...but not used....

Spectr. Temp. ..... Dome Temp./Hum. +4.1°C/71.6% 300 360 400 400 1 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
—				CASS CCD ~~DIRECT~~	DIRECT	SLITLESS		1		in "home" each position = no vignetting	
								2			
								½			
—								5	KK		
—								6		AUTOGUIDER used for guiding display, still guided manually.	
—								7			
—								8			
—								9			
—								10			
—								11		RACK IN HOME POS'N. CCD RE-FOCUSED.	
								2		AUTOGUIDED	
								3		AUTOGUIDED 10s int	
										AUTOGUIDED "	
										" "	
										Guide probe in but no guiding	

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Date 1994 Dec 21/22 Observers KK/Smt, Smt {V4s3}

Emulsion Batches: .....

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Spectr. Temp. .....

Focus .....

Spectr. Temp. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
162-166	M1	5 28.5	+21 57	21:18				Hg f. 1 tr	20		
167	M1			21 21 55				"	300		
168	M1			21 29 01				"	"		
169/70	3 STARS CLOSE TO HD23630 WHOSE NAMES ELUDE US	~ 3 41 30	~ +23 48					"	2x1s		
CC29157/8	COMP/STELLAR HARTMANN			~~23 09~~		0h	+37° 45'	FeNe clear	20/30		
~~59~~	~~BIAS x 4~~			~~23 34~~							
	~~COMP~~							~~FeNe clear~~	~~30~~		
	~~HD36395~~										

Spectr. Temp. .... Dome Temp./Hum. +3.3°C / 14.7% Transparency Conditions clear ; moon rising now! 20

Focus ....

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

(Com)parison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20					CASS CCD	DIRECT	SLITLESS			LK		
300									6		To Perseus only.	
"									7			
2x15									8			
/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
20/30					CASS CCD	1800 l/mn tilt = 47.8°	306μ	5303Å	3/4	FOCUS TEST	TO WORM & Perseus	
											RACK DIED.	
~~30~~												
										~~Marcy Standard.~~		

Pg. 1 of 2

Date 1994 Dec 22/23 Observers K.K./Smt

Emulsion Batches:
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Spectr. Temp. .....
Focus .....
Spectr. Temp. .....

Plate No.	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.	Seeing
CD00171	BIAS(4)							no filter			
172-181	Cas A x 10	23 21 12	+58 32	~18 20					20s		
182-188	Cas A x 7			~18 30					300s		
189	Cas A			19 13 37					120s		
190-201	GK Per x 12	03 24 24	+43 33 32					Hα filter	300s		
02	BIAS(4)			20 50							
203-204	M 1 x 2	05 28 30	+21 57	20 59				Hα filter	300s		
205-216	M 1 x 12							5100 Å filter	300s		
217	SKY FLAT	4^m30^s &	19° from Moon.			-5 E	+8°	"	360		
218 ~~220~~	MOON FLAT							"	.1s		
219-~~223~~	" x 5							"	.2s		
224-~~228~~	" x 6							"	.2s		
230	BIAS (4)										
231-235	MOON FLAT x 5							Hα	.03		
236-238	MOON "FLAT" x 3							"	.03		
239-243	MOON x 5								.05		

Spectr. Temp. -100°C ..... Dome Temp./Hum. 4.5°C / 60.8% Transparency Conditions ..little hazy, dry.....!2

Focus .....

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

300 420 400 400 1 1 CCDFMT (not good)

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	DIRECT	SLITLESS		½			
20s								2	KK	RACK IN HOME POS'N (MIRROR REMOVED) enguided images	
300s								3		"	
120s								4			
300s								5			
300s											
300s											
300											
.1s								8		in focus (2760)	
.2s								8			
.2s								8		secondary focus now 3150	
.03				Backed up to Perseus ONLY!				8		focus 3150	
.03				(need to edit the headers)				8		in focus (2760)	
.05				+ rename from CC to CD				8		"	

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p. 2 of 2

Date 1994 Dec 22/23 Observers Smt [illegible] / [Hlw]

Emulsion Batches:
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.....

CCO
Spectr. Temp.
Focus 6
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seen
CCO 29159/60	COMP/STELLAR HARTMANN					$0^h\ 12^m$ W	$+36°\ 19'$	FeNe clear	20/30		
61	BIAS x4			00 54							
62	COMP							"	30		
63	Vys 9 HD 36395	05 26 18	−3 41	01 06 57		$1^h\ 41^m$ W			900	3246	
64	COMP							"	30		
65	BIAS x4			01 24							
66	COMP							"	30		
67	Vys 467 AC+16 777-164	05 36 15	+15 17 17	01 32 04		$2^h\ 03^m$ W			1400	552	
68	COMP							"	30		
69	COMP							"	"		
70	Vys 560 BD-2 3000	corrected for proper motion 09 48 10	−03 13 04	02 06 12		$1^h\ 32^m$ E			1520	542	
71	COMP							"	30		
72	BIAS x4			02 34							
73-77	FLAT x5					$1^h\ 30$ E	$-3°\ 40'$	Tung + Ap	4		
78/79	COMP/STELLAR HARTMANN					0^h	$+40°$	FeNe clear	20/30		

CCD Spectr. Temp. ....-100°C.... Dome Temp./Hum. +2.1°C/74.1% Transparency Conditions ...clear., humid.....124.

Focus .....6.90..... NE FAN ON bright moon.

Spectr. Temp. ..... Dome Temp./Hum. +1.8°C/74.7% @END

412 0 50 1024 4 1 CCDFMT

Comparison Exp.	Exp. Mtr.	Seeing	V Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/30					CASS CCD	1800 ℓ/mm HH=47.9°	306μ	5307 Å	3/4	FOCUS TEST		
									1/2			
30									5			
900	3296		V 7.97	M1					6	Marcy Standard.	some SBIG guiding	2.4K
30									7			
									1/2			
30									8			
1400	552		10.61	M0					9	{V45}	some SBIG guiding	300 above b/g
30									10			
"									11			
1520	842		10.54	M0					12	{V45 3/Hlw	Killer background. <15° from Moon. Oh well.	100 above b/g
30									13			
									1/2			
4				Backed up to	WORM	& Perseus			14			13.5K →12.9K
20/30									3/4	FOCUS TEST		

125 pg #1 Mon/Tues

Date . 1.994. Dec. 26.27. Observers . . K.m./.Tu. . . . . Emulsion Batches: . . . . . .

CSS 386 9 seconds Ahead of U.W.V. Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp. / Focus / Spectr. Temp. / Exp. Mtr.
CC 241 80/81	Comp/Stellar Hartman				*GG385 Filter Used			FeAr No Aperture	60/60	No Filter For Exposure
82	BIAS(4)				For stellar beam. Perhaps only marginally needed,			OG560 Filter For Comps		
83	Comp							FeAr ~~Clear~~	60s	
84	HD 223094	23 41 23	28 08 54	17 56 55		00 21 W			4/4	2300
85	Comp									
CG40 652 55	HD 223094	for Seeing Test as well as			GG385 Filter still In for seeing Frames			4x	67 ms	
56 – 57	"	encoder normalization (3 BIRDs with one setup)				00 31W		2x	133 ms	
86	BIAS(4)									
87	Comp							FeAr Ap Clear	60s	
88	AC +58 20564	03 08 25	+57 48 08	18 25 56		2 22E			1508	≈400
89	Comp							FeAr Ap Clear	60s	
90	AC +58 20564	03 0825	+57 4808	18 5405		1 55E			1424	361
91	Comp							FeAr Ap Clear	60s	
92	BIAS (4)									
93	Comp							FeAr Ap Clear	60,	

Speetr. Temp. ....-101.5°C.... Dome Temp./Hum. +3.3°C....70.0%H Transparency Conditions ..Slight..haze..sthing loud..

Focus ...6.93..... Note Scattered light mask out from Cass hole used since Dec 21 CASSORET work

Spectr. Temp. ..... Dome Temp./Hum..... 385 0 50 1024 4 1 CCDEMT

Exp. Mtr.	Seeing	Pix. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no Filter For Expmeter				CASSCCD	1200 l/mm 40.1° Tilt	306u	6563Å	3/4			MAX ADU
								1/2			
								5			
2300		7.45	KS III					6	Stdvel		6.6K
								7			
	1"-2"							—	SEEING TEST	NE FAN only one on now very light East breeze	
								—			
								1/2			
								8c.	no obvious Hα Vgs pgm	Hα emission ≥100/15/14 SOUTH one 1st	
≥400	1"-2"	V 10.0	MO	Yes, un obvious "M" type Nice separation of Pair	MAYBE The slightly Brighter of Pair			9c		Yes, indeed a close N Spair	1.3K
								10		MAX FOR Comps	4.4K
361	1"-2"	V 10th	MO					11	Hα Vgs pgm	NORTH of Pair	1.3K
								12			
								1/2			
								13			

127 Pg#2

Date 1994 Dec. 26/27 Observers [K.m] T.n Hdy Stocking

Emulsion Batches:
GG.385 filter for Stellar
OG.560 filter for Comparison

CCD Spectr. Temp. Focus 6.9 Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
cc29194	AC +45130-216	03 02 48	+45 21 19	19 26 55		1 25 E			843	360	1"
95	Comp							FeAr Ap clear	60sec		
96	Comp							"	"		
97	Vys 419C	03 18 20	+23 25 09	19 50 12		00 59 E			1876	280	4"
98	Comp							FeAr Ap clear	60s		
99	AC +23 368-59	03 18 13	+23 25 51	20 24 52		00 50 E			270	50	1"
cc29200	Comp						Ap	FeAr Clear	60s		
201	BIAS(4)			20 34 51							
202 → 206	FLATS x 5					+9° Dec 00 00	GG 385 Filter	TUNG Ap 1/4	3sec		
207/08	Comp / Stellar	HARTMAN				" "	"	FeAr clear	60/80		T=+43

CCD
~~Spectr.~~ Temp. −99.9°C Dome Temp./Hum. +1.2°C 78%H Transparency Conditions: slight Haze ... Fog

Focus 6.93

Spectr. Temp. Dome Temp./Hum. +1.3°C 84% control d

Fast Low thick cloud → Fog
FROM Lake ontario coming MAX

Exp. Mtr.	Seeing	~~Rtg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
360	1"	10.2	mo	CASSCCD	1200 l/mm 42.1°	306u	6563Å	14	Vgs pgm	no obvious Hα emission Fld clocks at nicely	1.3t
								15			
								16			
280	<1"	11.89	m					17	Vgs pgm	No obvious Hα emission increasing cloud (not sobad) (.70/1 S/N)	
								18			
50	1"	10.47	mo					19	Vgs pgm	solid cloud 25/1	s/t
		~~10.47~~	~~mo~~					20			
								~~19~~ 1/2			
								21/ci			13t
T = +1.3°C								22/23	focus test		
						All	to Perseus	warm			

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pg#1

Date 1994 Dec 27/28 Observers K.m./I.T.

Emulsion Batches:
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CCD Spectr. Temp.
Focus ... 7.0
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
CC 29209	BIAS(4)									BG39 Filter	
210	comp										
211	HD 20902	03 17 12	+49 30	22 01 04					30	6000	
212	"	0		22 02 32		00 47 W		Nickel Aperture	25	6000	
213	comp							Fe/Ne	20		
214	comp							FeNe	20		
215	HD 21389	03 21 54	58 32 00	22 08 29		00 52 W			268	5000	3
216	~~Comp~~ "			22 14 31		00 58 W			330	6000	
217	comp							FeNe	20		
218	comp							FeNe	20		
219	HD 32630	04 59 30	41 13 51	22 ~~25~~ 27 ~~28~~ 59		-00 28 E			60 ~~40~~	~~4700~~ 4800	
220	"	"	"			-00 27 E			60	5500	
221 ~~220~~	comp							FeNe ~~Fe~~	20		
222	comp							FeNe ~~Ne~~	20		
223	HD 30652	04 44 24	06 47 00	22 36 38		00 03 E			95	4600	
224	"								102	5800	

CCD
Spectr. Temp. -101.5°C Dome Temp./Hum. +13°C 81% Transparency Conditions Part. Cloudy 130

Focus 7.04

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

c LAMBDA 394 0 50 1024 4 1 CCDFMT MHX ADC

Exp. Mtr.	Seeing	Pic. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	600 l/mm Tilt=~~3300~~ 2460	~~230~~	3800Å	1/2	way off on	Dec 29/30.	
								3			
30 6000		1.79	F5Ib		39.0° not a choice (optoon) for 600C grating.			4			max 11.7K
~~but~~ 35 6000								5			max 11.7K
20								6			
20								7			
25 5000	3"-4"	4.54	A0Ia					8			max 7.2K
330 6000								9			max 7.0K
20								10			
20								11			
60 ~~5100~~ ~~5300~~		3.17	B3V					12			max 14.4K
60 5500								13			max 12.5K
20								14		Comp	12K
20								15			
45 5600		3.19	F6V					16			10K
192 5800								17			8.4K

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Date 1924 Dec. 27/25 ... Observers ... K.M. / F.H. .....

Emulsion Batches:
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Spectr. Temp. ..
Focus 7.0
Spectr. Temp. ..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
225	comp							20	20	BG39 F:6	
226	comp							20	20		
227	HD 34085	05 09 44	-08 19 01	22 51 05					8sec	25K	
228	"			22 51 58		00 13E			8	26K	
229	Comp										
230	bias4			22 57							
231	comp							FeNe Clear	20		
232	HD 36512	05 27 06	-07 22 31	23 00 15		00 17 E			297	4852	4"
233				23 06 49		00 05 E			653	3800	
234	comp							FeNe Clear	20		
235	comp							"	"		
236	HD 37128	05 31 08	-01 15 57	23 22 35					28	4000	
237	"			23 24 20							
238	Comp							FeNe Clear	20		
239	comp								20		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. Hazy ... to p.c.r.t. cloudy ..

Focus .... 7.04 .....

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

MAX ADV

Comparison Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
20	BG39 E:Hg					600 m ~~3700~~ T:H 24.6°	250μ	3800Å				
20			~~0.12~~	~~BoIa~~					~~18~~			
888	≈ 5K		0.12	BoIq					18			
8	26K		"	"					20			B5K
									21			
									1/2			
20									22			
297	4852	4"	4.62	BoV					23			10K
653	3800								24		Thick cloud	6.6K
20									25			
17									26			
28	4000		1.70	BoI					27		thin cloud	8.7
									28		thick cloud	~~12K~~ 12.5K
29									29			
20									29			

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Pg #3

Date ..1994. Dec. 27/28.. Observers ..K.a./J.T.a.....

Emulsion Batches:
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Spectr. Temp. ..
Focus ... 709
CCD Spectr. Temp. ..

14

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
240	HD 36673	05 28 19	-17 53 38	23 30 35	—				350	5100	
241	"			23 37 48					190	5200	
242	Comp							FeNe	20		
243	Comp							FeNe clear	20		
244	HD 53138	06 58 51	-23 41 13	234602		00 00 E			410	4200	5"
245	"			23 53 43		00 53 E			435	5400	
246	Comp							FeNe clear	205		
247	Comp										
248	HD54605	07 04 20	-26 14 04	00 06 27		00 37 E			993	5380	
249	Comp	"	"	~~00 23 15~~				FeNe clear	20		
250	BIAS(4)										
251											
270	FLATS x20	using "Repeat FLATN.BAT				00 29E	-9°	TUNG clear	115		
271/72	Comp/Stellar HARTMAN					00 29E	+11 18	FeNe clear	20/40	4005	

Spectr. Temp. ..... Dome Temp./Hum. 10.4°c ... 82.7% Transparency Conditions ... Cloudy ... a bit 134
Then Lots of it.

Focus ... 7.04 .....

~~Spectr~~ CCD Temp. ..... Dome Temp./Hum. 10.5°c ... 85.5% H

Comparison Exp.	Exp. Mtr. BG39	Seeing	Rtg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
350	5100		2.58	F0 Ib		600 l/mm ~~5°~~ 24.6°	230u	3800Å	3			10K
190	5200								4			5K
20									6			
20									7			
410	4200	5"	3.02	B3 I					8			5.2K.
435	5400								9			7K
205									10			
									11			
993	5360		1.84	F8 Ia					12		in & out of thick cloud	3.0K
20									13			
									1/2			
115									14			14.6
20/50		4005Å	7.04 set						15/16	focus	Right on @ Row 450	
					All to Perseus & warm.							

pl 135

Date 1994 Dec 29/30 Observers Km./Smt

Emulsion Batches:
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Spectr. Temp.
Focus 7.
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CC29273/4	COMP/STELLAR	HARTMANN						FeNe clear	20/40		
75	BIAS(4)			18 19							
76	COMP							FeNe clear	20		
77	HD206165	21 35 14 ~~18 27 50~~	+61 37 51	18 27 50		3 11 W			330	5000	
78	COMP							"	20		
79	HD206165			18 37 54		3 26 W			650	10/50	
80	COMP							"	20		
81	COMP							"	20		
82	HD214680	22 34 47	38 31 47	19 00 53		2 41 W			270	5000	
83	COMP							"	20		
84	BIAS(4)			19 08							
85	COMP								20		
86	HD6130	00h 57m.4	+60° 32'	19 ~~08~~ 16 53		00 47 W			1100	5345	
87	COMP										
88	COMP										
89	HD6903	01h 04m.5	+19° 7'	19 44 54		1 04 W			800	5400	

CCD
Spectr. Temp. -100.4°C Dome Temp./Hum. 50.6%/-7.9°C Transparency Conditions clear, dry 136

Focus 7.14, set coal purposely.

Spectr. Temp. 90 again Dome Temp./Hum.

FANS OFF
(HOT PIXEL @ COLUMN 24)
430 0 50 1024 4 1 CCDFMT

Comparison Exp.	Exp. Mtr. FILTER	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/40						600C 24.6° tilt	230μ	3800 Å	3/4	FOCUS TEST	@ -7.4°C T dropping quickly.	
									1/2			
20									3			
330	5000	6-7" -8"	4.73	B2I					5	MK		2.8K
20									6			
650	10150								5	MK		5.5K
20									6			
20									7		Before this comp. OOPS Hartmann mask in Stellar	
270	5000	7-8"	4.88	O9V					8		focused for a little bit.	7.8K
20									9			
									1/2			
20									10			
110	5345		5.92	Fo II					11			6.7K
									12			
									13			
80	5400	~7"	5.55	Go III					14			5.6K

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Date 1944 Dec 29/30 Observers Km/Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29290	COMP			~~20 04~~				FeNe clear	20
91	BIAS(4)			20 04					
92	COMP							"	20
93	HD10761	01 40 06	+08 39	20 12 02		0 47 W			260
94	COMP							"	20
95	COMP							"	20
96	HD13611	02 07 42	+8 23	20 25 19		0 32 W			236
97	COMP							"	20
98	COMP							"	"
99	HD17918	02 47 36	+1605	20 39 27		0 22 W			1200
cc29300	COMP							"	20
01	BIAS(4)			21 01					
02	COMP							"	20
03	HD 20630	03 14 07	03 00 13	21 06 32		0 10 W			400
04	COMP								

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr. Seeing

5600 8"
5000 6"
4770
5180 -5"

CCD
Spectr. Temp. -100°C ..... Dome Temp./Hum. ...-8.8°C/52.1% Transparency Conditions ..little hazy..... 138

Focus .....7.14.....

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

430 0 50 1024 4 1 CCDEMT

BG 39 Exp. Mtr. ELLIOT	Seeing	~~Ptg.~~ Mag.	Sp.	CASS Inst. CCD	Grating/ Tilt	Slit	Emulsion	~~P.H.~~ C.	Program	Remarks	Quality
				600 C 24.6° tilt →		230μ	3800 Å	15			
								½			
								16			
5600	8"	4.26	G8III					17	MK		3.9K
								18			
								19			
5000	6"	4.37	GGII-III CN-2					20	MK		4.4K
								21			
								22			
4770	varied 3"–6"	6.31	F3III					23	MK		5.3K
								24			
								½			
								25			
5180	~5"	4.83	G5V					26	MK		5.4K
								27			

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Date 1994 Dec. 29/30 Observers Km/Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29305	COMP							Fe Ne clear	20
06	HD23180	03 38 00	+31 58 00	21 21 20		0^h 4 E			180
07	COMP							"	20
08	COMP							"	"
09	HD26015	04 02 00	+14 54 00	21 30 38		00 04 E			1200
10	COMP							"	20
11	COMP							"	20
12	HD27383	04 14.2	+16 15	21 58 17		00 09 W			900
13	COMP								20
14	BIAS (4)			22 15					
15	COMP								
16	HD 27397	04 14.3	+13° 48'	22 21 49		?			900
17	COMP								20
18	COMP								20
19	HD30652	04 44 24	+6 47	22 44		?			109

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

BG 39 Exp. Min. FILTER	Sc
3400	
6020	
2100	
6730	
7000	

CCD
Spectr. Temp. -100.3°C Dome Temp./Hum. -9.4°C / 53.1% Transparency Conditions Mostly fine 140

Focus 7.14

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

Comparison Exp.	Exp. Mtr. (B639 FILTER)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20					CASS CCD	600C	230μ	3800Å	28			
180	8400		3.83	B1III					29	MK		14.2K
20									30			
"									31			
1200	6020		6.01	F3V					5			7.5K
20									6			
20									7			
900	2100		6.89	F7V +G3V					8		DOME Block LIGHTWAY	2.6K
20									9			
									1/2			
									10			
900	6730		5.59	F0III					11			8.5K
20									12			
20									13			
109	7000		3.19	F6V					14			~~12K~~ 7K

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Date 1994 Dec 29/30 Observers Km/Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29320	COMP							FeNe clear	20
21	COMP							"	"
22	HD27022	04 11 18	+64 54	22 58 53		1 6 W			700
23	COMP							"	20
24	BIAS(4)			23 13					—
25	COMP							"	20
26	HD36512	05 27 06	-07 23	23 20 47		0 9 W			259
27	COMP							"	20
28	COMP							"	"
29	HD37018	05 30 24	-04 54	23 35 28		0 21 W			260
30	COMP							"	20
31	COMP							"	20
32	HD 41117	05 57 59	20 08 27	23 49 41		6 7 W		"	320
33	COMP							"	20
34	COMP							"	10

CCD Spectr. Temp
Focus
Spectr. Temp
Exp. Mid. Sc
FILTER

6370
6350
6280
6500

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. -10.0°C/53.6% Transparency Conditions Amazing for December! 1.42

Focus 7.14

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

Comparison Exp.	Exp. Mtr. (BG 39 FILTER)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20					CASS CCD	600 C 24.6° tilt	230μ	3800Å	15			
"									16			
700	6370		5.27	G5III b					17			6K
20									18			
—									½			
20									19			
259	6350	~4"	4.62	B0 V					20			10.8K
20									21			
"									22			
240	6280		4.59	B1 V					23			12K
20									24			
20									25			
329	6500		4.63	B2 I					26			8.6K
20									27			
"									28			

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Date 1994 Dec 29/30 Observers Km/Smt

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29335	HD 47839	06 35 30	09 59 00	00 01 23		0019 E			240
36	COMP								
37	BIAS 4			00 09					
38	COMP								
39	HD54605	07 04 18	-26 14 00	00 ~~21~~ ~~58~~		00 28 E			~~44~~ 75
40	COMP								
41	COMP								
42	HD 62345	07 38 25	24 38 16	00 ~~34~~ 40 ~~11~~ 54		?			~~220~~ 277
43	COMP								
44	COMP								
45	HD 62509	07 39 12	28 16 04	00 51 35		0 36 E			40
46	COMP								
47	COMP								
48	HD58350	07 20 06	-29 06	00 59 53		0 6 E			70
49	HD58350	"	"	01 04 33		?			170

Spectr. Temp. ..... Dome Temp./Hum. -10.7°C/55.2% Transparency Conditions ... clear 1.44

Focus ..... 7.14 .....

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

Comparison Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
240	6050		4.66	O7					29			9K
									30			
									~~31~~ 1/2			
									~~32~~ 3			
75 ~~44~~	10500 ~~6100~~		1.84	F8 Ia					5			4.3K
									6			
									7			
270 ~~220~~	11400 ~~9000~~		3.57	G8 III					8			~~5.8K~~ 7.2
									9			
									10			
40	15000		1.14	K0 III					11			~~13.2K~~ 12K
									12			
									13			
10	5900		2.45	B5 I					14			4.3K
170	15000								~~14~~ 15			12.3K

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Date 1994 Dec 29/30 Observers Km/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 29350	COMP							FeNe clear	20
51	BIAS(4)			01 11					—
52	COMP							"	20
53	HD 74395	8 38 48	−6 52	01 20 16		0 51 E			905
54	COMP							"	20
55	COMP							"	"
56	HD 39801	5 49 48	+07 23	01 47 20		2 10 W			94
57	COMP							"	20
58	COMP							"	"
59	HD 77912	9 00 12	+38 51	01 56 28		0 43 E			641
60	COMP							"	20
61	BIAS(4)								—
62	COMP							"	20
63	HD 82210	9 25 36	+70 16	02 19 43		0 52 E			380
64	COMP							"	20

CCD
Spectr. Temp. −100°C ..... Dome Temp./Hum. −10.7°C / 56.7% Transparency Conditions ... clear ; increasing cloud 1466

Focus ..... 7.14 .....

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

Comparison Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20					CASS CCD	600 C tiH 24.6°	230μ	3800Å	15			
–									½			
20									16			
905	14300		4.62	G1 Ib					17			10.3K
20	~~14.5K~~								18		exp. mtr made weird beeping noise before counting normally	14.5K
11									19			
94	50 000	5"	0.50	M2 I					20			10K
20									21			14.7K
11									22			
641	10 000	~7"	4.56	G7 Ib-II					23		~~cloudy here~~	6.6K
20									24			
–									½			
20									25			
380	270	?	4.56	G4 III-IV					26		in cloud. → sky attacked from NW by thick cloud front.	
20									27			

P7 147

Date 1924 Dec. 29/30. Observers Km./Smt.

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(s)Exp.	Exp. Mtr.	See
CC29365→73	FLAT x 9					0^h	$-15°$	Tung clear	11		
74/5	COMP/STELLAR HARTMANN					0^h	$+38°$	FeNe clear	20/40		
76	BIAS(4)			0310							

Spectr. Temp. ..... Dome Temp./Hum. -10.9°C/55.4% Transparency Conditions ... overcast except extreme S.

Focus ..... 7.14 .....

148

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

Comparison Filter (s) Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
11					CASS CCD	600 gl/mm(C) tilt=24.6°	23μ	3800Å	2c,			15.4K →13.9K
20/40									3/4	FOCUS TEST	-10.0°C in dome -10.9°C @ close set warm nav.	

Backed up to Perseus & WORM.

149 pg#1 Mon/Tues

Emulsion Batches:

Date 1995 Jan 2/3 Observers [R.m.] Sm.t./Tq

CSS = 14 secs ahead of (Astra clock)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC293 77/78	Comp / Stellar	HARTMAN	Posn					FeAr clear	60/60
79	BIAS(4)	Telescope Encoders also normalized using 1900 coords of HD3765							
80	Comp							"	60
81	HD3765	00 35 18	+39 40	18 12 56		0 18 W			882
82	COMP							"	60
CG400 658/661	HD3765	00 35 18	+39 40	18 32				4x	67ms
CG 662/663	"	"	"			0 25 W		2x	133ms
CC29383	Comp							FeAr clear	60s
84	HD203156	21 15 23	+37 49	18 42 44		4 05 W			628
85	Comp							FeAr clear	60s
86	BIAS(4)								
87	Comp							FeAr clear	60s
88	HD214975	22 36 55	+56 18 24	19 02 30		3 28 W			2122
89	Comp							FeAr clear	60s
90	BIAS(4)								

CCD
Spectr. Temp. ~100°C Dome Temp./Hum. -4.6°C 62.9% Transparency Conditions . P.C.AT. clear

Focus 6.90

CCD
Spectr. Temp. ~100.9°C Dome Temp./Hum. -6.8°C 71.5%H

CCDFMT
4 24 0 50 1024 4 1

150

Comparison Filter	Comparison Exp.	OG 560 Exp. Mtr. FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Max ADU Quality
	60/60					CHSS CCD	1800 hl/mm TiH 5495°	30µm	6400Å	3/4	focus test	Hot pixel at	
										1/2		column 25	
	60									5			
	887	2280	3'-4"	7.36	dK5					6	Std. Vel.		3400
	60									7c.			
x	87m			7.36	dK5		above 30µm s.lit				Seeing test	Dome west, gusty	
x	133m										* weather Radio SAY gusty SW winds	NW wind (Thought)	
	60s									8			
	628	F300	3'-5"	5.8 - 5.9	F2					9	Rm pgm	> 300/1 s/n	6.6K
	60s									10			
										1/2			
	60s									11			
	2122	3240	4"	8.40	GOIb					12	Rm pgm		
	60s									13			
										1/2c.			

151
Pg #2 Mon / Tues

Date 1995 JAN 2/3 Observers [Rm] Tn / Sept

Emulsion Batches:
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CCD
Spectr. Temp.
Focus ... 6.90
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
CC29391	Comp							FeAr Clear	60sec	OG 500 Filter	
92	~~V8Y~~ Per	02 20 18.8	+58 28 06	19 48 02		0 13 W			127	130	4
93	Comp							FeAr Clear	60s		
94 → 402	FLATS x 9					00 16W	+58°	Tung Ap 1/4	6s		
403	BIAS(4)										
404/05	Comp / Stellar HARTMAN					00 40 W	+5°	FeAr Clear	60/60	-6.3C	
06	COMP							"	60		
07	HD44990	06 19 48	+07 08	01 30 00		01 44 W			420	2260	
08	COMP							"	60		
09	BIAS(4)			01 41					—		

CCD
Spectr. Temp. −100.8°C ..... Dome Temp./Hum. −6.8°C ... 77.7% Transparency Conditions ... Some cloud .....

Focus ... 6.90 .....

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

Exp. Mtr.	Seeing	Pfg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG 560 Filter				CASS CCD	1800 l/mm Tilt 54.95	306μ	6400Å	14		S/N ~50/1	
130	4–3"	10.8 −11.6	F5 −F9					15	Rm pgm	VY Per (A Bit too Faint for this seeing And Cloud)	
								16			
								17		closed.	2.5K
								1/2			
−6.3°C	6.90 set							18/19	focus test		
								20		opened up during a hole in clouds.	
2260		B 6.5-8.0	F Tab −K Tab					21	T Mon Rm	GUSTY WIND.	3.6K
								22			
								½		BLOWING SNOW.	

Backed up to Perseus & WORM

pg#1 153 Tues/Wed

Date 1995 JAN 3/4 Observers [Blu] Tu / Scott

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC2941 10/11	Comp / Stellar Hartman					00 29W	40°	FeAr Clear	60/60
CG40 64-67	HD 3765	00 35 18	+39 40	18 40		00 30 W		4x	67 ms
CG 68 69	"	"	"					2x	133 ms
CC29412	Comp							FeAr Clear	60s
13	HD 3765	00 35 18	+39 40	18 47 11		0 50 W			500
14	Comp							FeAr Clear	60s
15	BIAS(4)			18 59					
16	Comp							FeAr Clear	60s
17	HD 6457	01 00 20	+20 55 43	19 05 19		00 55 W			1195
18	Comp							FeAr Clear	60 sec
19	Comp							"	"
20	HDE 235679	21 55 00	+54 00 00	19 32 36		4 41 W			1901
21	Comp							FeAr Clear	60s
22	BIAS(4)			20 09					—
23	COMP							"	60

CCD
Spectr. Temp.
Focus 6.93
Spectr. Temp.

Exp. Mtr.	Sec
CG560 FILTER	
995	3
4700	3
1006	2'3"

CCD
Spectr. Temp. −100° after clearing Dome Temp./Hum. −6.0°C 65.2% Transparency Conditions Part Cloudy
Saturation
Focus 6.93
Found CCD saturated slightly at start of night.
Raised Temp To −50°, running cisc for 20 mins.
Spectr. Temp. ..... Dome Temp./Hum. ..... climbed
[424 0 50 1024 4 1 CCD First Exact Y Orient centering]

Exp. Mtr.	Seeing	Pig Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG560 FILTER		7		CASS CCD	1800 l/mm G=6070	306u	* 6604†	3/4	Focus Test	Actual/Now 512d=6609† center	
		7.36	dk5		Above	306u slit			Seeing test	Part Cloudy	
					"	"	"		" "	No Funs tonight.	
								5			
995	3"	7.36	dk5					6	Std Vel	thin cloud	2.2K
								7			
								6½			
								8		CSS 386 time reset to now. It was 15 sec ahead.	
4700	3"	5.56	A0V n					9	Telluric Std	mostly Cloudy though 1.09 AIR MASS South of Pair	7.7K
								10	1st 15 mins	almost completely cloudy	
								11			
1006	2-3"	8.86	B2.5IV b					12	Bln pgm	1.33 AIR MASS Clear Now	6.1K @ Hα 1.7K @ continuum
								13		Headers ↑ Done	
								½			
								14			

Pg #2 155

Date 1995 Jan 3/4 Observers [Blu]/Tn/Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29424	HD19832	03 06 18	+26 53	20 19 23		0 07 E			600
25	COMP							Fe/v clear	60
26	COMP							"	"
27	HD35502	05 20 00	-02 54	20 40 24		1 49 E			1200
28	COMP							"	60
29	BIAS(4)			21 03					—
30	COMP							"	60
31	HD19832	03 06 18	+26 53	21 11 27		0 45 W			630
32	COMP							"	60
33	COMP							"	60
34	HD37017	05 30 24	-04 34	21 29 03		1 15 E			900
35	COMP							"	60
36	COMP							"	60
37	HD37776	05 35 54	-01 32	21 51 49		0 55 E			1099
38	COMP							"	60
39	BIAS(4)			22 12					

Spectr. Temp. -100°C Dome Temp./Hum. -7.2°C/65.4% Transparency Conditions clear now 156

Focus 6.93

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

mparison ter Exp.	Exp. Mtr. OG 530 FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
600	3820	4"-5"	V 5.79	B8 (Si)	CASS CCD	1800 l/mm G=6070	30μm	(6604 req.) 6609 Å	15	Bln He-weak	seeing worsening	6.3K
60									16			
"									17			
1200	1300	4"-5" ~8" at times	V 7.36	B5 V sn (HeW)					18	Bln He-weak	bit of Hα emission in wings of absorption	1.7K
60									19			
-									1/2			
60									20			
630	4150	5"	V 5.79	B8 (Si)					21	Bln He-weak	seeing better again	
60									22			
60									23			
900	2420		V 6.56	B2V p					24	Bln He-rich	S/N > 200:1	3.5K
60									25			
60									26			
1049	1885	3"-5"	V 6.97	B2V					27	Bln He-rich*	S/N > 200:1 some cloud	3.2K
60									28			
									1/2			

pg#3 157

Date 1995 JAN 3/4 Observers [Blh.] Ta. Smt

Emulsion Batches:

CCD Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Se
CC29440	Comp							FeAr Clear	60sec	0656 Filt	
41	HD19832	03 06 18	+26 53	22 18 20		01 51 W			564	3850	
42	Comp							FeAr Clear	60s		
43	Comp							"	"		
44	HD64577	01 00 20	+20 53	22 33 48		04 16 W			714	4000	
45	Comp							FeAr Clear	60s		
46	Comp							?	"		
47	HD37017	05 30 24	-04 34	22 54 30		00 09 W			835	2200	
48	Comp							FeAr Clear	60s		
49	BIAS(4)			23 10							
50	Comp							FeAr Clear	60		
51	HD19832	03 06 18	+26 53	23 16 24		02 50 W			567	3975	
52	Comp							FeAr Clear	60s		
53	COMP										
54	HD35502	05 20 00	-02 54	23 34 04		1 07 W			1345	2120	

CCD Spectr. Temp. −100.1°C Dome Temp./Hum. −8.0°C..66%H Transparency Conditions..Part. Cloudy 1.58

Focus 6.93

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pic. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ c d	P.H.	Program	Remarks	Quality
06566 Filter				CASS CCD	1800lm/mm G=6070	306u	6604A	5			
3850	3"	5.79	B8 (Si)					6	Bln He weak	1.12 AirMass	
								7			
								8			
4000	4"	5.56	A0Vn					9	(Telluric Std	SOME Cloud AirMass=1.72	
								10	Again, The	South one of pair)	
								11			
2200	"	6.56	B2Vp					12	Bln He Rich	1.50 AirMass Cloud too	
								13			
								1/2			
								14			
3975	3"-4"	5.79.	B8 (Si)					15	Bln He weak	1.25 AirMass	1.0K
								16			
								17			
2120		7.36	B5IIIsn (HeW)					18			3.2K

pg #4 159

Date 1995 Jan 3/4 Observers [Bln]/Tn/Smt

Emulsion Batches:
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Spectr. Temp.
Focus 6
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(s) Exp.	Exp. Min. Filter	Sec
CC29455	COMP							FeAr clear	60		
56	BIAS(4)				≈ 00 00						
57	Comp							FeAr clear	60		
58	HD 37017	05 30 24	-04 34	00 04 27		01 16 W			601	2280	4
59	Comp							FeAr clear	60		
60	Comp							"	"		
61	HD 19832	03 06 18	+26 53	00 21 40		3 55 W			580	4570	5
62	Comp							FeAr clear	60		
63	COMP							"	"		
64	HD37776	05 35 54	-01 32	00 39 33		1 50 W			900	2200	
65	COMP							"	60		
66	BIAS(4)			00 59					—		
67	COMP							"	60		
68	HD37017	05 30 24	-04 34	01 02 47		2 13 W			570	2220	
69	COMP										

Spectr. Temp. -100°C ..... Dome Temp./Hum. -8.4°C / 69.9% Transparency Conditions . variable cloud, mostly clear most of the time. 160

Focus ..... 6.93 .....

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

MAX 1004

CG 560 Exp. Mtr. FILTER	Seeing	Tel. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 ℓ/mm G=6070	306μ	6604 (6609 actually)	19			
								1/2			
	~~4"~~	~~6.56~~	~~B2Vp~~					20	~~Bln He Rich~~		
2060	4"	6.56	B2Vp					21	Bln He Rich	gusty.	3.0K
								22			
								23			
4570	~~4.5"~~	5.79	B8 (si)					24	Bln He wk	~~windy~~	7.5K
								25			
								26			
2200		V 6.97	B2V					27	Bln	emission? no sky here. odd Hα region (very nasty cosmic RAY strong & glancing) covers ~100 pixels total, crosses spectrum diagonally.	4.4K
								28			
								1/2			
								29			
2020		6.56	B2Vp					30	Bln	~~* odd Hα region~~	3.4K
								31			

pg#5 161

Date 1995 Jan. 3/4 .... Observers [illegible] + [illegible]

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29470	Comp							FeAr Clear	60s
71	HD 18832	03 06 18	+26 53 00	01 20 10		4 54 W			600
72	Comp							FeAr Clear	60s
73	Comp							"	"
74	HD 35502	05 20.	-02 54	01 39 06		3 13 W			1350
75	Comp							FeAr Clear	60s
76	BIAS(4)			=0207					
77	Comp							FeAr Clear	60s
78	HD 37017	05 30 24	-04 34 00	02 09 57		3 23 W			708
79	Comp							FeAr Clear	60s
80-99	FLATS x 20					00 00	+18°	TUNG Ap 1/4	6
CC29500/01	Comp / Stellar HARTMAN					"	"	FeAr Clear	60/65
CC29502/03	Comp / Stellar HARTMAN							FeAr Clear	40/70
04	BIAS(4)			03 03					
05	COMP							"	60

Spectr. Temp. ...../..... Dome Temp./Hum. −9.3°C 67%H Transparency Conditions ...slight Haze..... 162

Focus ...6.93./...705 for 4475Å wind getting gusty again

Spectr. Temp. ..... Dome Temp./Hum. −9.6°C 66.8%H

Exp. Mtr. FILTER	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 lm/mm G=6070	306μ	6604Å	5			
4490		5.79	B8 (Si)					6	Bln He weak		6.5K
								7			
								8			
7240	3-5"	7.36	B IV SN					9	Bln He weak	2.22 AIR mass	30K
								10			
								12			
								11			
2160	2-4"	6.56	B2 Vp					12	Bln He Rich	2.38 AIR mass	
								13			~~13.5K~~ 14.0K →13.5K
								14			
	−9.5°C	6093 set						3/4	focus test		
3639 FILTER	−9.5°C				1800 lm/mm G=4555	306μ	4475Å	3/4	focus test	4470Å actual center	
								1/2			
								5			

pg# 6163

Date 1995 Jan 3/4 Observers [Wde]/Tn/Smt + [Bln]

Emulsion Batches:
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Spectr. Temp.
Focus 7
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	86 24 Exp. Mtr. Filter	See
CC29506	HD42111	06 03 48	+02 31	03 09 00		3 59 W			1330	11830	
07	COMP							Fe Ar clear	60		
08	Comp							"	"		
09	Vesta	06 02 J2000	+21 43 For HF 03	03 38 36		4 35 W			1292	5008	
10	Comp							Fe Ar Clear	60		
11	BTHS(4)			~04 00					—		
12	COMP							"	60		
13	HD88195	10 05 09	-07 55 01	04 09 14		0 51 W			886	9170	
14	COMP							"	60		
15	COMP							"	"		
16	HD86360	09 52 48	+12 55	04 32 21		1 21 W			600	13900	
17	COMP							"	60		
18	COMP							"	"		
19	HD77190	08 55 54	+28 18	04 51 39		2 44 W			1000	3160	
20	COMP							"	60		

Spectr. Temp. -10.2°C Dome Temp./Hum. -9.8°C/66.8% Transparency Conditions ... clear, gusty W. wind 164

Focus ... 7.05

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

CCD FLAT for 4475 Å Region

430 0 50 1024 4 1

Comparison Filter	Comparison Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	1330	11830	4"-5"	5.73	A3Vn	CASS CCD	1800 @/mm G=4555	306μ	4475 Å	6	Wide A-shell		4.9K
	60									7			
	4									8			
	1212	5008	2"-3"	6.8	G2					9	Std Vel		2K
	60									10			
	—									1/2			
	60									11			
	886	9170	3"-4"	5.91	A1V					12	Wide A-shell	S/N > 250:1	
	60									13			
	"									14			
	600	13900		5.26 ✓	B9 IV					15	Bin Spec Bin.	S/N > 370:1 windy again.	7.2K
	60									16			
	"									17			
	1800	16650		6.07 ✓	A8Vn					18	Wide A-shell	S/N ~ 260:1	5.5K
	60									19			

pg# 7165

Date 1995 Jan 3/4 Observers [Wade/Blu] Tn/Smt

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29521	BIAS(4)			05 12					
22	COMP							Fe Ar Clear	60
23	HD98058	11 11 36	-03 06	05 17 18		0 42 W			265
24	COMP							"	60
CG40 670	HD103095	11 47 13	+38 26 10	0537				4x	67½
CG40 674 675	"	"	"			0022 W		2x	133½
cc29525	Comp							Fe Ar Clear	60
26	HD103095	11 47 13	+38 26 10	05 42 11		0044 W			1084
27	Comp							"	60
28	BIAS(4)			06 04					—
29	COMP							"	60
30	HD112028	12 48 24	+83 57	06 10 32		0 07 W			600
31	COMP							"	60
32	COMP							"	"
33	HD118232	13 30 24	+49 32	06 32 05		0 21 E			240

Spectr. Temp.

Focus 7

Spectr. Temp.

Exp. Mtr.	See
6639	
10 500	3
	3'
1340	2'
1250	
9950	5'

Spectr. Temp. ..... Dome Temp./Hum. -10.8°C / 67.0% Transparency Conditions ... clear, gusty wind ... 166

Focus ..... 7.05 .....

Spectr. Temp. ..... Dome Temp./Hum. -11.2°C / 66.8% H

Exp. Mtr.	Seeing	~~V Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39				CASS CCD	1800 Rlmm G=4555	300μ	4475Å (4470 actually)	½			
								20			
10 500	3"	4.47	A7IIIn					21	Wide A-shell	S/N ~ 270:1	5.2K
								22			
	3"	~~6.45~~	G8V$_p$		ABOVE 306μ slit			—	Seeing Test	Dome west, strong W wind 82° Alt. 1.008 Air mass, -11.1°C stable humidity most of night 67% dome.	
								—	"		
								23			
7340	2"	6.45	G8V$_p$					24	Std vel		
								25			
								½			
								26			
12 300		5.28	A1 III Shell					27	Bln/Wide A-shell.	S/N ~ 320:1	10.0K
								28			
								29			
9950	3"	4.70	A5V					30	Wide A-shell	S/N ~ 290:1	5.8K

167 pg # 8

Date .1995...Jan..3/4... Observers .[Wde.].Tn./Smt.....

Emulsion Batches:
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CCO
Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
cc29534	COMP							Feth clear	60		
35	Comp							"	"		
36	HD108283	12 21 24	+27 49 00	06 44 09		01 00 W			275	830	2.5
37	Comp							Feth clear	60		
38	Comp							"	"		
39	HD138629	15 28 12	+41 14	06 56 24		01 53 W			290	870	2.6
40	COMP							"	60		
41	BIAS(4)			07 03					—		
42	COMP							"	60		
43	HD148283	16 21 54	+37 37	07 07 53		2 31 ~~E~~			240	830	
44	COMP							"	60		
45-53	FLAT x9					2 30 E	+38°	Tung clear	13		
54/55	Comp / Stellar Hartman					"	"	Feth clear	40/70		

CCD Temp. −101.9°C Dome Temp./Hum. −11.2°C / 66.8% Transparency Conditions .. clear, windy

Focus 7.05

Spectr. Temp. Dome Temp./Hum. −11.3°C 67.6% H

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800-ℓ/mm 6=4555	306μ	4475 Å (4470 Å actually)	31			
					〃		〃	5			
8030	2"-3"	4.95	F0p					6	Wide A stell		3.8K
								7			
								8			
8400	2"	5.02	A5 V					9	Wide A stell		4.0K
								10			
								½			
								11			
8300		5.52	A5 V					12	Wide A-stell	bright morning sky. S/N > 220:1	4.0K
								13			
								14			13.0K → 11.8K
								3/4	focus test		
				All to	WORM	&	Perseus.				

169 Wed / Thurs

Emulsion Batches:

Date 1995 Jan. 4/5 Observers [R.m.] Jn. Short

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc295 56/57	Comp / Stellar	Hartmann				00 11W	38°28	Fe Ar Clear	60/60
58	BIAS(4)								—
59	COMP							"	60
60	HD180583	19 12 00	+27 45	07 59 26		(PLATFORM) 05 26 W			261
61	COMP							"	60
62	BIAS(4)								—
63-65	FLAT x3			18 09		05 26 W	+27°55	Tung ¼ Ap.	6s
66-71	FLAT x6			19 47		"	"		
72	BIAS(4)			19 52					

CCD
Spectr. Temp.
Focus 6
Spectr. Temp.

CCD

Spectr. Temp. ~~-100.5°C~~ Dome Temp./Hum. -10.0°C 59%H Transparency Conditions . Part cloudy 1.70

Focus 6.95 → Snow frequently

Spectr. Temp. ..... Dome Temp./Hum. ..... CHAMBUH 424 0 50 1024 4 1 CCDFMT

Comparison Filter Exp.	Ca 56c Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60/60	-10.2	6.95			CASSCCD	1800 l/mm G=5905	306a	~~6392~~ 6392 Å	3/4 c;	focus test	6392 Å actual	
—									~~2~~ 1/2			
60									5			
241	500		(V) 6.19	F6 I -IIb					6	Rm V473Lyr	Aperture [primary] partly blocked by dome (platen)	500 above background
60									7			
—									1/2			
60s									8			13.0K → 12.6K
									9			20.6K
									1/2	All to WORM Jn & Perseus		

171
pg #1 THURS/FRI

Date 1995 JAN. 5/6 ..... Observers [Rm.] ..Sent. I.T.n. .....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC295 73/74	Comp / Stellar Hartmann					00 20W	+40°	FeAr Clear	60/60
75	BIAS(4)								
76	Comp							FeAr clear	60s
77	HD180583	19 12 00	+17 45 00	17 39 15		05 18 W			698
78	Comp							FeAr clear	60s
79	COMP							"	"
80	HD331970	20 08 27	+32 34 16	17 58 38		5 04 W			2043
81	COMP							"	60
82	BIAS(4)			18 35					
83	COMP							"	60
84	HD203156	21 15 24	+37 49	18 40 50		4 17 W			711
85	COMP							"	60
86	COMP							"	"
87	HD214975	22 36 55	+56 18 24	18 00 15		3 33 W			1800
88	Comp							"	60
89	BIAS(4)			19 35					

CCD
Spectr. Temp.
Focus ... 6.7
Spectr. Temp.

Exp. Mtr.	Se
CG560 Filter	
500	3-
1000	3-6
900	3-1
1570	4-8

CCD
Spectr. Temp. −100.0°C Dome Temp./Hum. −8.2°C 47.8% Transparency Conditions .. FINE 172 pg #1

Focus ... 6.95

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

Strong WSW wind very gusty too (SW 40 to 50 kms/hour)

424

Exp. Mtr.	Seeing	Pkg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG560 Filter				CASSCCD	1800 l/mm G=5905	306a	6392A	3/4	focus test		
								1/2			
								5			
5000	3"-7"	6.19	FGJ-T5		S/N > 300:1 easy.			6	V473Lyr Rim pgm	PARTIALLY BLOCKED BY DOME AT END.	7.3K
								7			
								8			
1000	3"-10"	9.1-9.8	F8-62Ib		S/N > 100:1			9	Rm MWCyg	S/N > 100:1	
								10			
								1/2			
								11			
4900	3"-10"	5.8-5.9	F2		S/N > 350:1			12	Rm V1334 Cyg	wind caused variable seeing	9.0K
								13			
								13			
1370	4"-8"	8.4	G0 T6		S/N > 170:1			14	Rm Z Lac		
								15			

pg #2173

Date 1995 Jan 5/6 Observers [Rm] Tn / Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29590	Comp							Fe Ar clear	60s
91	VY Per	02 20 19	+58 28 03	19 38 04		00 32 W			2297
92	Comp							Fe Ar clear	60s
93	VY Per			20 18 40		1 15 W			2400
94	Comp							Fe Ar clear	60
95	BIAS (4)			21 06					
96	COMP							"	60
97	HD25361	03 56 42	+58 23	21 09 37		0 08 W			1199
98	COMP							"	60
99	COMP							"	60
cc29600	HD29587	04 34 30	+41 57	21 41 54	21 52				600
01	COMP							"	60
CG40676-9	HD29587	"	"						4x.067s
80 81	"	"	"		2158	0h	88° Alt.		2x.133s
cc29602	BIAS (4)			22 01					

Spectr. Temp.
Focus 6.95
Spectr. Temp.

Exp. Mtr. Se
333 3
336
3000 3
600 3
2s, 155
2s, 163

Spectr. Temp. ..... Dome Temp./Hum. -8.7°C 50.8% Transparency Conditions ... slightly hazy ... 174

Focus .. 6.95 .....

Spectr. Temp. ..... Dome Temp./Hum. -8.6°C 50% pg #2

c LAMBDA

Exp. Mtr.	Seeing	Pt. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60s				CASS CCD	1800 l/mm G=5905	306	6392Å	16			
2297 333	3"-5"	10.8 -11.66	F5 -F9					17	Rm pgm	S/N ~ 70:1 above blg.	
60s								18		s	
2400 336								19	Rm pgm	S/N ~ 70:1 above blg.	400 above blg
60								20			
								1/2			
60								21			
1199 3000	3"-8"	7.30 -8.07	F6Ib -G2Ib					22	Rm RX Cam	wind taking over again.	6.1K
60								23			
60								24			
600 1600	3"-5"	7.29	d62					25	Std. Vel.		
60								26			
247, 179 215, 153		"	"					–	SEEING TEST	Done w/ STRONG SW wind gusts 40-50 km/h above 30m, stable T (-8.6°C) and humidity (50% dome).	
200, 163								–			
								1/2			

175 pg 43

Date 1995 JAN 5/6 Observers [R.M.] T.A. Smith

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc2903	Comp							FeAr Clear	60s
04	HD 30282	04 41 05	+36 32 36	22 11 54		0 28 W			1200
05	Comp							FeAr Clear	60s
06	COMP							"	"
07	HD44990	06 19 48	+07 08	22 43 24		0 43 E			900
08	COMP							"	60
09	BIAS(4)			23 05					—
10	COMP.							"	60
11	VESTA	J 2000.0 06 00 00	+21 48 00	23 15 02		~0 10 W			900
12	COMP							"	60
13-21	FLAT x 9					0 29 W	+21 48	Tung ¼ Ap.	6s
22/23	COMP/STELLAR HARTMANN							FeAr Clear	40/70
24	COMP							FeAr Clear	60
cc2916 25	VESTA	J 2000.0 06 00 00	+21 48 00	23 57 47		01 03 W			1261
26	COMP							"	60
27	BIAS(4)			0021					

Spectr. Temp. −10.2°C Dome Temp./Hum. −8.4°C / 49.9% Transparency Conditions. fine., GUSTY., STRONG SW WIND. 176

Focus 6.95 / 7.03 @ 4470 Å

Spectr. Temp. ..... Dome Temp./Hum. −8.1°C / 49.4% @ FOCUS TEST

Exp. Mtr. (OG 560 FILTER)	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C455 CCD	1800 lines/mm G 5905	306μ	6392Å	5			
	3"-5"	7.9-8.8	F6 - G1					6	AW Per Rm pgm	Double peaked spectrum due to wind shaking telescope	4K
								7			
								8			
4700	4"-5"	6.5-8.0	FTIab - KITab					9	Rm T MON		9.0K
								10			
								1/2			
								11			
~3600		~7	G2					~~12~~	STD. VEL.	Δα = -0010, Δδ = -0054	7.3K
								13			
								15			13.0K → 12.3K
−8.1°C	7.03 SET				1800 l/mm G=4555	30μ	4470Å	3/4	FOCUS TEST	4470Å exact wavelength at center	
OG 560 FILTER				Grating Angle 42.7°				5			
4380	5"	~7	G2			Edit Starting		~~12~~	STD. VEL	exp. mtr. filter changed during obs. WIND IS NUTS!	
BG 39 FILTER								7			
								1/2	C.		

177
pg#4

Thurs / Fri

Date 1995 Jan. 5/6..... Observers [Blw/Wde]...Tu./Swot

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29628	Comp							FeAr Clear	60sec
29	HD86360	09 52 48	+12 55 00	00 29 40		2 32 E			747
30	Comp							FeAr Clear	60sec
31	Comp							"	"
32	HD77190	08 55 51	+28 17 48	00 51 43		1 13 E			774
33	Comp							FeAr Clear	60s
34	Comp							"	"
35	HD188195	10 05 06	-07 55 00	01 19 43		1 55 E			960
36	Comp							FeAr Clear	60sec
37	Comp							"	"
38	HD98058	11 11 35	-03 06 18	01 36 46		2 49 E			
39	Comp							FeAr Clear	60sec
40	B143(4)			01 46					
41	Comp							FeAr Clear	60s
42	HD108283	12 21 24	+27 49 00	01 52 28		3 43 E			903
43	Comp							FeAr Clear	60s

Spectr. Temp. ..... Dome Temp./Hum. -84°C ..... 49% Transparency Conditions ..... slightly hazy 178

Focus ..... 7.03 .....

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

* Hot Pixel & Col #24 now

430 050 1024 4 1 CCDFMT

no clouds through

STILL very gusty SW

30 - 60 kms/hr

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER											
				CHSS CCD	1800 l/mm G=~~4655~~	30u	4470Å	8			MAX ADU
15155	3-4"	B 5.22	B9IV					9	Blu SBn pgm		7.2K
~~1578~~								10			
								11			
8500	3-~~8~~4"	V 6.07	A8Vn					12	wide A shell		4.3K
								13			
								15			
8460	3-5"	B 5.93	A1V					14	wide H shell	> 200/1 S/N	
								16			
								16			
11,100	6"	B 4.68	A7IVn					17	Wide A shell		3.9K
								18			
								1/2			
	~~3-6"~~							18			
10,400	3-6"	B 5.22	F0p					19	Wide A shell pgm		5.5

1:79
pg 45

Date 1995. JAN. 5/6..... Observers .[Wade/Bahn]...T.A./.Smt.

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

Spectr. Temp.
Focus....7.0
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seei
CC29644	Comp							Fe Ar Clear	60s	~~0550~~ BG39	
45	HD 112028	12 48 24	+83 57	020811		3 45 E			800	17300	
46	Comp							Fe Ar Clear	60s		
47	COMP							"	"		
48	Ceres	J2000.0 09 42 44	+26 04 00	02 33 02		0 07 W			1890	5400	
49	COMP							"	60		
50	BIAS(4)			03 08					—		
51	COMP							"	60		
52	HD118232	13 30 22	+49 32	03 17 31		3 27 E			300	14500	
53	COMP							"	60		
54	Comp							"	"		
55	HD 103095	11 47 12	+ 38 26	03 30 47		1 17 E			1242	7690	3"
56	Comp							"	60s		
CG40 ~~82~~ 85	HD 103095	"	"	03 56		1 11 E	75° Alt.	4x	67ms		3"
CG40 86 87	"	"	"					2x	133ms		
CC29657	BIAS (4)			0401							

Spectr. Temp. ..... Dome Temp./Hum. -8.2°C 50684 Transparency Conditions ... Fine ... 180

Focus ... 7.03 ... increasing Cloud

Spectr. Temp. ..... Dome Temp./Hum. -8.0°C 50784

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	60s	~~G560~~ BG39					1800 l/mm G4555	306u	4470H	21			
	800	17300	~~A0~~	B 5.31	AO	S/N	~ 380:1			~~22~~	Wide/Blk Shell pgm	SOUTHONE	9.0K
	60s									23			
	"									24			
	1890	5460 ~~5890~~		~~6.56~~ ~1	G2	S/N	~ 190:1			25	Std Vel.	$\Delta\alpha = -0.09$ $\Delta\delta = -0.054$	2.5K
	60									26			
	-									½			
	66									26			
	30	14500		4.70	A5V					27	Wide A-shell		10.0K
	60									28			
	"									29			
	1242	7698	3"	6.45	G8V					30	Std vel		3.3K
	60s									5			
4x	67ms		3"	6.45	G8V						Seeing STRONG	Pure SE wind	
2x	133m												

181
pg 6

Date 1995 Jan 5/6 Observers [Wade] T.G. / Sarat

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29658	Comp							FeAr Clear	60
59	HD138629	15 28 12	+41 14 00	040743		4 15 E			140
60	Comp							FeAr Clear	60s
61	Comp							"	"
62	HD148283	16 21 50	+37 37 18	04 38 04		4 49 E			821
63	Comp							FeAr Clear	60s
64	HD148283	16 21 50	+37 37 18	045535		4 22 E			1373
65	Comp							FeAr Clear	60s
66	BIAS (4)								
67	Comp							FeAr Clear	60s
68	HD102870	11 45 30	+2 20	052759		00 25 W			150
69	Comp							FeAr Clear	60
70 — 78	FLATS x 9					00 32W	+1° 46	Tung Clear	13s
79	BIAS (4)			05 51					
80/81	Comp / Stellar Hartman					00 01W	+38	FeAr Clear	40/40

CC
Spectr. Temp.
Focus ... 7.0
Spectr. Temp.

Exp. Mtr.	Secti
7130	3%
1400	23
2775	23
1000	2"

CCD
Spectr. Temp. −101.9°C ..... Dome Temp./Hum. ..... Transparency Conditions Thin – medium cloud 182

Focus 7.03 .....

Spectr. Temp. ..... Dome Temp./Hum. −6.8°C 66%H wind finally dying out MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800/m/2m G4555	306u	4476A	~~7~~			
9130	3"6"	B 5.09	A5V					9	wide Stellpgm		
								10			
								11			
~~2110~~	2"3"	V 5.52	A5V					12	wide Stellpgm	(cloudy at START) and at end.	400A01
								13			
2745	2"3"	V 5.52	A5V					14	wide Stellpgm	cloud again	1.4K
								15			
								1/2			
								16			
10000	2"	V 3.61	F9V					17	Stellel		5.3K
								18			
								18			12.7K
								1/2			
								3/4	All to Cygnus & Perseus		

183
pg#1 SAT / SUN

Date 1995. Jan. 7/8..... Observers [Bln] I.Th.....

Emulsion Batches:
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.....

CCD Spectr. Temp.
Focus ... 7.6
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CC296 82/83	Comp inbound / Stellar outbound		HARTMAN	Positions		00	+46°	FeAr Clear	40/70	BG39 C:Hea	Lho Cha (exc
84	BIAS (4)										
85	Comp							FeAr Clear	60s		
86	HD 3765	00 35 18	+39 40	17 51 53		00 19 W			964	1350	4
87	Comp							FeAr Clear	60s		
CG40 688/691	HD 3765	00 35 18	+39 40					4x	67 ms		Foc
CG40 692/693	"	"	"			00 21 W		2x	133 ms		
CC296 88	Comp							FeAr Clear	60s		
89	HD 37017	05 30 24	−4 34	18 19 13		3 55 E			180	4000	8
90	Comp							FeAr Clear	60s		
91	BIAS (4)			18 52							
92	Comp							FeAr Clear	60s		
93	HD 21364	03 21 42	+9 23 00	18 56 27		1 35 E			28	11,650	5
94	Comp							FeAr Clear	60s		
95	Comp							"	"		

CCD Spectr. Temp. -100°C Dome Temp./Hum. -6.0°C 70% H Transparency Conditions Fine 184

Focus 7.00

Spectr. Temp. Dome Temp./Hum. Central Lambda CCD FINT 430 0 50 1024 41 S/N

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG39 Filter	[no spectrograph change from previous night (except focus)]			CHSSCCD	1800 lnl/mm G=4553	306μ	4470Å	3/4	Focus Test		
								1/2			
								5			
1350	4"5"	7.36 ✓	dK5					6	Std Vel	Also Telescope encoder normalization 80/1 S/N	80/1
								7			
	poor	7.36 ✓	dK5		above	306μ	slit		Seeing Test	Same STAR, Dome West Sixth Night	
									Light North wind	No FANS Tonight. Early Dome opening	
								8 cs			
4000	8"40"	B 6.42	B7 V p					9	He Rich; Bln		170/1
								10			
								1/2 cs	CCDT = -100.1 °C		
								11			
16,650	5"	B 7.66	B8p					13	SB Bln	MAX 1202K ADU >	300/1
								12			
								14			

185 pg#2 SAT / Sun

Date 1995 Jan 7/8 Observers [Bln] Ln

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Spectr. Temp. / Focus / Spectr. Temp.
cc29696	HD37017	05 3024	-4 34	19 0840		306E				BG39 5,500	6
97	Comp							FeAr Clear	60s		
98	Comp							"	"		
99	HD37468	05 3342	-02 3900	19 4548		257E				12,700	8
cc29700	Comp							FeAr Clear	69		
01	ADS 4241D	053342	-02 3912	19 5557		238E			829	3840	6
02	Comp							FeAr Clear	60s		
03	BIAS(4)			20							
04	Comp							FeAr Clear	60s		
05	HD37017	05 3024	-4 34	20 1927		158E			1597	5600	8
06	Comp							FeAr Clear	60s		
07	Comp							"	"		
08	HD112028	12 4824	+83 57	20 5532		844E			1156	12000	5
09	Comp — Wrong. It is a bias — Ln. Same one as 7							FeAr Clear	60s		
10	BIAS(4)			21 17		(Same Time)					

Spectr. Temp. ..... Dome Temp./Hum. −8.9°C ... 71.7% Transparency Conditions ... Slightly hazy ... 1.86 estimated S/N

Focus ... 7.00 .....

Spectr. Temp. ..... Dome Temp./Hum. −11.0°C ... 74% H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 5,500	6"	6.42	B2V$_p$	CASS CCD	1800 l/m @ 4553	306μ	4470Å	15	He Rich Bln		200/1
								16			
								17			
12,900	8"	B 3.57	09.5V					18	ORI AB	Bln pair	260/1
								19			
3640	6"	B 6.3	B2V					20	ADS 4241 D	Guided far left on screen to avoid AB	>100/1
								21		AB would be at lower column # from "D"	
								1/2		If showing at all	
								22			
5,600	8"	6.42	B2V$_p$					23	He Rich Bln		
								24			
								25			
12000	5"	5.2	A0 Shell					26	Bln/wide Shell	(Brighter and South of Pair) M1K	4.4K ADU
								27			
								1/2			

187
pg#3 SAT / SUN

Date 1995 JAN 7/8 Observers [illegible] Jn

Emulsion Batches:

CCD Spectr. Temp.
Focus 7.00
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CC29711	Comp							FeAr Clear	60s		
12	HD37017	05 3024	-0434	21 2622		00 55E			1350	6326	5
13	Comp							FeAr Clear	60s		
14											
→ 22	FLATS x 9						-431	JUNC Clear	15s		
23											
24	Comp / Stellar HUMTOWN					0045E	-431	FeAr Clear	40/70	-11.3°	
25	Comp							FeAr Clear	60s		
26	HD37017	05 3024	-434	22 1051		00 11E			1317	6380	4
27	Comp							FeAr Clear	60s		
28	BIAS(4)			27 3507							
29	Comp							FeAr Clear	60s		
30	HD22484	03 3148	+000500	22 4118		0200W			236	6450	4
31	Comp							FeAr Clear	60s		
32	Comp							n	4		
33	HD42111	06 0348	+023100	22 5105		0014E			736	7300	3
34	Comp							FeAr Clear	60s		
35	BIAS(4)			2306							

CCD
~~Spectr~~. Temp. −100.3°C Dome Temp./Hum. −11.2°C 73.9% H Transparency Conditions Slight Haze

Focus 7.00

Spectr. Temp. Dome Temp./Hum. −12.0°C 78.0% H

c lambda

no Cloud though S/N above Background

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/m G=4555	306μ	4470Å	28			
6326	5-⅓"	6.42	B2V$_p$					29	He Rich Bkn	seeing improving	> 200/1
								30			
								31		MAX 104 15.9 K − 14.6 K	
−11.3°C 7.00 set								3/4	focus Test	Still in focus but can't go much lower without changing ST to colder Temp	
								5			
6380	4"	6.42	B2V$_p$					6	He Rich Bkn		~~200~~
								7			
								1/2			
								8			
6450	4-6"	V 4.28	F9 V − V					9	Std vel	7.4K MAX	200/1
								10			
								11			
7300	3-5"	B 5.80	A3V$_n$					12	wide A shell pgm	3.4K ADU MAX	
								14			
								1/2			

189
Pg#4

SAT/SUN

Date 1995 Jan 7/8 Observers [illegible]

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29736	Comp							FeAr Clear	60s
37	HD37017	05 3024	-4 3400	23 1027		0049 W			1333
38	Comp							FeAr Clear	60s
39	Comp							"	60s
40	ADS 4241 D	05 3342	-2 3912	23 4121		W			432
41	Comp							FeAr Clear	60s
42	HD 37468	05 3342	-02 3900	23 5345		0116 W			561
43	Comp							FeAr Clear	60s
44	BIAS(4)			0004					
45/46	Comp / Stellar	HARTMAN		0134		00	+28°	FeAr Clear	40/70
47	BIAS(4)			0146					

Spectr. Temp.
Focus 7.6
CCD Spectr. Temp.

Exp. Mtr. So
6500 4
2100 3
5,200 3
-10.8°C

Spectr. Temp. ..... Dome Temp./Hum. −11.8°C 76% Transparency Conditions ... slight haze 190

Focus .... 7.00 ..... −12.6 before closing dome

CCD
~~Spectr~~. Temp. ... −100.3°C ... Dome Temp./Hum. −10.8°C after dome closed 40 min Cloudy

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60s					CASS CCD	1800 l/mm G4555	306μ	4470Å	16			
1333	6 500	4"	642	B2V p					15	He Rich Blk		
60s												
60s									16			
432	1 000	~~3~~ *	6.3	B2V					18	ADS 4741 Blk	* better separation guided @ left end of slit view.	
10s									17			
561	5,200	3"-4"	B 3.57	09.5V					22	ORI NB	in cloud	
60s									~~12~~			
									1/2			
40/70	−10.8°C, but probably = −11-12°C for spectrograph by now,								~~3~~ 3/4 1/2	focus	3 tests tonight may show the "temp Lag" effect,	
										Now it's a bit too cool for this set (Lag caught up now.)		
					All to Persons & worm							

191

Sun mon

Date 1995 Jan 8/9 Observers T.n Test for Bin.

Emulsion Batches:

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CCD Spectr. Temp.

Focus 7.0

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seq
CC2748/49	Comp/Stellar HARTMAN					1 12W	-5 17	FeNe Clear	50/70	BG39 Filter	
50	BIAS										
51	Comp							FeNe Clear	* 40sec 60sec	60sec, 50	
52	LAMP TL850			20 1224	2101	1 12W	-5 17		2900	8200	
53	Comp							FeNe Clear	40sec	"	
54	LAMP TL830			21 0529	2159					8870	
55	Comp							FeNe Clear	40s		
56	LAMP TL830			22 0133	2250				2900	7780	
57	Comp							FeNe Clear	40s		
58 - 60	FLATS x3							TUNG Clear	90sec		
61	LAMP TL850			23 0854	2339				1600	1280	
62	"			23 3916					1884	5918	
63	BIAS(4)										
64	Comp							FeNe Clear	40s		
65	LAMP TL850			00 1242					1856	6030	
66	Comp							FeNe Clear	40s		

CCD
Spectr. Temp. −100°C ..... Dome Temp./Hum. −5.3°C .. 74% Transparency Conditions .. Cloudy (snow a bit)

Focus ... 7.00 ..... 90CGAIN - Lamp Pairs placed on catwalk [Dome closed Tests] 192

Spectr. Temp. ..... Dome Temp./Hum. ..... UNDER Telescope. ADU

CLAMBDA 430 0 50 1024 4 1 CCDFMT MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				CASS CCD	1800 kd/mm Tilt 38.2°	306	* ≈ 3670Å	3/4	Focus Test	* must check exact λ ID	
								1/2			
60 secs saturates		one line						5		FLORESCENT Light PAIRS	12K
8200			sources in Double fixture placed at West end of Platform as far					6	TL80 F32T8/TL830 Lamp		11K
"			From dome interior as possible at top of stairs.					7			
8870			Dome in NORMAL Rest Position.					8	TL80 F32T8/TL830 LAMP		
			[No Houselights or Stair Lights on of course]					9		Dome T +5.6°C	
7180								10		CCDT @ 22 EST = −100.4°C	
								11		Dome T @ 23 EST = −5.9°C	
								12			11.7K
6280			≈ 50 ADU/min					13		Dome T @ 00 EST = −6.1 The Bluest looking of 3	390
5916								14		[SAME 3 lines as TL830 And weaker if any thing]	
								1/2	CCDT = −100.3°C		
								15			
6030								14	Last of 3 (TL850 LAMPS)		
								16			

193
Pg #2

Date 1995 JAN 8/9 Observers [illegible] TG Lamp Tests

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC2976~~7~~	LAMP TL 841			00 51 02		01 12 W	-05:17		3944
68	Comp							FeNe clear	40s
69	Lamp TL 841			01 59 44					3960
70	Comp							FeNe clear	40s
71	BIHS(4)								
72	Lamp TL 841			03 08 49					4120
73	Comp							FeNe clear	40s
74	BIHS(4)								

Spectr. Temp.
Focus ... 70
Spectr. Temp.

Exp. Mtr.	Sec
BG39	
3,700	
11,344	
1,000	

Spectr. Temp. ..... Dome Temp./Hum. -62°C 74.7% Transparency Conditions ... mostly cloudy ... 194

Focus ... 700

Spectr. Temp. ..... Dome Temp./Hum. -67°C 73.9% ADU MAX

c Lambda

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3944	BG39 12,200				CASS CCD	1800 l/mm T: 11 38.2°	306u	3670Å	17c;	Lamp Test for Blu		
40s									18c:			
3960	11,344								17c;		Dome T = -63°C CCD T -100.3°C	980
40s									18c:		Dome T = -65°C	
									1/2			
4120	11,000								17c;			
40s									19			
									1/2		CCD T = -100.4 °C	

195
pg#1 Mon/Tues

Date 1995 Jan 9/10 Observers [Bln] Tn

Emulsion Batches:

CSS Time Reset to Aker www.w. Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC24775/76	Comp/Stellar (Enlarged / cardboard) HARTMAN							FeAr Clear	40/70
77	BIAS(4)	(done after HD3765)							
78	Comp							FeAr Clear	60s
79	HD 3765	00 40 34	+40 09 48	18 17 30		00 52 W			947
80	Comp							FeAr Clear	60s
CG406 94 97	HD 3765	00 40 34	+40 09 48			00 53W	+4010	4x	67ms
CG406 98 99	"							2x	133ms
CC297 81	Comp							FeAr Clear	60s
82	HD 37017	05 30 24	-43 40 00	18 46 00		3 20 E			1726
83	Comp							FeAr Clear	60s
84	Comp							"	"
85	HD 21364	03 21 42	+9 23 00	19 27 43		1 02 E			222
86	comp							FeAr Clear	60s
87	BIAS(4)			≈ 1932					
88	Comp							FeAr Clear	60s

CG Spectr. Temp.
Focus 7.00
Spectr. Temp.

Exp. Mtr. Seeing

-6.6°C

BG39 Filter Before CC

1800 3-4

57/64 3-5

1600 3-4

Spectr. Temp. CCD −100°C Dome Temp./Hum. −6.5°C 67%H Transparency Conditions Partly clear improving 196

Focus 7.00

Spectr. Temp. ..... Dome Temp./Hum. −8.0°C 71.6%H CLAIMED 4 30 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
−6.6°C				C455 CCD	1800 l/mm G=4555 42.7°	306u	4470Å	3/4	focus test		
BG39 Filter Before Exp mtr								1/2			
								5			
1800	3"-4"	✓ 736	dk5					6	Std Vel and Encoder Reanalization		
								7			
		7.36	dk5		Above	306u Slit			Seeing Test	Dome west, Clear now Light west wind	
								8			
5764	3"-5"	B 6.42	B2 V p					~~9~~	He Rich Bln		
								~~10~~ 9½	but star written through		
								10			
16,100	3"-4"	3.66	BG p					11	SB Bln		mHx 8K
								12			
								1/2			
								13			

197
pg#2 Mon/Tues

Date 1995 Jan. 9/10 ..... Observers [Blundell] Tn .....

Emulsion Batches:
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Spectr. Temp.
Focus ... 7.00
cq
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr. 8639	See
cc29789	HD22484	3 31 48	+00 05	19 35 48		00 57 E			294	8930	3"
90	Comp							FeAr Clear	60s		
91	Comp							"	"		
92	HD37017	05 30 24	-4 34	19 47 50		02 24 E				6000	3-5
93	Comp							FeAr Clear	60s		
94	Comp							"	"		
95	HD112028	12 48 24	+83 57	20 20 40		09 12 E			1095	1300	4-8
96	Comp							FeAR Clear	60s		
97	BIAS (4)			20 41 37							
98	Comp							FeAr Clear	60s		
99	HD37017	05 30 24	-4 34	20 49 05		01 21 E			1563	6300	3-6
cc29800	Comp							FeAr clear	60		
01 — 09	FLATS x 9					01 15 E	-4 30	TUNG Clear	15s		
10/11	Comp/Stellar HARTMAN			21		01 08 E	"	FeAr Clear	40/78		-9.7
12	BIAS (4)			21 34							

Spectr. Temp. ..... Dome Temp./Hum. -7.9°C ... 71%H Transparency Conditions Slightly hazy, no clouds

Focus 7.00

Spectr. Temp. CCD —°C Dome Temp./Hum. -9.6°C 71.7%H

CCOFINT FOR 4470Å OBS 198 HDM MAX
430 0 50 1024 4 1

Exp. Mtr. BG39	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8930	3"	V 4.28	F9 IV-V	CASS CCD	1800l/m 64555 42.7°	306	4470A	14	Std Vel		3.7
								15			
								16			
6000	3-5"	B 6.42	B2V p					17	He Rich Blk	200/1 S/N	
								18			
								19			
11,300	4"-8"	B 5.2	A0 shell					20	Blk/Wda A shell	Southern of Pair	
								21			
								1/2c		CCDT = -100.4°C	
								22			
6300	3-6"	B 6.42	B2V p					23	He Rich Blk		
								24		~~max~~ 15.5K	
								25		15.5K max	
-9.7	7100 SET							3/4c.	focuss	Right on for center	
								1/2			

199
pg# 3 Mon/Tues

Date 1995 Jan 9/10 Observers [illegible] T.A. Km present now.

Emulsion Batches:
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CCD
Spectr. Temp.
Focus ... 7.0
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
CC29813	Comp							FeAr Clear	60s		
14	HD37017	05 30 24	-04 34	21 40 13		00 33 E			1369	6080	4
15	Comp							FeAr Clear	60s		
16	Comp							"	"		
17	HD37468	05 33 42	-02 39	22 09 23		00 26 E			238	19,500	4
18	Comp							FeAr Clear	60s		
19	HDS42410	05 33 42	-02 39 12	22 16 57		00 14 E			576	7100	3
20	Comp							FeAr Clear	60s		
21	BIAS(4)			23 10							
22	Comp							FeAr Clear	60s		
23	HD37017	05 30 24	-04 34	23 12 57		01 00 W			1367	6250	3
24	Comp							FeAr Clear	60s		
25	Comp							"	"		
26	HD42111	06 03 48	+02 31 00	23 42 54		00 47 W			815	8200	3
27	Comp							FeAr Clear	60s		
28	BIAS(4)		-2	00							

CCD
~~Spectr~~. Temp. -100.3°C... Dome Temp./Hum. -9.7.... 71%/14 Transparency Conditions ..P.&R.T. Cloudy..... 200

Focus ... 7.00.....

increasing cloud

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHS CCD	1800 l/mm G-4555	306	4470 B	26			
6080	4"6"	642	B2V p					27	He Rich B/m		
								28			
								29			MAX
18500	4"	357	09.5V					6	ζ Ori AB	Bln pgm	6.1K
								7			
+700	3"4"	B 6.3	B3V					8	40542410 (Bln)	guided at High count rate to mask out AB	
								9	CCOT--1020	Some cloud here now At expend	
									Dome	Open again	
								10			
6250	3"5"	6.42	B2V p					11	He rich Bln	some cloud though	>200/1
								12			
								13			
8,200	3"4"	B 5.80	A3V m					17	Wide Shell	pgm	37K
								112			

201
pg #4

Date 1995 Jan 9/10 Observers [Blondel] J.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	Comparison Exp.
cc29829	Comp							FeAr Clear	60s
30	HD37017	05 30 24	−4 34	00 03 38		01 49 W			1262
31	Comp							FeAr Clear	60s
~~cc29833~~	Comp + stellar	Lost stellar frame, (~~Bad~~ looked good)				00 01 W	+35 33	FeAr Clear	60/60
32	Comp			~~01 05 31~~		OG560 in Comp Feed GG385 in stellar ~~Feed~~ TRAY		FeAr Clear	60s
33	AC+47 256-130	07 15 58	+46 16 52	01 05 31		00 57 W			899
34	Comp							FeAr Clear	60s
35	BIAS(A)			01 25					
36	Comp							FeAr Clear	60s
37	AC+63 14097	07 25 17	63 09 16	01 30 37		01 16 W			1201
38	Comp							FeAr Clear	60s
39	Comp							"	"
40	AC+36 28826	08 22 03	35 21 00	01 58 58		00 49 W			1081
41	Comp							FeAr Clear	60s
42	BIAS(A)			02 25					

Spectr. Temp.
Focus 7.0
cc Spectr. Temp.

Exp. Mtr.	Seeing
5819	3"
355	2.5"
460	2"
860	2"

Spectr. Temp. ...../..... Dome Temp./Hum. -10.8°C 75.4%H Transparency Conditions ... Part. Clouds 202

Focus 7.00 / 7.06 for 1200 l/mm

CCD Spectr. Temp. -9.9 to -10.9°C Dome Temp./Hum. -10.9°C 77.9%H

getting better again
Then not so hot
literally

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G4555	306u	4470Å	10i			
5819	3"	642	B2IVp				"	11i	He Rich Bkn	(cloud end)	
								12		Top up done By	
-10.6°C	7.06 set			CASS CCD	1200 l/mm G=4506 42.10°	306u	6563Å	3/4	Focus Test	(385 0 50 1024 4 1 CCDFMT)	
						6574Å@ Row 512		5			
						Exact center					
355	2-3"	V 10.5	M2					6	Vys Ht	search no Ha em	
								7			
								1/2			
								9			
460	2"	V 10.48	M0					8	Vys Ht	some cloud no Ha em	
								9			
								10			
360	2"	V 10.7	M0					11	Vys Ha	cloud @ end no Ha em	
								12			
								1/2			

203
1945

Date .1995. Jan. 9/10..... Observers .Kim../.T.y.....

Emulsion Batches:
.GG.385.Filter.for.Stellar.s.Flats
.OG.560.Filter.for.Comparisons
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29843	Comp							FeAr Clear	60s
44	Vys 560 [BD-23000]	09 48 18	-031304	02 30 19		00 08E			878
45	Comp							FeAr Clear	60s
46									
— 54	FLATS x 9		(OG560 Replaced by GG 385 Filter)			00 29E	+01°	Junc Ap 1/4	3s
55/56	*Comp / Stellar		HARTMAN		GG385 Filter in		"	FeAr Clear	60/60
57	Bias (4)								

* From this day forward, "COMP/STELLAR" HARTMANN MASK POSITIONS will be referred to as "INBOARD" for "COMP" and "OUTBOARD" for "STELLAR".

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

Exp. Mtr.	Se
300	

Spectr. Temp. .... Dome Temp./Hum. -11.3°c 78.0%H Transparency Conditions Cloud again 204

Focus .... 7.0.6 ....

Spectr. Temp. .... Dome Temp./Hum. -11.8°c 79%

S/H

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200 l/mm G=4500	306μ	Hα	13			
300	2-3"	10.54	MO		4201°Tilt			14	Vys Hα	(no Hα em) (Although not 5303Å) of interest to Alw too	80/1
								15			
								2 c;			13.6K
-11.6°c	set	7.06						3/4	Focus	still good for slightly cooler if anything.	
								1/2			
					All to	Worm c Perseus.					

205
PJ #1 Mon / Tues

Date ..JAN./6./17..95.. Observers [K.K.]...T.A./.S.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	Comparison Exp.
ce084 49 50	inboard / outboard			≃19 EST		≃2 W	≃30°		
51	BIAS(4)			22 07 25					
ce0852	Comp	* note (used encoder BAT start, cut 1st time, and imported						ThAr	15s
53	HD 34029	05 09 18	+45 53 47	22 12 38		00 37 W			827
54	Comp							ThAr	15s
55	HD 34029	05 09 18	+45 53 47	22 29 08		01 11 W			1889
56	Comp							ThAr	15s
57	BIAS(4)			23 05					
58	HD 34029	05 09 18	+45 53 47	23 06 31		01 47 W			1807
59	Comp							ThAr	15s
60	BIAS(4)			00 48				~~	~~
61	Comp			≃01				ThAr	15s
62	HD 47105	06 31 56	+16 29	01 02 21		W			1572
63	Comp							ThAr	15s
64 - 68	FLATS x5					2 25 W		TUNG Etc	200s
69	BIAS(4)			02 20					

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

Exp. Mtr.	Se
0°C	
2797	* W
10,100	
	x 5
470	5
80	7

CCD Spectr. Temp. −100.0°C ..... Dome Temp./Hum. 0°C 82% H at 22 EST ..... Transparency Conditions ..Mostly Cloudy 2/6

Focus ..244 .....

Spectr. Temp. ..... Dome Temp./Hum. −0.7°C 81% ..... very windy (NW) gusts

FULL moon @ ≈ +15° Decs 8 hrs RA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	× Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0°C	.244 set			echelle CCD Tilt=17.80	1200ln/mm .4460	60u 400u 400u=.225 set 60u=.272 set	3960Å	1/2	focus test	CCD FMT 0 0 128 1024 81	
								1/2		CCD FMT 0 0 256 1024 41	
								3		Telescope encoders	
2797	* very poor	V 0.08	G5 III e +G0 III	* Very hard to focus Telescope (ie cannot tell if image is focused)				4	kk Capella	hardened on Capella program	≈1K
								5			
10,100								6	kk Capella	Thick cloud at end	3K
								3			
	* 5"	(Able to estimate seeing & focus Better in cloud)						1/2		CCD T = −100.4°C	
470	5"							4	kk Capella	Thick cloud, but visible on slit	
								5			
								1/2 CI		CCD T = −100.5°C	
								3			
80	7"	B 1.9	A0 V					4	kkpgm 8 Gem	FULL moon <30° away	≈50A/m ABOVE Backgrd
								3			
					W=60u H=700u			2			6.9K
								1/2			

207 Pg #2

Date 1995 JAN 16/17 Observers [KK] Tn / Smt

Emulsion Batches:
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CCD Spectr. Temp. ... Focus ... Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mir.	See
CE08470	Comp							ThAr	15		
71	HD47105	06 31 56	+16 29	02 29 17		4 08 W			287	1700	5
72	Comp							ThAr	15s		
73	BIAS(4)			03 20							
74	Comp			~~03~~				ThAr	15s		
75	HD62509	07 39 12	+28 16 04	03 24 23		3 41 W			036	1560	4
76	Comp							ThAr	15s		
~~77~~	~~COMP~~							"	"		
77	~~HD56986~~ BIAS(4)	~~07 14 09~~	~~+22 10 00~~	04 15 ~~04 03 09~~		~~4 21 W~~			~~613~~	~~48~~	~~4~~
78	Comp	~~14 11 06~~	~~+19 42 11~~	~~04 22 36~~				ThAr	15s		
79	HD124897	14 11 06	+19 42 11	04 22 36		2 03 E			1303	314	1-3
80	Comp							ThAr	15s		

CCD
Spectr. Temp. −102.0°C Dome Temp./Hum. −6.0°C 81% Transparency Conditions cleared quickly 208
clouded in again fast

Focus 1244

Spectr. Temp. ____ Dome Temp./Hum. −2°C 86%
clouds

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				echellp CCD	1200ln W=60u H=400u		3960Å	5			
1700	5"	1.9	A0 IV					4	KK pgm	* 8 Gem part clear well, mostly cloudy	
								3		* Most of Exposure in Last 15 mins	
								1/2			
								5			
1560	4"	V 1.14	K0 III 6					6	Stlvel	β Gem 30° from moon some cloud	
								3			
								5			
~~48~~	~~5"~~	~~B 3.9~~	~~Eo IV~~					~~1/2~~	~~KK pgm~~	nothing there. cloud suddenly back with a vengeance.	
								3c.			
314	2-3"	V 0	K1.5 III					4c.	Stlvel		50 ADU above blg.
								5			
						All to Perseus c work.					

209 pg #1 Tues/Wed

Date 1995 JAN 17/18 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	Comparison Exp.
CC 298 58/59	inboard/outboard HARTMAN					01 05 W	+3 06	FeNe Clear	40/65
29860	BIAS(4)								
61	Comp					01 12 W	-20 48	FeNe Clear	50sec
62	LAMP TL830	(didn't Intend this long an exposure)		20 33 27		"	"		4399
63	Comp							FeNe Clear	60s
overexposed 64	LAMP TL830			21 49 30					3669
65	BIAS(4)								
66	Comp							FeNe	50s
67	LAMP TL830			22 54 12					4357
68	Comp							FeNe	50s
69 - 71	FLATS x 3							TUNG Clear	60s
72	LAMP TL850			00 21 20					2003
73	Lamp TL850			00 55 34					2500
74	Lamp TL850			01 37 47					2269
75	Comp							FeNe Clear	60sec

CCD Spectr. Temp. -100°C Dome Temp./Hum. +00.2°C 85%H Transparency Conditions Cloudy, Dome closed for Light Tests 210

Focus 6.9.8

Spectr. Temp. Dome Temp./Hum. +00.1°C 88%H

418 0 50 1024 4 1 CCDFMT MAX AD

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/65	no filter +00.3°C	6.98 Set			CASS CCD	1800 l/mm G=4175 Tilt=39.45°	306	3890Å	3/4ci	Focus Test	Exactly 3890Å & Band #512 ± 1.5Å	ABOVE Backgnd
									1/2ci			
50sec	Twin sources placed same locat'n as on JAN 8/9								5ci		(Continuum ~15ADU above Background)	
4399	100K But Telescope pointing closer to Bright area on Dome.								6ci		~~start showed only one weak line = 8ADU above backgnd in 3 mins of exposure~~	80
60s	No house lights and "Exit" sign covered. (with Black cloth)								7ci			→
3869	84,200								8ci		Dome T = +00.2°C	
									1/2		Dome T = +00.1°C	
50s									9ci			
4357	99.5K								8ci			
50s									10ci			
10s									11		Dome T ~ +00.1°C	12.2K
2003	52,000								12	Continuum ≃3ADU above	Strongest only 2.5ADU above Background.	
2500	63,000								13ci			
2269	56,300								12ci			
50sec									14ci			

211
pg #2

Date 1995 JAN 17/18 Observers [B/n] Tu

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
cc29876	BIAS(4)					01:12:10 W	-20 47 48			No Filter	
77	LAMP TL841			02 23 17				3253 sec	325	88K	
78	"			03 17 56					273	66K	
79	"			04 04 12					303	73K	
80	BIAS(4)										
81	Comp							FeNe	50s		
START →	1995 JAN 18/19 Wed/Thurs - Continuation of next					Region Red/Dome		93%H	+1.2°		CCD T=
cc29882/83	inboard/outboard HARTMANN					01 12 20W	-20 34 21	FeNe Clear	40/65	+1.2°	
84	Comp							FeNe Clear	90sec		
85	TL830 LAMP			19 36 57					1040	21,600	
86	"			19 55 09					1040	21,600	
88	BIAS(4) (done after cc29888)										
87	TL830 LAMP			20 12 53					1045	21,000	
89	Comp							FeNe Clear			
90	TL850 Lamp			20 41 18						1200	

CCD
Spectr. Temp.
Focus 6
Spectr. Temp.

CCD
Spectr. Temp. −100.4 °C Dome Temp./Hum +00.1°C 87% A Transparency Conditions Fog outside 2.2

Focus 6.98 90CGAIN as always.

Spectr. Temp. −100.2°C Dome Temp./Hum. −00.2°C 87% H

c LAMBDA exactly

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
No Filter				CHSS CCD	1800 l/mm G=4175	30u	3810Å	1/2			
88K					Tilt=39.45			15	Phillips florescent x2 Lamp Test	Continued	
66K								16			
73K								16			
								1/2ci			
								17ci			
CCDT=−101.0°C Focus 6.98 still, 90CGain									418 0 50 1024 4 1	CCD FMT (SHIME)	
+1.2°C 6.98				CHSS CCD	1800 l/mm G=4300 Tilt=40.4°		4085Å ±1.5Å	3/4	focus.	(outboard only slightly for cooler temp.	
								5c			5.2K
21,600								6ci	TL830 Pair of Lamps under		11K
21600								7ci	Top and of Telescope (SHIME config as previous night.		11K
								1/2ci			
22,000								8ci		continuum 5 ADU u tape background	11.5K
								9ci			
21,200								10ci	The Blue looking Lamp		8 K

213
Pg2 of 6 Wed / Thurs

Date 1995 JAN 18/19 Observers [B.L.] T.M.

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc29890	TL850 Lamp					01:12:20	-20 34 21		90s
92	TL850 Lamp			21 12 56					90s
93	Comp							FeNe Clear	90s
94	TL841			213815					90s
95	TL841			215506					90s
96	"			221112					90s
→97 99	FLATS x3							TUNG Clear	45s
cc29900	Comp							FeNe Clear	90s
cc29901/02	outboard/inboard	HARTMAN		2312				FeNe Clear	40/65
03	BIHS(4)								
04	Comp								90s
05	TL841 Lamp			232107					209
06	TL841 Lamp			232539					200
07	TL841 Lamp			233319					200
08	TL850 Lamp			234104					170

CCD
Spectr. Temp.
Focus 6:98
Spectr. Temp.

Exp. Mtr.	See
2340	
113°C	Se
5000	
4900	
4800	
3800	

~~Spectr.~~ CCD Temp. .... Dome Temp./Hum. +1.2°C .... 93%   Transparency Conditions ... Foggy (Dome closed of 214 course) more, with twin fixture Phillip's Lamps On upper catwalk beneath end of Telescope,

Focus .. 6.98 ....

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

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
900	-				CASSCCD	1800l/mm × G4300	306μ	4085Å @	10			MAX ~~8?~~ 84K
900						* TILT=~~40.4~~°		Row512	10		(Plenty of continuum 80 ADU at Red end, 3 ADU blue above background.)	84K
905			*Note regarding Grating Tilts, (All Final G settings made after Homing grating)						11			
950	23,700								12ci		Dome T=+1.3°C	10.4
950									12			10.3
950									12			10.4
45s									12ci			14K
905									~~13~~ 12ci			
40/65	+1.3°C	Set	6.95		CASS CCD	1800l/mm G ~~44~~4430	306μ	4285Å ±5Å	17/18	T2 focus	just overlapping with Previous Region	Right on @center
						TILT=41.7°			1/2			
905									19ci			6K
209	5000								20			15.6K
200	4950								20		(~210 ADU continuum at center above Background)	15.3K
200	4800								20			
170	3800								21			10.6K

215 pg 3 Wed/Thurs

Date ..1996. Jan 18/19... Observers [Bln]...Tn....Light project

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CQ9909	TL 850			234431		01:17:20	-20342		170		
10	TL 850			235315					170	4000	
11	Comp							FeNe Clear	90s		
12	TL 830			00 0205					191	4200	
13	TL 830								191	4700	
14	TL 830								185	4700	
15	~~Comp~~ BIAS(4)										
16 → 18	FLATS x3							TUNG			
19	Comp							FeNe Clear	90s		
20	Comp							FeAr Clear	60		
21	TL 830			003502					800	18500	
22	"			004919					800		
23	"			010932					800		
24	Comp							FeAr Clear	60s		
25	TL 850			013057					1200	9600	
	~~BIAS~~										

Spectr. Temp. ..... Dome Temp./Hum. +1.4°C ... 93.5% Transparency Conditions ... fog 216

Focus ... 6.95 .....

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

MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C455 CCD	1800 l/mm G=4430	30µ	4285Å	21			~~12.8K~~ ~~12.8K~~
4000					Tilt 41.7°		I.5Å ≙ Row 512	21			12.6K
								22			
4200								23			
4700								23			15.6K
4700								23			15.3K
								1/2			
								24			
								26		Reference FeAr in 25c	14K
					1800 l/mm G=4555	30µ	4468Å F 1Å	27	(Exact same Range as common Bin/Wide Region for Research)		2K
18500	one weak em line ≙ Row 322 (≥ 10 ADU above backgnd)				Tilt = 42.8°			28c			350
								~~28~~	Blue end has some weak scattering or wings from massive Em of 4285 Region		
								~~28~~	Continuum ≙ 70 ADU above Background.		
								29			
30,600								28	Read out in edit Time ✓	~~Blue~~	

217 pg#4 Wed/Thurs

Date 1995 Jan 18/19. Observers T.S.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr. no filter
CC29926	TL 850			01 5336		0112 W	-20°	1222sec	1222	31,600
27	TL 850			021447					1200	30,400
28 → 30	FLATS x 3			0238				TUNG Clear	15secs	
31	BIAS(4)									
32	TL 841			024511					700	18,400
33	"			025713					700	17,800
34	"			030923					700	
35	Comp							FeAr Clear	60s	
[Blu] Smt/Tn	Lamp Tests continued 1995 JAN 23/24 - All procedure hopefully the same.									no filter 90
CC299 36/37	Inboard / outboard					0 0	+25	FeAr Clear	40/60	-0.32 (CASSETTE)
38	BIAS(4)									
39	Comp					01 12W	-20 32	FeAr Clear	90s	Focus
40	TL 830			19 1831		~~19 18~~			1200	27,0
41	TL 830			19 4012		~~19 4012~~			1200	TILT
42	TL 830			20 0136		~~20 0136~~			1200	28,000
43	Comp					01 12 W		FeAr Clear	90	

Spectr. Temp. ..... Dome Temp./Hum. +14°C 93% Transparency Conditions ..foggy..very..2/8

Focus ....6.95.....

CCD Spectr. Temp. ....-100.2°C.. Dome Temp./Hum. +15°C 95%

Exp. Mtr. no filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
31,600				CASS CCD	1800 l/m G=4555	306u	4468Å	10c;		≈ 500 ADU Continuum above background,	15K
30,400				Grat Tilt=42.8°				10c;		No Em features	
								30c;			13K
								1/2			
18,400								20c;		Just Continuum at	
~~7,200~~								0		≈ 230 ADU above background.	
								4		Very weak Em at Pix 320 again	
No filter 90	All warmed ≈ too Perseus			Dome H = 80%							ADU MAX
-0.3°C	CGAIN 6.95			CASSCCD	1800 l/m G=4680	306u	4688Å ±.3Å	3/4	focus Test	fine @ Raw 517 set for very slightly cooler	
(CASSETUP output for				0°≈4688Å)	TILT=43.95°			1/2			
	focus → 6.92							5c;			3K
27,000	G → 4678							6c;		Strongest Line (ABOVE continuum)	160
	TILT → 44.9							6		Continuum ≈ 150 ADU above background.	
28,000								6			
								7			

219
pgd2

Mon / Tues

Continuation of Lamp Tests

Date 1995 JAN 23/24 Observers [illegible] Jn./Scot. Philips TL 80 Fluorescents

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC29944	TL850			203021		01 12 W	−20:32		1800
45	"			21:03:30					1800
46	"			21:33:50					1800
47	Comp			230923				FeAr Clear	90s
48	TL841			231613					1080
49	"			233447					"
50	"			235327					"
51	Comp							FeAr Clear	90s
52 54	FLATS x3							TUNG Clear	9 sec
55	BIAS(4)								
56	Comp			00 35				FeAr Clear	90s
57	TL841			00 44 55					1200
58	"			01 05 17					1200
59	Comp							FeAr Clear	90
60 - 60	FLATS x3							TUNG Clear	5 sec
- 63	BIAS(4)								

CCD Spectr. Temp.

Focus ... 6:

CCD Spectr. Temp.

Exp. Mtr. Mon #	Se
4,400	
21,000	
25,300	
25,200	
(Comp)	
26,700	
16,500	

CCD
Spectr. Temp. −100.°C..... Dome Temp./Hum. −00.3°C 80.0%H Transparency Conditions ....cloudy, dome closed.

Focus ....6.95*.....

CCD
Spectr. Temp. −94°C..... Dome Temp./Hum. −01.0°C 77%H
Lambda

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
None				CASS CCD	1800 l/mm G=4680 Tilt 43.95°	306u	4688Å	8ci	Lamp Tests	(Strongest Em Line ≈ 150 ABOVE continuum)	
16,400								9cp		Continuum Level ≈ 800 ADU above background	
								9ci			
								10			
26,000								11		CCDT = −100.4°C	
25,300								11			
25,200								11			
								12			
								13			14K
(Come up → G → 4793, 45.1° Tilt .693 focus)					1800 l/mm G=4798 Tilt=44.95°		4861Å	14			5.8K
26,700								15		Blue end continuum	3.7K
26,500								16		≈ 300 ADU above background	3.7K
								17			
								18			13.6K
								12			

* Note Dewar Starting To warm up by 0125 = −95°C should be −100°C

221
pg#1 Tues/Wed

Date 1995...Jan 24/25 Observers [Blm.] Lamp Tests ... Tu/Sent

Emulsion Batches:
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.....
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CCD Spectr. Temp
Focus ..6.9
CCD Spectr. Temp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CC29964/5	inboard/outboard Comp/Stellar → old designation					01 12 W	−13°	FeAr clear	40/60	
66	BIAS(4)									
67	Comp			18 39				FeAr clear	90s	
68	TL841			18 42 22		01 12 W	−20°29'		1900s	44500
69	"			19 14 45		"	"		"	
70	"			19 46 45						
~~74~~	Comp			20 45				FeAr clear	90s	
~~71~~	TL850			20 55 39		01 12 W	−20 29		1800	~~45000~~
~~72~~	"			21 25 58					180	
~~73~~	"			21 56 23					1800	
~~75~~	TL830			22 32 19					2402	53 000
76	"			23 20 30					2400	52 000
77	"			00 00 54					2400	
78	COMP							FeAr clear	90s	
79	BIAS(4)									
~~80-82~~	FLAT x3							Tungsten	5	

CCD
Spectr. Temp. −100°C ..... Dome Temp./Hum. −00.3°C 74.5% Transparency Conditions .. cloudy 222

Focus 6.95 ..... 90C 90% m

~~CCD~~ Temp. −100.7°C .... Dome Temp./Hum. ..... cLoudy 4/8 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality max 400
40/60				CASSCCD *	1800 l/mm G=4798 Tilt=44.95	306u	4861Å	3/4		* spectrograph controller failed But grating was disabled Previous night. ∴ Tilt should still be same.	
								1/2			
90s								5			
1900s	44500							6	Bin LAMP TEST		~6K
"								6			
								6			
90s								7			
1800	~~45~~ 000							8			6.4K
180								8			
1500								8			
2402	53 000							9			8.2K
2400	52 000							9			
2400								9			
90s								10			~~12.5K~~ 13.2K
								1/2			
5								11			13.4K → 12.8K

223

Date 1995 Jan 25/26. Observers [Bln]/Smt ..... ikt/kk is backup.

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	(s) Exp.
CCD 29983/4	INBOARD/OUTBOARD					$1^h 12^m$ W	$-20° 18'$	FeAr clear	45/60
85	BIAS(4)			20 27		FOR ALL EXPOSURES OF ANY KIND			
86	COMP							FeAr clear	90
87	TL 830			20 40 20					1800
88	"			21 11 49					1800
89	"			23 03 16					1800
90-92	FLAT x 3					"	"	Tung ½Ap	7
93	COMP							FeAr clear	90

CCD
Spectr. Temp.
Focus.....
Spectr. Temp.
Exp. Mir. | Se

CCD
Spectr. Temp. -100.0°C Dome Temp./Hum. -0.6°C / 75.7% Transparency Conditions cloudy, snow 224

Focus 6.92

Spectr. Temp. Dome Temp./Hum.

4/8 0 50 1024 4 1 CCDEMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 ℓ/mm G=4920	306μ	5016 Å	3/4	FOLDS TEST	CCD completely saturated on red half. Took biases & ciscd a lot to get rid of the leftover "continuum".	
								1/2			
								5			
								6	B/n LAMP TESTS	Done by batch file TL.bat	
								7			
	DON'T KNOW IF I'D TRUST THIS ONE.							8		Didn't appear in cache after exposure, the first time. CCD CSS 350 crashed before taking replacement exposure.	
								9	max ADU ~12.9K → 12.7K	MANY camera/Heuristics/350 interaction problems.	
								10.			
		All to Perseus & WORM									

Comparison Star(s) Exp.
45/60
90
1800
1800
1800
1
90

Pg#1 225 Thurs / Fri CCD Direct

Date ..1995 JAN 27/28 Observers ..K.K../.~~Sut~~./.Tu..... Emulsion Batches: .....

SID TIME

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time ~~E.S.T.~~	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CD00246	Bias								
247	Bias 4X								
248-252	5 flats on Twilight sky					2h ±		7680Å	60-120
53	ADS 2081	023724	+48 48	= ~~02~~ 50	✓				25sec
54	"			= ~~02~~ 52 ~~18 1941~~	✓				"
~~57~~	"			02530	✓				"
~~55~~	"			0254	✓				"
~~56~~				0255		CO 12W			
56									
CD00~~259~~				SIDEREAL TIME					
→ ~~263~~	ADS 2081			0303 → 03 09					25s
264	ADS 2081			0312 - 0313					~~49~~ sec
~~265~~									
⇒	ADS 2644	03 31 42	+00 16	0321 ←					30sec
266	~~ADS 2644~~ BIAS(4)	"	"	After Reboot.					
~~267~~									
— 275	ADS 2644	"	"	0329	0344		+00 33 47		60sec
276	"	"	"	0348					53

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

Exp. Mtr. Se

drive o
1st exp. (to

Then 30
TRAILE

CCD
Spectr. Temp. ~~Spectr.~~ −101.0°C Dome Temp./Hum. +6.3°C 63.9% H Transparency Conditions Clear ~~ly~~ → ~~cloudy~~ 226

Focus 30 CGAin Dome Temp./Hum. −7.0°C 64.7% H 30 C GAIN

Spectr. Temp. Filter Telescope focus for Direct = 2781

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks CCD EMT	Quality Signal
							7680Å			0 0 5 12 5 12 2 2	ABOVE Background
60-120				CCD Direct	NONE						
25sec										Faint one 200	
4								4		BRT star 10 000	
4								5			
4								6c			
								7ci			
								8ci			
25s								3ci; 4ci, 5, 6, 7, 8ci		Another series	
2 1/2 sec	Drive off TRAIL							3ci			
30sec	For 1st exp. (to weak) Remaining exps 60 secs,							(4ci = 30sec)	5ci = 60sec	Then CCD 3 messed up Reset heaviconc CSS 386	
								1/2 ci			
60sec	Then 30 secs.							3ci,		MAX 10K Fainter ~ 1KADU max	
53	TRAILED		Drive off					4ci			

PgHJ 227

Date ..1995..MAR 7/8.. Observers ..K.K../.J.T.....

Emulsion Batches:
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SIDERIAL Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time ~~E.S.T.~~	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
		Telescope position							
CD00277→~~284~~	TRIPLET	03 46 57	+24 06 21	=03 56		00 10W			30s
285	Same			4:05					150s
286									
→ 293	HD 23439	03 40 06	+41 10 00	=04 15					30
294	HD 24760	03 51 08	+39 43 16	04 30 MID TRAIL		00 32W	DRIVE OFF TRAILED		53s
295	NGC 1952 CRAB M1	05 28 30	+21 57 00	05 02					300s
296	"	"	"	05 09		00 08E			97
297	"	"	"	05 31		00 09W			712
298	"			05 50					300s
299	"			05 59					300
300	"			0604					300s
301	bias 4X								
302	NGC 1952			06 17					10 min
303	"			06 36					180s
304	"								180
305	"			~~06 47~~					180
306	"			0647					

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

Exp. Mtr. Seen

RG 18 f

Hα C

Spectr. Temp. ..... Dome Temp./Hum. -7.0°C 64% Transparency Conditions ... Fine 228

Focus. ..... 30 cg gain still

Spectr. Temp. ..... Dome Temp./Hum. -9.0°C 57.5% H

Filter

Comparison Filter	Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	30s					CCD Direct			7680Å	5ci	Scaling using Triplet near ζ Tau		
	150s									5ci			
	30			8th mag pair + a faint pair TO SW						6q		Δα 00 00 08 −00 03 03	
	53s			2.84	Ross IV					6ci			
	300s								5100	3ci			
	97s								"	4ci	1900 coords Entered.	Δα = −00 00 01 Δδ = −00 01 09	
	712								"	6ci		Δα = +00 00 11 Δδ = −00 02 09	
	300s	BG 18 filter							BG18	3ci			
	300								"	3ci			
	300s								"	3ci			
	10min	Hα filter							Hα	6551A			
	180s								Hα	6560A			
	180									4		more west this time	
	180									"	...		

pg #3 229

Date 1995 JAN 27/28 Observers K.K. / Tn

Emulsion Batches:

Spectr. Temp.
Focus
Spectr. Temp.

SID Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CD00307	NGC 1952	052830	+21 57	06 51		W			180		
308	"			06 55		1 24W			180		
309	NGC 2392	072942	+20 55						60		
310	"			7:15		0 10E			180		
311	BIAS(4)										

Note - Some FRAMES TAKEN PREVious Night.
All is with CCD DIRECT now at CASS FOCUS Plane.

CD00244	PINHOLE:								~10sec		
CD00245	SKY/FLAT					FAR EAST ~45° Dec					

Spectr. Temp. ..... Dome Temp./Hum. −9.3°C 57.4% Transparency Conditions ... Clear ... 230

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. −10°C

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Fi Hel	P.H.	Program	Remarks	Quality
	180					CCD DIRECT			6560			slightly west of previous.	
	180												
	60												
	180		Poor, ≈ 18 pixels FWHM ≈ 4.5"										
										1/2c			
	20sec		To show off centered mounting.								Cloudy Sky		
											Cloudy SKY		
									All to				

231 pg#1 SHT/SUN CCD DIRECT

Emulsion Batches: .....

Date 1995 JAN. 28/29 Observers K.K./T.m ....

SIDEREAL Time .....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time ~~E.S.T.~~	Ending Time ~~E.S.T.~~	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CD00 312	BIAS(4)										
313	FLAT off Secondary screen					00 01W	+20°	1x	1/10s		
114 117	" "	"	"					4x	2/10s		
118 122	" "	"	"					5x ~~4x~~	.5sec	½sec	
CG400 700 703	HD13013	02 02 18	+43 59 07	~1830 EST		01 00W		4x	67ms		~3
704 705	"							2x	133ms		
CD00 323	BIAS(4)										
CD00 324 327	HD13013			~0329		01 23W		~~4x~~	1sec		
328 337	ADC 2081	02 37 24	+48 48	03 38	03 40	00 59W		10x	1sec		
336 347	ADS 2644	03 31 42	+0 16	3 53				10x	4s		
348	ADS 2644			04 11		00 33W					
349	BIAS(4)										
350 354	TRIO near	03 41 32 HD 23630	23 47 36	~0420		00 37W		5x	6s		
355	" "	"				00 39W			120s		
356-365	HD 23439	3 40.1	41 10	4:37					15 then 30		

CCD Speetr. Temp. -100°C Dome Temp./Hum. -9.5°C 57.5% H Transparency Conditions CLEAR 232

Focus 30C gain

Spectr. Temp. Dome Temp./Hum. FILTER 0 0 512 512 2 2 CCD FINT MAX

Exp. Mtr.	Seeing	P.C. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
							6560Å			50 watt Tungsten	
							"			Iodide lamp	≈7K
1/2 sec exp's							Green	3ci			11K
	≈3"	V 6.4	G8III			306a on CCD	DIRECT MOUNT		Seeing Test	2842 focus for Slit	
									"	Dome WNW Light west wind.	
								1/2	Tel Focus	2844 ideal focus	
		V 6.4	G8III				Green	3ci		for CCD DIRECT	
		V 5.78 8.13	G9V K6V.					3ci		for Brightone	3.8k
								4ci			9K
								4ci		DRIVE off TRAILED	
								1/2.			
								3ci			
		8.15 8.74	G5 G5							= ADS 2757	

233p942

Emulsion Batches:

Date ..1995 JAN 28/29. Observers .K.K./Tq.....

SIDEREAL

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time ~~E.S.T.~~	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CD00366	HD24760	03 57 08	+39 43 16	04:51					
367 → 372	HD 26965	04 10 40	-07 48 30	05:15		1 08W			1sec
373 → 382	HD26965 BC	faint pair		05:24		1 18W			20sec
383	HD26965			05:36					
384 → 388	Trapezium	05 35 24 2000	-05 23 00	05:44		0 14 W		5x	3sec
389-92	"	"	"	0547					20sec
393	TRAP TRAIL					0 20W			60s
394	NGC1952	05 26 30	+21 57 00	0620		0 52W			300s
395	"			0628					300s
396	"			06:34					300s
397	"			06:39					300s
398 - 399	HD50635	06 49 00	+13 18 18	06:54		00 01W		2x	1sec
CD00400	PIF/Fts	"	"	07:00		0007W			16
401	PIF/Fts	"	"	07:04					
402	PIF/Fts	"	"	0707					
403	BIAS								

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

Exp. Mtr.	See
Then 1.5sec	
A number	
16 seqn	
16	
16	

CCD
Spectr. Temp. -102.0°C Dome Temp./Hum. -10.5° C 59.2% Transparency Conditions .... Fine 234

Telescope
Focus ..... 2844 .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Filter	P.H.	Program	Remarks	Quality
				CCD DIRECT			Green		U∝ -00 00 03 Δδ -00 00 54	TRAIL DRIVE OFF	
Then 1.5secs exps								5c	only 3 ADU above background for faint pair.	Brightone. MAX 15.5K	
		9 and 11 V	M6 and	DA				5c			
										TRailed, DRive off.	
								5c			
A number of nearBy Regions.											
										Accident resulted in encoder normalizatn to NGC 752.	
										Sharper image	
										Focus To #2832	
16 sequences. in one large FITS File.								using CCD2A		Using a mosaic sequence	
16 sequences								" "		(502 422, 134, 140, 2, 2 CCD FMT	
16									16 sequence ALSO		

235 pg #3

Date 1995 Jan 28/29 Observers ...K.K. /.T.M.....

Emulsion Batches:
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SIDERIAL

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CD00404	HD50635	064900	+131818	07:14					7s
405 –406	HD56986	071409	+22 10 00	07: 22					3/10s
407 PIF	"	"	"	07:26		00 07W			3/10s
408 PIF FTS	"								
409 PIF FTS	"								
410-1 Bias									
412	HD56986	071409	+2210	07:40		00 21 W			7s
413 –~~415~~	HD79210	090742	+530700						90
414	"	"	"						10
415	"	"	"	8:09		01 03 E			8
416/17	BIAS ~~6~~ x2	16 sequence							
418 –419	HD79210	090742	+530700	08:20		00 52 E			8sec
420/21	"	" Tel posh	"	08 25		~~00~~ 49 E			15s
~~422~~ 26	NGC 2632	083937	193406	08:40		00 06 E			3sec
	~~AD57044~~	084518	08 1400						

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

Exp. Mtr. | Sec

Then 1 sec

Spectr. Temp. ..... Dome Temp./Hum. -11.5°C. 63.9% Transparency Conditions Fine 236

Focus .... 2831 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Filter MAX

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
7s					CCD DIRECT			GREEN		DRIVE off	TRAILED	
3/10s												
3/10s											CCD FMT for sequences 520 392 80 81 22	
											16 image sequences	
7s									1c	TRAILED	CCD Fmt 0 0 512 512 22	14K
10			Both 7th			check header dimens				Mosaic	344 316 230 158 22	
10											"	
8											"	
			418 missing!								"	
8s									1c		0 0 512 512 22	
15s									3c		TRAIL, DRIVE off	
3s	Then 4 secs,								3c		TRIPLE at south end, 12K	
									4c		Faintest 4th star 100 ADU ABOVE	

237
pg #4

Date 1995 Jan. 28/29 Observers ..KK../.T.y.....

Emulsion Batches:
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SIDEREAL

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CD00427	ADS 7044	08 45 18	+08 14	09:00		W			5sec
428 ✓	"			09:05					6sec
429 ✓	"			09:10					6sec
430 ✓	"			09 22		W			6sec
431-2	Bias								
433	AOS8119	11 12 54	+32 06 00	09 44		1 28 E			1sec
434	"	"	"	09 50					1
435	"	"	"	09 51					1
436	"			09 54	=0140 EST				1
437 OR 438?	BIAS sequence								

cp
Spectr. Temp.
Focus ... 28
Spectr. Temp.

Exp. Mtr. Se

16

CCD
Spectr. Temp. -102.0°C Dome Temp./Hum. -11.9°C 65% H Transparency Conditions ... Fine 238

Focus ... 2830

Spectr. Temp. ... Dome Temp./Hum. -17°C 63.7% H

MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5sec				CCD DIRECT			Green	4ci		556, 504, 464, 32 CCD FMT 16 sequence	940
6sec									F=2830	36 sequence	
6sec									F=2840	36 sequence	
6sec									F=2845	36 sequence	
										36 sequence	
1sec	16	sequence					550 370 128 128 1 1 CCD FMT			16 " " ~~557 446 464 1 1~~ CCD FMT	
1										16	
1										16	
1										16	
										16	

pg#1 239 Sun / mon

Date 1995 JAN. 29/30 Observers KK. I.T.

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

CCD Spectr. Temp.
Tel Focus ..... 2.
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
CG407 06/09	HD13013	02 02 18	+43 59 07	≈ 18 30				4x	67ms		
CG407 10/11	"	"	"			00 40W		2x	133ms		
C000439	BIAS			SIDEREAL							
440 → 441	ADS 2218	02 49 42	+26 28 00	03:09		0 14 W			8 sec		
442	"	"	"	03:17		0 27W			10 sec		
443	"	"	"	03 24					10 sec		
444	"	"	"						10s		
445/~~446~~	BIAS										
447	ADS 2218	02 49 42	+26 28 00	03 39					5 sec		
448	"	"	"	03 52		00 56W			63s		
449 → ~~450~~	ADS 3514	04 48 48	+07 13 00	04 03		00 48 E			20s		
451	"	"	"			00 44E			10 sec		
452	"								4 sec		
453	"								4 sec		
454/~~455~~	BIAS										
456	ADS 3514	04 ~~48~~ 48	+07 13			E					

CCD
Spectr. Temp. -100°C ..... Dome Temp./Hum. -65°C 72384 Transparency Conditions .... Part. Cloudy 240

Tel
Focus .... 2800 ... ideal

30 C GAIN

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

Exp. Mtr.	Seeing	Pic. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	22"	64	G&II	EEV CCD GUIDE CAMERA		A800E 306m	C		Seeing Test	no wind, no fans	
	"								" "	Dome to WNW.	
				CCD DIRECT			GREEN			CCD FMT 0 0 512 512 22	
										~~520 432 7781 22~~	
	16	Sequence,								560 426 9195 22	
	"		"								
	"		"								
2x	16	Sequence Too							Tel	Focus = 2799.	
	64	Sequence,			PIF also saved					focus 2799	
										TRAILED Drive off.	
										0 0 512 512 22	
	16	Sequence							FMT	450 300 114 173 22	
	16	"								images all look doubled in EW direction,	
	16	"									
	16	"								TRAIL, drive off	
									Fmt	0 0 512 512 22	

Pg#2 241

Sun/mon

Date 1995 JAN 29/30.. Observers K.K./Tu..... SIDERIAL

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time ~~E.S.T.~~	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CG407 ~~12~~/15	ADS 3514							4x	67ms
16/17	"							2x	133ms
CD00456 ~~7~~/61	HD 23630 TRIO near	03432	+23 4746	04:51	(Hzg 13~~62~~	1338			1sec
CD00 4562	HD 23630 TRIO	"	"			0143W			1sec
4563	"			0536		0147W.			2sec
CD00 45 ~~64~~/65	ADS 5197	062836	+~~44~~ 49	05:46		0047E			4sec
CD00466 ✓	"	"	"	05:52		0040E			4sec
467 ✓	"	"	"	0557					4sec
468 ✓	" (PIF File written too)			6:04					4sec
469/70	BIAS(2)			06:11					
471 ✓	ADS 5197	only PIF written			Too Big for RAM disk		3.5 meg		5sec
472 (2)	BIAS	only PIF "							
473	HD 47575	063410	+130422						
~~474~~ 478	FLATS					0 0	platform	TUNG	0.5s
479	BIAS(4)								

Spectr. Temp.

Focus 2

Spectr. Temp.

Exp. Mtr. Sec

Then 2secs

5K Bkgd

7.4K max

Secondary

Spectr. Temp. ..... Dome Temp./Hum. -7.6°C 77% Transparency Conditions ... increasing cloud.....

Focus ..... 2799 .....

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

242

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
67ms					CCD DIRECT	ABOUT 306a				Seeing Test for scale	no focus change	
133ms										" "	" " from previous CCD DIRECT	
1sec	Then 2 secs for remainder, Note focus touchedup before										Foas 2797	
1sec	5K AAU max with mirror covered, (East Side)										(2798 encoder in window Then logged)	
2sec	7.4K max											
4sec					1.7" sep double					PRIMARY MIRROR Half covered with East Leaves, A Test		
4sec										50 sequence	CCDEMT	
4sec										"	450, 416, 97, 52, 33,	
4sec										"	somecloud	
										"		
5sec					now 1-1 binning					50 sequence	456 361, 230, 150, 1, 1	
					" " "					60 "	" " " "	
				TRAILED							Clouds!	weak
005	Secondary screen mounted, and source pointed at it										0 0 512 512 2 2 CONFMT	
											" " " " "	

pg of 1 243 Mon/Tues

Philip's Fluorescent Lamp Tests

Emulsion Batches: .....

Date 1995 Jan. 30/31. Observers [Blk] ... T.n. .....

All done same as previous ... Lamp Tests .....

CCD Spectr. Temp. ...
Focus ... 6:9
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr. No. & Filter	Seeing
cc2999 4/5	IAB Board / outboard Hartman					01 12 W	+30°	FeAr Clear	50/70	-27°C	
96	BIAS(4)										
97	Comp					01 12 W	-20 43	FeAr Clear	90s		
98	TL830 Lamp			183139	✓				1400	23K	
99	"			185521	✓				1400	23K	
cc30,000	"			191901	✓				1401	23K	
01	TL850 Lamp			19 5009	✓				1600		
02	"			20 2029	✓				1600		
03	"			20 5049	✓				1800	103 K Sum	
04	TL841 Lamp			21 2556	✓				1700	31,700	
05	"			21 5518	✓				"		
06	"			03 2357	✓				"		
07	Comp										
08/10	FLATS x3							TUNG Ap=1/2	7sec		
11	BIAS(4)										

CCD
Speetr. Temp. -100°C ..... Dome Temp./Hum. -2.7°C 84.3%H Transparency Conditions ..... cloudy ..... dome closed for tests 244

Focus ....6.95.....

Spectr. Temp. ..... Dome Temp./Hum. -2.5°C 82.9%H

CLAMBDA 418 CSC 1024 4 1 CCOFMT ADU MAX

Exp. Mtr. no filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
-2.7°C Set 6.95				CASS CCD	1800 l/mm G: 4920 TILT 46.1	306u	5016Å ±.3Å	3/4		in focus @ center	
								1/2			
								5			
23K								6		weakest em ≃ 30 ADU above continuum	1.8K
23K								6		[weakest continuum ≃ 150 ADU above backgnd]	
23K								6			
								8		more Blue than previous lamp	
								8	dome automatically		
103 K	Sum of 3 exps & intervening WAITES							8		~~Redder than previous~~	2.7K
31,700								10i		Redder than previous	2.7K
"	Automatically done							"			"
"								"			
								11			
								12			13.7K
								1/2			

P942 245

Date 1995 JAN 30/31 Observers [Bla] Jn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
C30012	Comp			2311		01 12W	-20° 43	Fe Ar Clear	90s		
13	TL 841			231402					900	15,800	
14	"			232917					900	15,750	
15	"			234434					900		
16	TL 850			000508					1200	22,100	
17	"			002522					1321	33,900	
18	"			004743					1229	22,100	
19	BIHS(4)										
20	TL 830			011341					1200	29,700	
21	"			013356					1200	29,350	
22	"			015407					~~1200~~ 1322	21,380	
23	Comp			022043				Fe Ar Clear	90s		
24 - 26	FLATS x 3							Jung Ap=1/2	5s		

CCD Spectr. Temp. ...
Focus ... 6.95
Spectr. Temp. ...

CCD
~~Spectr~~. Temp. −10.5 °C Dome Temp./Hum. −2.4°C 83%H Transparency Conditions Cloudy 5/10 11

Focus 6.95

Spectr. Temp. ..... Dome Temp./Hum. −2.6°C 78%H

c Lambda

246

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
'				CASS CCD	1800 ln/mm G=5047	306u	5200Å I.5A	11			
15,800				Actual Tilt 47.1°				13		[≈3 em lines 720 ADU above continuum]	
15,750								13			
								13		Lowes continuum Level ≈ 160 ADU above backgnd	
22,100								15		1 em line ≈ 100 ADU above	
33,900								15		continuum. Continuum Level min ≈ 170 ADU	
22,100								15			
								11/2			
20,700								17		The redder pair again	
20,350								17		[Strongest em ≈ 100 ADU above continuum]	
20,380								17			
								18		Continuum minimum ≈ 100 ADU above background	
								19			
				All to Worm & Perseus.							

PG #1 [247]

Date 1995 ~~Jan~~ Feb 1/2 Observers [Bln]/Smt ... iks/Hdy as backup. (unable to observe in person.)

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30027/8	INBOARD/OUTBOARD HARTMANN					0 ~~15~~ W	36°	FeAr clear	40/70
29	BIAS(4)			00 44 ~~18 59~~					
30	COMP							FeAr clear	60
31	HD37017	5 30 25	-04 33 36	01 03 21		4 28 ~~3~~ W			1800
32	COMP							FeAr clear	60
33	BIAS(4)			01 45					–
34	COMP							"	60
35	HD37468	5 33 44	-02 39 28	01 49 31		4 51 W			600
36	COMP							"	60
~~37~~	COMP							"	"
TOO WEAK, ABORTED	HD37017	5 30 25	-04 33 36	02 14					600
	COMP								
37	COMP							FeAr clear	60
38	HD86360	9 52 51	+12 55 19	02 37 49		~2h W			1330
39	COMP							"	60

CCD
~~Spectr.~~ Temp. -100.°C Dome Temp./Hum. -1.8°C/68.5% @ 2000 Transparency Conditions. just cleared. then clouded 248 really quickly @ 2000 or so. clearing again @ 00 20.

Focus ~~6.88~~ 7.00

~~Spectr. Temp.~~ 90 cgain Dome Temp./Hum. -6.9°C/61.2% @ 100 FANS OFF

B6 39

Exp/Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1500 l/mm G = 4555	306μ	4475Å	3/4		~~4424 0 50 1024 4 1 CCDFMT~~ 4470 50 1024 41 CCDFMT	
								1½		(410 0 50 1024 4 1 CCDFMT IS PERFECT! FOR 6070=G)	
								5			
3222	7-8"	6.56	B2 V p		~150:1	S/N		6	Bln Sp. Bin	(He rich) TEL. ON E SIDE	1200
								7			
								½			
								8			
9330	>8"	3.81	O9.5 V		S/N ~ 230:1			9	Bln pgm.	hard to guide – windy. TEL E SIDE	2400
								10			
								11			
190 MOSTLY SKY	>10"!	6.56	B2 V p					12	Bln Sp. Bin	VERY LOW, MAYBE IN TREES SOON TEL. E SIDE	
								13		VALIANT EFFORT ABORTED. HAD TIME TO KILL.	
								11			
15280	4-5"	5.26	B9 IV		S/N ~ 330:1			12	Bln Sp. Bin	STRONG- TEL E SIDE.	5.5K
								13			

pg # 2 269

Date 1995 ~~Feb~~ Feb 1/2 Observers [Bln] / Smt ..... Km as backup

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc30040	BIAS(4)			03 04					—
41	COMP							Fe Ar clear	60
42	HD84441	9 40 11	+24 14 05	03 17 50		2 07 W			240
43	COMP							"	60
44	COMP							"	"
45	HD66141	7 57 04	+02 36 34	03 46 42		4 29 W			1201
46	COMP							"	60
47-55	FLAT x 9					2h	+5° 30'	Tung clear	15
56	BIAS(4)			04 17					
57	COMP							Fe Ar clear	60
58	HD112028	12 48 23	+83 57 24	04 33 27		0 36 W			1202
59	COMP							"	60
60	BIAS(4)			05 44					

Spectr. Temp.

Focus .....

Spectr. Temp.

Exp. Mir.	Filter	See
17000		5'
3500		5'
15100		5'

Spectr. Temp. -100°C Dome Temp./Hum. -8.7°C/60.6% Transparency Conditions . clear 280

Focus ~~-5.6~~ 7.00

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

4170 50 1024 4 1 CCDFMT
FANS OFF

Exp. Mtr. (B6 39 FILTER)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 ℓ/mm G = 4555	306μ	4475Å	1/2			
								14			
17000	5"	2.98	G1 III					15	STD. VEL.	TEL. E. SIDE	5.4K
								16			
								17			
13500	5"-8"	4.39	K2 IIIb FZ-0.5					18	STD. VEL.	TEL E SIDE STILL close in dec & HA to exposures for HD37017 & HD37468	3.1K
								19			
								20		TEL. E. SIDE	13.5K →12.4K
								1/2			
								21			
15100	5"?	5.2	AO Shell					22	Bln Ashell	TEL. E. SIDE	6.4K
								23			
								1/2		75h later	

All to Perseus & WORM

251

Emulsion Batches:

Date 1995 Feb 2 Observers Smt

Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
CG40718/21	HD ~~113811~~ 120245	13 43 11	+38 23 33	~06 00				4x	.067s	
22/23	"					0 30 W	~~5~~ 81° Alt.	2x	.133s	
CG40724-7	BD+37 2174	11 16 12	+37 19			3 14 W	53° Alt	4x	.233s	
CG40728-3	HD128718	14 33 24	+48 39			~~3 14 W~~	~~53° Alt.~~	4x	.067s	
32/33	"	"	"			0 17 W	85° Alt.	2x	.133s	
34-37	HD142658	15 50 42	+10 24			0 48 E	55° Alt.	4x	.233s	

Spectr. Temp. ..... Dome Temp./Hum. ~11.8°C/61.3% Transparency Conditions .. clear .. since .. 0:00 .....

Focus .. as best as possible (2785 secondary) @ 1st seeing test.

Spectr. Temp. ..... Dome Temp./Hum. ~12.2°C/61.3% @ end of all!

TELESCOPE ON W SIDE
FANS OFF

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	yuch!	6.95	KOIII	EEV CCD 100483?	—	above 306μ	—	—	SEEING TEST	DOME WSW, lite W wind, HA = 30m W	
									"		
		primary 9.1	?						SEEING TEST SCALE CALIBRATION		
	5"-6"?	6.7	F2						SEEING TEST	DOME W, lite W wind.	
									"		
		primary 8.6	primary FO						SEEING TEST SCALE CAL.	Dome S.	

p. 1253

Date 1995 Feb 2/3 Observers Mki./Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	
CC30061/2	INBOARD/OUTBOARD HARTMANN							FeAr clear	60/60	
63	BIAS(4)			18 20						
64	COMP							FeAr clear	60	
65	HD211211	22 10 32	+42 27 28	18 40 48		5 10 W			660	2862
66	COMP							"	60	
67	BIAS(4)			19 03					–	
68	COMP							"	60	
69	HD23169	03 37 54	+25 25 00	19 06 21		0 11 W			906	775
70	COMP							"	60	
71	BIAS(4)			19 24						
72	COMP							"	60	
73	BD+16 516	03 44 43	+16 57 06	19 33 26		0 31 30 W			900	438
74	~~BIAS~~ "			19 49 12		0 47 30 W		"	900 ~~60~~	433
75	"			20 04 35		1 03 W			905	435
76	"			20 21 32		1 19 50 W			906	430
77	COMP							"	60	

CCD Spectr. Temp. Focus Spectr. Temp.
CS 500 Exp. Mir. FILTER

CCD
Spectr. Temp. -102.0°C ..... Dome Temp./Hum. -9.3°C / 46.8% Transparency Conditions thin patchy cloud → haze 254

Focus .....6.95.....

~~Spectr. Temp~~. 90..gain..... Dome Temp./Hum. .....

DOME FANS ON
410 0 50 1024 4 1 CCDFMT

06 560

Exp. Mtr. FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ LAMBDA	~~P.H.~~ CI	Program	Remarks	Quality max ADU
60/60				CASS CCD	1800 ℓ/mm G=6070	306μ	6609 Å	3/4			
								1/2			
60								5			
660	2862	3"-4"	5.68	A2Vnn			2 peaks across rows, brighter @ 24 col, other @ 20	6	TELLURIC STD.	First 1000 exp. mtr. counts or so, the star wasn't centered. then in cloud.	3.1K
60								7		S DOME FAN TURNED OFF AT END OF STELLAR.	
-								1/2			
60								8			
906	725	2"-3"	8.75	62V	S/N ~ 130:1			9	STD. VEL	thin cloud. RV = +13.3 ± 0.2 km/s	1.4K
60								10			
								1/2			
60								11			
900	438	3"	9.40 -9.71	0.65* KOV+WI	S/N ~ 95:1			12	Mki V471 Tau	thin cloud → haze	700 above b/g
900	433		"	"	S/N ~ 95:1			13	"	very thin haze now.	760 above b/g
905	435		"	"	S/N ~ 95:1			13	"		740 above b/g
906	430		"	"	S/N ~ 95:1			12	"		720 above b/g
60								14			

p. 2 255

Date 1995 Feb 2/3 Observers Mki/Smt

Emulsion Batches:
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CCD Spectr. Temp.
Focus .....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	CCD Exp. Time / Filter	Seeing
cc30078	BIAS(4)			20 43							
79	BD+16 516	03 44 43	+16 57 06	20 45 49					900	450	
80	"			21 ~~01 02~~ 33 36					900.	450.	
81	"			21 ~~01 12~~ 49 24					900	378	
82	"			22 04 52		3 03 W			900	39	
83	COMP							FeAr clear	60		
84	BIAS(4)			22 24							
85	BD+16 516	03 44 43	+16 57 06	22 25 32		3 24 W.			900	380	
86.	"			41 47		3 40.			900.	390	
87	"			58 04					900.	430.	
88	"			15 07		4 14			900	?	
89	COMP			1				FeAr Clear	60		
90	BIAS(4)			23 37							
91-95	FLAT x5					4 25 W	4	Tung Via Ap	6s.		
	TEL MOVED TO E SIDE OF PIERS										

CCD
Spectr. Temp. −102°C Dome Temp./Hum. −16.1°C/49.9% Transparency Conditions ...clear... 256

Focus ...6.95...

~~Spectr. Temp.~~ ..90.cgain.... Dome Temp./Hum. .....

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

Comparison Exp.	Exp. Mtr. 06 560 FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CX	~~P.H.~~ C1	Program	Remarks	Quality max ADU
					CASS CCD	1800 l/mm G=6070	306μ	6609 Å	½			
900	450		9.40 -9.71	OGS* KOU+ wd					15	Mki V471 Tau		
900	400.		"	"	S/N	still 95:1			16	"	"900 obs" was ignored at first. That's why this one is late.	B+y 660 above Hy
900	378		"	"	S/N	~ 92:1			15	"		
900	369		"	"	S/N	~ 90:1			16	"		550 above Hy
60									17			
									½			
900	380		"	"					18	Mki V471 Tau		
900	380		"	"					"	"		
900	430.		"	"					"	"		
900	?		"	"					"	"		
60									19			
									½			
60									20			13.4K & 13.1 → 12b

p. 3257

Date 1995 Feb 2/3 Observers Mki / Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30096	COMP							FeAr clear	60
97	HD26162	4 03 20	+19 20 42	23 59 24					300
98	COMP							"	60
99	BIAS(4)			00 08					—
CC30100	COMP							"	60
01	BD+16 516	3 44 43	+16 57 06	00 17 50		5 17 W			900
02	"			00 33 18					960
03	"			00 50 09					900
04	"			01 07 11		6 06 W			900
05	"			01 23 00					960
06	"			01 40 04		6 39 W			900
07	COMP							"	60
08	BIAS(4)			01 58					—
09-13	FLAT x5					6 46 W	+17°	Tung ¼ AP	9s
14	COMP							FeAr Clear	60

CO
Spectr. Temp.
Focus 6
Spectr. Temp.

Dep. Mir.	Sec
4750	
338	
318	
276	
234	5
228	
163	6-7

CCD Spectr. Temp. -102°C Dome Temp./Hum. -10.6°C/52.1% Transparency Conditions ... clear 258

Focus ... 6.95

~~Spectr. Temp.~~ 90 cgain:... Dome Temp./Hum. ...

N FAN ON ONLY
410 0 50 1024 4 1 CCDEMT

Comparison Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	~~P.H.~~ ci	Program	Remarks	Quality
60					CASS CCD	1800 ℓ/mm G=6070	306μ	6609 Å	21		TEL. ON E SIDE NOW.	
300	4750	~3"	5.50	K1 III					22	STD. VEL.	RV = +23.9 ± 0.6 km/s	8.8K
60									23			
-									1/2			
60									24			
900	338	4"	9.40 - 9.71	0.65# KOV+wd	S/N ~ 80:1				25	Mki V471 Tau	TEL STILL E SIDE.	460 above blg
960	318		"	"	S/N ~ 75:1				26	"		390 above blg
900	276				S/N ~ 60:1				27	"	GETTING TOUGH TO GUIDE	200 above blg
900	234	5"			S/N ~ 60:1				28	"	DRIFTED OFF SLIT FOR A COUPLE OF MINUTES DURING WEATHER CHECK.	220 above blg
960	228				S/N ~ 58:1				25	"	SKY LINES SHOW UP (180 above blg) IMAGE VERY ELONGATED ALONG SLIT	180 above blg
900	163	6"-7"							26	"	PRIMARY MIRROR APERTURE PARTIALLY BLOCKED NOW	90 above blg
60									29			
-									1 1/2			
9s									30		CLOCK DRIVE TURNED OFF	15.3K 714.6K
60									5			

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Date 1995 Feb 2/3 Observers Mki / Smt

Emulsion Batches:
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Spectr. Temp.
Focus 6
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	CG40 Exp. Mtr. FILTER	See
cc3015	HD90861	10 24 18	+29 05	02 17 38		0 33 W			615	~3000	
16	COMP							FeAr clear	60		
CG40738-41	HD90861	10 24 18						4x	.067		3
42/43	"					~0 40 W	~71° Alt.	2x	.133		
cc3017	BIAS(4)			02 43					—		
18	COMP							FeAr clear	60		
19	BD+30 2163	11 24 46	+30 31 06	02 46 05		0 04 E			300	1045	
20	"			02 53 02		0 03 W			300	1100	
1	1	1	1	02 58 56	1	0 08 45 W	1	1	300	1145	1
21	"			03 04 32		0 17 W			432	1550	
22	"			03 14 04		0 24 W			300	1170	
23	"			03 19 29		0 30 W			371	1370	
24	"			03 26 10		0 36 W			300	1080	
25	COMP							FeAr clear	60		
26-30	FLAT x5					~0 40 W	+30°	Tung ¼ Ap	7s		

Spectr. Temp. ..... Dome Temp./Hum. -11.5°C/55.2% Transparency Conditions ... Clear 260

Focus ..... 61.95 .....

~~Spectr. Temp.~~ ..90..cgain..... Dome Temp./Hum. -11.5°C/54.6% @ SEEING TEST

N FAN ON ONLY

410 0 50 1024 4 1 CCDFMT

Comparison Filter	Comparison Exp.	OG360 Exp. Mtr. FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	~~P.H.~~ ci	Program	Remarks	Quality max ADU
	615	~3000		7.20	K2 III	CASS CCD	1800 ℓ/mm 6=6070	306μ	6609 Å	6	STD. VEL.	TEL. ON E SIDE STILL RV = +36.3 ± 0.4 km/s	5.4K
	60									7			
x	.067		3"	7.20	K2 III	EEV CCD 100483	–	ABOVE 306μ	–	–	SEEING TEST	~~the~~ Done S, no wind, clear TEL on E side, further W than normal.	
y	.133									–			
	–									1/2			
w	60									8			
	300	1045		6.84 -7.10	FO - F2	S/N ~ 155:1				9	Mki AW UMa	TEL STILL ON E SIDE	~2K
	300	1100		"	"	S/N ~ 155:1				9	"		2.2K
	~~600~~	~~443~~	/	/	/	S/N ~ 160:1	/	/	/	~~10~~	/ " /	PANICKED overwrote LOST in wrong cache	~~2.0K~~
	432	1550				S/N ~ 195:1				10	"	too long, wrote to wrong cache.	3.0K
	300	1170				S/N ~ 170:1				9	"		2.4K
	371	1370				S/N ~ 180:1				10	"		2.8K
	300	1080				S/N ~ 150:1				9	"		2.0K
w	60									11			
	7s									11			13.5K → 13.1K

26t
p.5

Date 1995 Feb 2/3 Observers Mki / Smt

Emulsion Batches:
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Spectr. Temp. .
Focus 6
Spectr. Temp. .

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	CC 560 Exp. Mtr. FILTER	Seein
CC30131	BIAS (4)			03 40					—		
32	COMP							FeAr ~~clear~~	60		
33	BD+30 2164	11 25 ish	+30 31	03 44 41		1 19 W			1800	893	
34	COMP							FeAr clear	60		
35/36	INBOARD/OUTBOARD HARTMANN					1 20 W	+30°	"	60/60		
37/38	INBOARD/OUTBOARD HARTMANN					1 50 W	+30°	FeAr clear	50/60		
39	BIAS (4)			04 45							
40	COMP							"	60		
41	BD+30 2164	11 25 ish	+30 31	" 48 08				1900	1750		
42	COMP							"	~~60~~		
43	BD+30 2163	11 24 46	+30 31 06	5 33 22		2 43 W			300	2880	
44	"			5 39 43		2 50 W			302	2700	
45	"			5 45 14					300	2700	
46	"			5 50 55					320	2700	
47	"			5 57 11					315	2140	
48	"			6 02 50		3 13 W			300	2150	

Spectr. Temp. ...-100.°C..... Dome Temp./Hum. ...-11.9°C./52.9%. Transparency Conditions ...clear..... 262

Focus .....6.95../..7.00..... N FAN ON ONLY

Spectr. Temp. ..90.cgam.... Dome Temp./Hum. ..... 410 0 50 1024 4 1 CCDFMT

Comparison Filter	Comparison Exp.	CC 560 Exp. Mtr. FILTER	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CCD	~~P.H.~~ Ci	Program	Remarks	Quality max 4000
	-					CASS CCD	1800 ℓ/mm G=6070	306μ	6609Å	1/2		TELESCOPE ON E SIDE	
	60									14			
	1800	893		9.45	G?					15	Mki		1.9K
	60									14			
	60/60									3/4	FOCUS TEST	set a bit warm now	
	5/60					CASS CCD	1800 ℓ/mm G=5547	306μ	5890Å	3/4	FOCUS TEST	SAME CCDFMT.	
										1/2			
	60									5			
	1750			9,45	G?					6	Mki		
	60									7			
	300	2880		S/N	~	180:1				9	Mki AW UMa		3.2K
	302	2700		"		170:1				10	"	thin cirrus clouds.	2.7K
	300	2600		"		160:1				9	"		2.4K
	320	2700		"		170:1				10	"		2.2K
	315	2140		"		150:1				9	"	thicker cloud now, noticeable at least	2.2K
	300	2150		"		150:1				10	"		2.3K

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p. 6

Date 1995 Feb 2/3 Observers Mki / Smt

Emulsion Batches:
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CCD
~~Spectr.~~ Temp.
Focus 7
~~Spectr. Temp.~~

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
cc30149	COMP							FeAr Clear	60		
50-54	FLAT x5					3 25 W	+30°	Tung ¼ Ap	10		
55	BIAS(4)			6 21					–		
56	COMP							FeAr clear	60		
57	HD107328	12 15 16	+03 52 10	6 34 39					180	8450	
58	COMP							FeAr clear	60		
59	COMP							"	"		
60	HD87901	12 27 22	+10 03 03	06 51 03					27	12000	
61	"			06 52 57		5 21 W			22	12000	
62	COMP							"	60		
63-67	FLAT x5					5 25 W	+10°	Tung ¼ Ap	11		
68	BIAS(4)			7 01							

CCD ~~Speetr.~~ Temp. --101.°C ← JUST CHECKED @ 6 20 Dome Temp./Hum. --11.7°C/50.6% Transparency Conditions some thin cloud now... 264

Focus .....7.00.....

~~Speetr. Temp.~~ ...90..again.. Dome Temp./Hum. .....

N DOME FAN ON ONLY

410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CA	~~P.H.~~ C.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5547	306μ	5890 Å	11		TEL. STILL ON E SIDE	
								11			13.5K →13.0K
								1/2			
								5			
8450		4.96	K0.5IIIb Fe-0.5					6	STD. VEL.	RV = +35.7 ± 0.3 km/s	10.0K
								7			
								8			
12000		1.35	BTIn					9	TELLURIC STD	trailed L to R	~6K
12000		"	"					9	"	trailed R to L	~6K
								8			
								8			13.3K →12.5K
								1/2			
				All to Perseus & WORM						Telescope focus last @ 2834	

265

Fri / Sat

Date ..1995..Feb 3/4.... Observers [KK]..TA.....

Emulsion Batches:

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CSS 386 Time Reset to WWV Time on 0806 74 pgm.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD84 81/82	inboard/outboard					≈230 W	≈+30°	ThAr	25/20
CCD84 83	BIAS(4)								
84	Comp							ThAr	15
85	HD 178778	02 47 10	+52 21 12	18 51 43		00 56 W			1260
86	Comp							ThAr	15
87	Comp							"	"
88	HD 34029	05 09 18	+45 53 47	19 20 58		1 01 E			989
89	Comp							ThAr clear	15
90	HD 34029			19 39 17		0 45 E			901
91	Comp							ThAr clear	15
92	HD 34029			19 55 48		0 32 E			600
93	COMP							"	15
94	BIAS(4)			20 08					—
95	COMP							"	15
96	HD 29316	4 32 02	+53 16 34	20 14 31		0 41 W			172
97	Comp							ThAr	15

CCD Spectr. Temp. ...
Focus.....23
Spectr. Temp.

Exp. Mtr.	Seen
880	1·2
10 K	
16.4K	
19.2K	
450	1·2

CCD
Spectr. Temp. -100°C Dome Temp./Hum. -61°C 70% H Transparency Conditions Part Cloudy 266

Focus 2335

Spectr. Temp. ____ Dome Temp./Hum. ____ Cl Lambda Tel focus 2272 mAK

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion (CD)	P.H. C.	Program	Remarks	ADU Quality
				echelle CCD 17.80°	W 60m = .277 H = 400m = .225 / 1200 l/m x = .4460		3960 Å	1/2	focus test	CCD FIMT 0 0 128 1024 8 1	
							3960 Å			CCD FIMT 0 0 256 1024 4 1	
										encoders normalized	
8 60	1-2"	V 3.09	G5 III +A5					4c	KK pgm	on HD 178788 also cloud at end	~ 600 H04
								5ci			
								5c			
10 K		V 0.08	G5 IIIe +G0 III					6c	KK pgm	cloud at times	4.7K
								5			
16.4K								3c	KK pgm	clear stretch	8.9K
								5			
19.2K								6	"		9.0K
								5			
								1/2			
								5			
450	1-2"	V AB 5.36	A5 n					4	KK pgm		400 ADU
								5			

267
Pg#2 Fri/Sat

Date 1995 Feb 3/4 Observers [K.K.] Smt. / Tm

Emulsion Batches:
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CCD Spectr. Temp.
Focus 123
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Se
ce08498	HD 29316	4 32 02	+53 16 34	20 44 36		1 11 W			1747	485	
99	Comp							ThAr	15se		
C008500	BIAS(4)										
01	Comp							ThAr	15se		
02	HD47105	6 31 56	+16 29 05	21 25 49		0 18 E			969	3830	
03	Comp							ThAr	15se		
04	HD47105	6 31 56	+16 29 05	21 43 30		0 0 0			968	5000	
05	COMP							"	15		
06	Comp							"	15		
07	HD.56986	7 14 09	+22 10 00	22 05 10		0 10 E			1592	1000	
08	Comp							ThAr	15		
09	BIAS(4)			22 35							
10	COMP							ThAr	15		
11	HD56986	7 14 09	+22 10 00	22 40 34		0 21 W			1348	1425	
12	Comp							ThAr	15		

CCD
Spectr. Temp. −100.2°C Dome Temp./Hum. −7.9°C..67%H Transparency Conditions .. Part. Cloudy 268.

Focus ..1235.....

Spectr. Temp. ..... Dome Temp./Hum. −8.2°C..73.1%H

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
465	1-2"	AB 5.36	A5n	echelle CCD 17-80°	1200 l/mm X=.4460	60u W 400u H	3960A	6ci	KK pgm	2nd exp.	
								1/2			
								5ci			
3830		B 1.9	A0 IV					3	KK pgm		3K
								5ci			
5000								4	KK pgm		
								5			
								5			
1000	<2"	B 3.9	F0 IV					6cs	KK pgm	Could see faint companion in Finder and then found it in guiding views. Est's 1.5m x 5 and 7" separation	Exc. APO
								5			
								1/2			
								5			
1425		B 3.9	F0 IV					6	KK pgm		
								5			

269 pg #3 Fri/Sat

Date 1985 Feb 3/4 Observers [illegible] ... Th./Sat.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE08513	Comp							ThAr	15s
14	HD 61421	07 34 04	+5 28 53	23 07 52		00 23 W			1000
15	Comp							ThAr	15s
16	BIAS (4)			23 27					
17	Comp							ThAr	15s
18	HD62509	07 39 12	+28 16 04	23 33 33		00 51 W			1484
19	Comp							ThAr	15s
20 → 24	FLATS x 5			00 10		201 30 W	+28° 01	TUNG	300s
25	BIAS (4)			00 40 48					
26	Comp							ThAr	15s
27	HD62509	07 39 12	+28 16 04	00 49 08		01 57 W			1180
28	Comp							ThAr	15s
29	Comp							"	"
30	HD 34029	05 09 18	+45 53 47	01 12 56		4 58 W			1342
31	Comp							ThAr	15s
32	BIAS (4)			01 38					

CCD Spectr. Temp.
Focus ... 23
Spectr. Temp.

Exp. Mtr.	Se
440	2
	4
160	1-2
2000	
638	

CCD Spectr. Temp. ...-10200°C... Dome Temp./Hum. ~8.2°C ...73.3%H Transparency Conditions. increasing cloud ...270

Focus ...1235.....

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

c Lambda MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				echello CCD 17.80°	1200 l/m x=.9460	60 μ W 400 μ H	3960Å	5ci			
4,140	2"	B 0.74	F5 IV-V					3ci	kk pgm	STANDARD some cloud	16K
								5			
	~~4~~ 3"							1/2			
								5ci			
160	1"-2"	V 1.14	K0 III b					4	std vel	Thick cloud	MAX 70 ADU ABOVE Background
								5ci			
						60 μ width 700 μ Height		2ci			12K
								1/2 ci			
				Back To →		60 μ width 400 μ Height		5ci			~~22~~
2 000		V 1.14	K0 III b					6ci	Std vel	Not so thick cloud	2K
								5cg	1		
								5ci	kk pgm	Only FAR NW clear now	
6 38		V 0.08	G5 III a +G0 III					3ci	kk kp gm	some cloud → later	200 above blg
				All to Perseus & WORM				5cg		clouded out.	

271 SAT/Sun

Date 1995 Feb 4/5 Observers [KK] Tn /Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE 08533/4	INBOARD/OUTBOARD					2 47 W	+12°	ThAr	30/15
35	BIAS(4)			01 42					
36	Comp							ThAr	15s
37	HD34029	05 09 18	+45 53 47	01 12 01		5 07 W			B7 44
38	Comp							ThAr	15s
39-41	FLAT x 3					"	+46°	Tung	300
42	BIAS(4)								
	Then Tests	Starting 03 EST Feb 5/95			Tn	CCD T unregulated			
ce 08543	Flat for Non motion Ap extraction					00 00	−33 30°	TUNG	
44	Comp							ThAr	30s
45 96	Comp on Batch MMTST.BAT			x52 eqd		(900 sec Quiet between)		ThAr	30s
97	Comp before Raising Telescope			17 58 17				ThAr	30s
98	FLAT			18 00 15				TUNG	40
99	Comp just before Raising			18 23 31				ThAr	30

CCD Spectr. Temp. −101.5°C Dome Temp./Hum. −8.9°C / 51.6% Transparency Conditions snow but clearing, high winds. 272

Focus 0.231 Temp Dropping Fast −14°C By 01:15

Spectr. Temp. ____ Dome Temp./Hum. −15°C 53.1%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. CCD	X-Grating/ Tilt	Slit	~~Emulsion~~ cλ	~~P.H.~~ ci	Program	Remarks	Quality
				ECHELLE 17.80	1200 ℓ/mm 0.4460	60μ WID 500μ HEIGHT =0.215	3960 Å	3/4	FOCUS TEST	0 0 128 1024 8 1 CCDFMT 400μ slit height for focus test.	
								1/2		0 0 256 1024 4 1 CCDFMT	
15s								3			
174 374	very very poor	V 0.08	G5 III e +G0 III					4	KKpgm	thin cloud	60 ADU along b/g
15s								5			
300						760μ =.195 height		6			10K, ? 9.8K
								1/2			
	CCD T = −125°C			90 C gain						CCD FMT 875 448 100 72 11	MAX
	Dome T −12.7° but probably −17° and getting colder					700μ H 60μ W		2c		Air pressure Rising = 100. Kpsals.	8400
30s								1c			34K
30s								1c		"	
	CCD T −116°C Dome T = −14.7°C										
										Air Pressure 100.35 Kpsal @ 3 AM Feb 6	
	CCD T now −110°C					(focus test showed that focus was still Reasonable)					

273 pg#1 sun/mon

Date 1995 Feb 5/6 Observers [KK] Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE8600/1	INBOARD/OUTBOARD					$2^h 46^m$ W	+12° 11′	ThAr	30/24
02	BIAS(4)								
03	COMP							"	15s
04	HD34029	5 09 18	+45 53 47	01 13 36		5 03 W			1200
05	COMP							"	15s
06	HD 34029			01 37 13		5 27 W			1205
07	Comp							ThAr	15s
08	HD34029	05 09 18	+45 53 47	01 59 49		5 50 W			1200
09	Comp							ThAr	15s
10	BIAS(4)			02 28					
11	Comp							ThAr	15s
12	HD61421	07 34 04	+5 28 53	02 29 16		3 57 W			1200
13	Comp							ThAr	15s
14	Comp							"	15s
15	HD 102 509	11 42 50	+20 46	03 00 18		6 29 W			1204
16	Comp							ThAr	15s

(cd) Spectr. Temp.
Focus L
Spectr. Temp:

Exp. Mtr.	Sec
9520	3
10,200	
5575	4
184	5

CCD
Spectr. Temp. ...-100.°C..... Dome Temp./Hum. ..-16.7°C/.?.. Transparency Conditions ..clear,..fine snow beforehand..
@ focus test not too windy tonight
Focus .....0.225.....
Spectr. ~~Temp.~~ ..90..again.... Dome Temp./Hum. -19.7°C/55.1% once dome was opened. -22.2°C
ZH MAX

parison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. CCD	X-Grating/ Tilt	Slit	~~Emulsion~~ CCD	~~P.H.~~ Ci	Program	Remarks	Quality
30/24					ECHELLE	1200 ℓ/mm	60μ width	3960Å	2/3	FOCUS TEST	set a smidgen too cool	
					tilt = 17.80	tilt = 0.4470	500μ height (=0.215)				0 0 128 1024 8 1 CCDFMT	
						not touched			1/2		0 0 256 1024 4 1 CCDFMT	
15,						∴ probably erroneous value in logbook prior to tension			2			10K
1200	9520	variable 3"-7"	V 0.08						3	KK pgm		20K
15s									4ci			10K
1205	10,200								3ci	KK pgm		20K
15									4ci			
1200									5ci	KK pgm		
15s									4ci			10K
									1/2ci			
15s									1			9K
1200	6575	4"-6"	B 0.74	F5 IV-V					2ci	KK pgm	Std Procyon	
15s									4			
15s									4			10K
1204	144	5"	B 5.0	A+ G5 III+IV					5	KK pgm	(Above backed)	100AD1
15									4			

275 pg#2 Sun/Mon

Date .1995..Feb.5/6..... Observers .[KK]..Jn./Sant.....

Emulsion Batches:
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cap
Spectr. Temp.
Focus...122
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CCD0817	BIAS(4)			0333							
18	HD102509	11 4250	+204629	033619		01 00 W			1482	190	4"
19	Comp							ThAr	15s		
20	Comp							ThAr	15s		
21	HD62509	07 3912	+281604	040916		05 19W			500	1500	4"
22	Comp							ThAr	15s		
23	Comp							〃	〃		
24	HD84441	09 40 36	+23 1405	042738		03 40 W			681	500	3.5
25	Comp							ThAr	15s		
26	BIAS(4)			04 44							
27-31	FLAT x 5					3 40 W	+23°	Tung	300		
									30/15		4

~~Spectr.~~ CCD Temp. -102.0°C Dome Temp./Hum. -22.1°C 61.3% H Transparency Conditions .. Hazy (slightly) 276

Focus .225

Spectr. Temp. .... Dome Temp./Hum. -22.5°C 63.5% H Then Snow.

MAX

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					echelle 17.80	X 1200 l/mm .4470	60μ W 500μ H	3960Å	1/2			
1482	190	4"	B 5.0	A + G5III-IV			-.215		5cs	kk pgm		
15s									4cs			
15s									4			
500	1500	4"	V 1.14	K0IIIb					6	Std Vel	Above backgnd	160 ADU
15s									4cs			11.7K
"									4cs			
88	500	3.5"	V 2.98	G1 II					3cs	Std Vel	Above backgnd	~100
15s									"		snow in dome, lightly, of course.	
									1/2			
300							60μ W 800μ H		4			11.3K → ~
								All to Perseus & WORM				
~~30/15~~	~~"~~	~~-148°~~	~~.225 set~~			~~79 88~~						

277 Mon / Tues
pg#1

Date 1995 Feb 6/7 Observers [KK] Tn

Emulsion Batches:

CCD Spectr. Temp.

Focus

CCD Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
ce08632/33	inboard / outBOARD Hartman					2 45W	+25°	ThAr	30/18	-118°c	·27
34	BIAS(4)										
35	Comp							ThAr	15s		
36	HD 31964	04 54 47	+43 40 32	20 06 35		00 24 W			1800	1500	2"
37	Comp							ThAr	15s		
38	Comp							"	"		
39	HD 32068	04 55 29	+40 55 48	20 41 03		01 05 W			2212	1800	3"
40	Comp							ThAr	15s		
41	BIAS(4)										
42	Comp							ThAr	15s		
43	HD 29094	04 29 46	+41 03 34	21 24 35		02 15 W			2235	1400	2-3"
44	Comp							ThAr	15s		
45	Comp							"	"		
46	HD 29316	4 32 02	+53 16 34	22 07 31		03 05 W			2853	630	2"
47	Comp							ThAr	15s		
48	BIAS(4)										

Spectr. Temp. (CCD) −104.0°C ..... Dome Temp./Hum. −14.8°C 38%H Transparency Conditions ..... 11.9.24 – thin cloud ....

Focus ..... 1225 ..... 90 Cegain −17.3°C shortly after opening no wind tonight anyway 28

Spectr. Temp. (CCD) −100.7°C ..... Dome Temp./Hum. −17.4°C 60.5%H

≃ MAX ADU

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion (λ Lambda)	P.H.	Program	Remarks	Quality
	30/15	−14.8°C	1.225 SET			echelle CCD 17.80° tilt	1200 l/mm 1.4470	60 μ wide 500 μ Height = .215	λ = 1.277 3960 Å	3/4	focus test	CCD Entt 0 0 128 1024 8,12 (SET for Then now)	cooler
										1/2		0 0 256 1024 4 1	
	15s									3		encabes NORM on SAME	7.2K
	1800	1500	2"-4"	V 2.99	FOTec+B					4	kk STD spectrum pgm		≃ 1K
	15s									3			7.2K
	9									3			
	2212	1800	3"	V 3.75	K4II+B8V					5	kk STD	≃	400 ABOVE Background 8.1K
	15s									3			
										1/2			
Ar	15s									3			8.2K
	2235	1400	2"-3"	V 4.25	K4III+A3V					6	kk Std	completely clear here	300 ADU ABOVE Background 8.2K
Hr	15s									3			
	"									3			8.8K
	2253	630	2"	AB 5.36 V	A5n					4	kk pgm	≃	500 above background
Ar	15s									3			9.8K
										1/2			

279
pg#2 Mon/Tues

Date 1995 Feb 6/7 Observers [KK] JA

Emulsion Batches:
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CCD
Spectr. Temp.
Focus 22
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CCO8649	Comp							ThAr	15s		
50	HD47105	06 31 56	+16 29 05	23 03 35		1 36 W			1214	1400	2
51	Comp							ThAr	15s		2
52	Comp							"	"		
53	HD 64421	07 34 04	+05 28 53	23 38 05		00 56W			435	800	
54	Comp							ThAr	15s		
55	Comp							"	"		
56	HD 80586	09 15 36	-09 07 53	23 53 57		00 14W			3012	527	3
57	Comp							ThAr	15s		
58	BIAS(4)										
59 63	FLATS x 5					01 16W	+12°	~~ThAr~~ Flng	300s		
64	BIAS(4)										
65 66	inboard/outboard					02 45W	+12°	ThAr	30/20	-17.5C	

CCD Spectr. Temp. −102.0°C ..... Dome Temp./Hum. 17.3°C ... 61.5% H Transparency Conditions ... Fine ... + some haze ..... some cloud coming 280

Focus ... 225 .....

Spectr. Temp. ..... Dome Temp./Hum. −18.0°C ... 63.0% H

All cloudy by 2

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD 17.80° tilt	1200 l/mm .4470	60 μ W 500 μ H	3960 Å	3			
6400	2"-4"	B 1.9	HD IV					5			6K
	2"-3"	B 1.9	HD IV					3	KK pgm		
								3			
8800		B 0.74	F5 IV-V					6	KK (std vel use)		2K
								3			8.9K
								3			9.7K
522	3"-5"	V 4.8	G8 III-IV + F5 V					4	KK spec std doubstand	< 100 above background.	
								3			8.9K
								1/2			
						60 μ W 800 μ H > .185		2			13.2K
								1/2			
−17.5°C .225 set								7/8	focus test	0 0 128 1024 8 1 CCD FLAT	
				All To Perseus & Woman							

281

pg#1 Tues/Wed

Date 1995 Feb 7/8 ..... Observers [B.In.]. Tn. /. Mk. /. Tn. ...

Emulsion Batches: .....

CASS Light Baffle (Long one) Reinstalled .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30169	BIAS(4)								
170	Comp							FeNe clear	~~20s~~
171	Comp for INT and ID purposes.							FeAr clear	90
172									
174	TL830 x3			19 56 18		01 12 W	-21 15		120s
175									
~~177~~	TL850 x3			20 ~~15 56~~ 17 05	20:17 → 20:28				160s
178									
~~180~~	TL841 x3				20:40				130
181	Comp							FeNe clear	20s
182								TunG	
~~184~~	FLATS x3							Ap=1/2	4sa
CC30185	BIAS(4)								
186	Comp							FeAr clear	60s
187	BD+16 516	03 44 43	+16 57 06	21 26 38		W			912
188	~~Comp~~ "	"	"	21 42 18				~~FeAr clear~~	~~900~~
189	"			21 57 44					937
190	"			22 13 51					900
191	Comp							FeAr	60s

CCD Spectr. Temp.

Focus 7.0

Spectr. Temp.

Exp. Mtr. Sec

No focus

1400

1700

2000

Done

180 2-3'

785 3'

780

740 3-4'

CCD
Spectr. Temp. −100°C Dome Temp./Hum. −10.4°C 66.2%H Transparency Conditions Mostly cloudy 282

Focus 7.00 90 Cgain

Spectr. Temp. Dome Temp./Hum. −13.8°C 71.6%H 410 6 50 1624 4 1 CCDFLAT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSS CCD	1800 ln/mm G=5170	306u	5373Å	1/2 a		5275 → 5470 Å	
				Actual Tilt = 48.2°			± .3Å	3ci			8K
No focus Test possible Tonight.								4ci		ST	1.2K
1400								5ci	Fluorescent Lamp Tests.	Strongest Line near Red end = 5457Å	12K
1700								6ci			15K
2000								7ci			13.5K
								8ci			10K
								9ci			14K
Done T = −13°C after opening										Mostly clear now	
								1/2			
		9.4 V 9.7			1800 ln/mm G=6070	306u	6609Å	3			
780	2-3"		KOX +wd					4	Mk: pgm	Telescope East Side near moon.	≈70/1
785	3"							5			
780								6			
740	3-4"							7			
								8			

Pg#2 283 Tues/Wed

Emulsion Batches: .....

Date 1995 Feb 7/8 ..... Observers Miki/Tim ....

CCD Spectr. Temp. ..... Focus ... 70 Spectr. Temp. .....

CSS 386 is 7secs ahead of U.W.U. Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
cc30192	BD+16 516	03 44 43	+16 57 06	22 33 59					420		
193	"			22 50 41					460	730	
194	"			23:07:41					906	650	
195	"			23 23 39					900	640	4
196	Comp			23 40				Fe Ar Clear	60s		
197	BIAS(4)			23 42							
198	BD+16 516			23 43 01					901	645	
199	"			23 58 33					901	635	
200	"			00 13 58					900	600	4
201	"			00 29 53		5 40W			389	260	5
202	Comp							Fe Ar Clear	60s		
203	BIAS(4)			00 40							
204	Comp							Fe Ar Clear	60s		
205/06	HD87901	10 03 03	+12 27	00 47:37					77/40	14K	
207	Comp			00 49 52				Fe Ar Clear	60s		

CCD
Spectr. Temp. ..... Dome Temp./Hum. ...-13.7°C... 70-76 Transparency Conditions . P.C.A.T. cloudy 284

Focus ...7.00.....

Spectr. Temp. ..... Dome Temp./Hum. ...-15.4°C.... 73%H

c Lambda

To completely cloudy

Tel Focus 2427 mm

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
		V 9.4-9.7	KOV	CASS CCD	1800 l/mm G-6070	306a	6609Å	9ci	Mkipgm	Strong moonlit sky	
730								10ci			
650								11ci			
690	4"							12ci		thin cloud.	
								13ci			
								1/2			
645								14			
635								15		Hα em not visible now	
600	4"							16		Hα Cm " " "	
260	5"							17		cloud e end.	
								18			
								1/2			
								19			
14K		V 1.36	B7V					20h	Telluric Std, x2	~ 10K	

285
Pg#3 Tues/Wed

Date 1995 Feb 7/8 Observers MKS/JTH

Emulsion Batches:
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Spectr. Temp.
Focus 7
cc
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
cc30205	Comp							Fe Ar Clear	60s		
209	HD 62509	07 39 12	+38 16 04	01 01 08					16		3
210	Comp							Fe Ar Clear	60s		
211 → 214	FLATS x 4					≤ 2 20W	+28°	Tung Ap = 1/4	5 sec		
215	BIAS (4)										

Spectr. Temp. ..... Dome Temp./Hum. ~~-1~~ 5°C ... 72% Transparency Conditions ... cloudy ... 286.

Focus ... 7:00 .....

Spectr. Temp. ~~-10~~ 1.0°C ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60s				CASS CCD	1800 l/m G=6070	306u	6609Å	21		Tel still eastside	
164	3"	V 1.14	KOIII6					22	Stilvel	thick doud	
60s								23			
5&2								24			10K
								1/2			
				All to Perseus 5				WORK			

parison
r Exp.

p 1 287

Date 1995 Feb 11 Observers Km / Smt

Emulsion Batches:
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CCD Spectr. Temp.
Focus ..... ?
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CC30216	COMP							FeNe clear	20	NONE	
17	HD74280	8 37 60?	+03 45 28	01 41 59					200		
18	COMP							FeNe clear	20		
19	HD74280	8 38 00	+03 45 28	01 48 17		~2 15 W			200		
20	COMP							FeNe Clear	20		
21	BIAS(4)			01 55							
22	COMP							"	20		
23	HD100889	11 31 36.5	-09 14 57	02 05 37					215		
24	COMP							"	20		
25	HD 100889			02 12 24		0 11 E			400		
26	COMP							"	20		
27	COMP							"	"		
28	HD114330	13 04 46	-05 00 18	02 28 33		-1 30 E?			300		
29	"			02 33 49		1 25 E		#	300 ~~200~~		
30	COMP							FeNe clear	20		

CCD
~~Spectr.~~ Temp. ..-100°C..... Dome Temp./Hum. -6.0°C / 59.0% ~85% when started (before opening up) Transparency Conditions cleared after snowstorm 28

Focus .....7.12...(a guess)

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

BOTH FANS ON

410 6 50 1024 4 1 CCDEXT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CA	~~P.H.~~ C.	Program	Remarks	max Quality ADU
NONE TONIGHT				CASS CCD	600 ℓ/mm (c) tilt=24.8°	250μ	~3760 Å	3		NO GRATING CONTROL, NO HARTMANN MASK, NO EXP. MTR.	
	3"-4"	4.30	B3V					4	Km MK Std.		13.9K
								5		TEL ON E SIDE	
								6	"		12.3K
								7			
								1/2			
								8			
	3"-4"	4.10	B9.5Vn					9	"		5.8K
								10			
								11	"		12.3K
								12			
								13			
	4"-5"	4.38	A1 ~~IVs~~ + Am					14	"		12.1K
	"	"	"					15			10.3K
								16			

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Date 1995 Feb 11 Observers Km/Smt

Emulsion Batches:
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Spectr. Temp.
Focus 7
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
cc30231	BIAS(4)			2 41						NONE	
32	COMP							FeNe clear	20		
33	HD129956	14 40 25	+01 08 22	02 51 21		2 34 E			800		
34	"			03 05 20		2 19 E			900		
35	COMP							"	20		
36	COMP							"	"		
37	HD74280	8 38 00	+03 45 28	03 31 33					240		
38	"			03 38 01		4 10 W			500		
39	COMP							"	20		
40	BIAS(4)			3 49					—		
41	COMP							"	20		
42	HD100889	11 31 37	-09 14 57	03 55 32					580		
43	COMP							"	20		
44	COMP							"	"		
45	HD114330	13 04 46	-05 00 18	04 12 55		~0 15 W			240		

Spectr. Temp. ....-1.00°C.... Dome Temp./Hum. -7.2°C/61.6% Transparency Conditions ...still clear... hazy on 290 horizon, bright waxing gibbous moon.

Focus .....7.12..... and climbing but going down on catwalk (80% → 76%)

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CX	~~P.H.~~ ci	Program	Remarks	max ADU Quality
NONE				CASS CCD	600 ℓ/mm(c) tilt = 24.8°	250μ	3760 Å	1/2		Telescope still on E side of piers	
20								17			
280	4"	5.69	B9.5V					18	Km MK Stds.	S/N ~ 280:1 at red ~~grey~~ active end ~ 160:1 at blue guider end	9.3K
900		"	"					19	"		11.0K
20								20		SE DOME FAN OFF NOW	
"								3			
240	5-6"	7.30	B3V					4	"		5.6K
500								6	"		8.5K
20								7			
-								1/2			
20								8			
580	3-4"	7.70	B9.5V					9	"		13.5K
20								10			
"								13			
340	4-5"	4.38	A1 IV + Am					14	"		7.9K

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Date 1995 Feb 11 Observers Km / Smt

Emulsion Batches:
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Spectr. Temp. .....
Focus .....
Spectr. Temp. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC30246	HD114330	13 04 46	-05 00 18	04 18 30		0 22 W			401	NONE	4.0
47	COMP							FeNe clear	20		
48	COMP							"	20		
49	HD129956	14 40 25	+01 08 22	04 31 39		0 52 E			860		
50	COMP							"	20		
51	BIAS (4)			04 50					—		
52	COMP							"	20		
53	HD100889	11 31 37	-09 14 57	05 01 55		2 42 W			600		4
54	COMP							"	20		
55	COMP							"	"		
56	HD114330	13 04 46	-05 00 18	05 20 24		1 24 W			428		4
57	"			05 29 39		1 33 W			400		4-5
58	COMP							"	20		
59	BIAS (4)			5 38					—		
60	COMP							"	20		

Spectr. Temp. ..... Dome Temp./Hum. -8.1°C / 62.9% Transparency Conditions clear with haze dam. low.

Focus 7.12 N FAN ON 292

Spectr. Temp. ..... Dome Temp./Hum. -8.5°C / 59.8% @ cc 30253

Comparison Iter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
	401	NONE	4"-5"	4.38	A1 IIIs +Am	CASS CCD	600 ℓ/mm (c) tilt = 24.8°	250μ	3760 Å	15	Km MK Stds	Telescope still on E side of piers	13.0K
	20									16			
	20									17			
	860			5.69	B9.5V					18	"		11.K
	20									~~20~~ 19 20 1/2			
	–												
	20									3			
	600		4"	4.70	B9.5Vn					9	"		9.1K
	20									10			
	"									13			
	420		4"	4.38	A1 IIIs +Am					14	"	slightly saturated at red end (1st 42 rows)	16+ K
	400		4"-5"							15	"		13.0K
	20									16			
	–									1/2			
	20									21			

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Date 1995 Feb 11 Observers Km / Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc30261	HD129956	14 40 25	+01 08 22	5 43 39		0 18 W			700
62	"			5 57 32		0 32 W			800
63	COMP							FeNe clear	20
64	COMP								
65	HD100889	11 31 37	-9 14 57	06 19 26		4 04 W			800
66	COMP								
~~67~~	BIAS(4)			6 36					—
CG407 ~~44-47~~	HD144579	16 01 30	+39 25 36					4x	0.06s
~~48/49~~	"					12m E	85° Alt	2x	.133s
cc30268-76	FLAT x9					2h 0m E	+39° 11'	Turq clear	13s
77 ~~78~~	SKY FLAT ~~x2~~					"	"		180s ~~150s~~
78	"					"	+39° ↔ +36°		150s
79	"					"	+ 37°		120s
80	BIAS(4)			7 20					

Spectr. Temp. ..... Dome Temp./Hum. -8.8°C/56.7% Transparency Conditions Clear 294

Focus 7.12

Spectr. Temp. ..... Dome Temp./Hum. -9.8°C/55.2% @ end of SEEING TEST

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
	700	NONE	4"	5.69	B9.5V	CASS CCD	600 ℓ/mm (c) tilt = 24.8°	250µ	3760 Å	22	Km MK Stds	Telescope still on E side of piers	8.5K
	850									23	"		9.4K
	20									24			(11.4K)
										25			
	850		5"-7"	4.70	B9.5V h					26	"	into the wind, lots of sky	2.0K
										27			
	-									1/2			
1x	0.01s			6.66	G8V			above 250µ		-	SEEING TEST	~~above~~ Done E, W wind mech. sun coming up.	
2x	1.25s			"	"					-			
1	13s									29		CLOCK DRIVE OFF	12.7K → 11.8K
	180s									28			7.5K
	145s									28			10.9K
	120s									28			12.1K
										1/2			

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Date 1995 Feb 11/12 Observers Km/Smt

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seen
CC30281	BIAS(4)			19 59						NONE	
82	COMP							FeNe clear	20		
83	HD 30739	4 45 10	+8 43 43	20 03 25		0 26 W			210		>6
84	~~COMP~~ "			20 08 01		0 33 W			400		6"
85	COMP							"	20		
86	COMP							"	"		
87	HD74280	8 38 00	+03 45 28	20 23 56		3 03 E			426		6"
88	COMP							"	20		
CG40750-53	HD40722	5 55 40	+43 22 39					4x	.007s		
54/55	"					0 09m E	88° Alt	2x	.133s		5"
89	BIAS(4)			20 53					—		
90 - 98	FLAT x 9					1 20 W	+9°	Tung clear	5		
99	BIAS (4)			21 02							
CC30300	COMP							FeNe clear	20		
01	HD30739	4 45 10	+8 43 43	21 12 32		1 39 W			460		5
02	COMP							"	20		

Spectr. Temp. ..... Dome Temp./Hum. -14.8°C/46.8% Transparency Conditions partly cloudy, strong wind

Focus ..... 7.19 ..... FANS OFF 296

Spectr. Temp. ..... Dome Temp./Hum. -15.9°C/48.5% @ seeing test 410 0 50 1024 4 1 CCDFMT

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CA	~~P.H.~~ C1	Program	Remarks	Quality
	NONE				CASS CCD	600 l/mm(C) tilt = 25.4°	250μ	4200Å	1/2			
20									3			
210		> 6"	4.36	A1 IVn					4	Km MK Stds	335:1 S/N	5.2K
400		6"	"	"					4		S/N ~ 465:1	10.1K
20									5			
"									6			
426		6"	4.30	B3 V					7	"	thin cloud.	10.8K
20									8			
4x .005s			6.42	K0 III			above		–	SEEING TEST	Dome W, strong W wind, thin cloud,	
2x .133s		5"	"	"			250μ		–	"		
-									1/2			
5									2			1.42K → 13.6K
									1/2			
20									9		FOCUS CHANGED TO 7.24	
460		5"	4.36	A1 IVn					10	Km MK Stds	wind moving star off the slit. S/N ~ 400:1	12.2K
20									11			

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Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
30303	COMP							FeNe clear	20
304	HD 74280	08 38 00	+03 45 28	21 29 13		-1 57 E			400
05	HD 74280			21 38 34		-1 49 E			320
06	COMP							"	20
07	COMP							"	20
08	HD 100889	11 31 36.5	-09 14 57	22 07 26		-4 05 E			775
09	COMP							"	20
10	BIAS(4)			22 23					
11	COMP							"	20
12	HD 100889	11 31 37	-09 14 57	22 26 47		-03 47E			740
13	COMP							"	20
14	COMP							"	"
15	HD 30739	04 45 10	+08 43 43	22 50 22		3 21 W			615
16	COMP							"	20
17	COMP							"	"

Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr.	Seen
NONE	

Spectr. Temp. ~~-16.0°C/+5a1%~~ Dome Temp./Hum. -16.1°C/+5a1% Transparency Conditions cloudy 198

Focus ~~7.a24~~

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

440 050 102K 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion ~~c-x~~	~~P.H.~~ c	Program	Remarks	Quality
NONE				CAFOS CCD	600 l/mm (c) tilt = 25.4°	250μ	4200 Å	12			
		4.30	B3 V					13	1cm MK Stds		15.5K
								14	"		9.7K
								15			
								16			
		4.70	B9.5 Vn					17	"	cloudy	5.1K
								18			
								1/2			
								19			
		4.70	B9.5 Vn					20	"	cloudy.	MAX 4.8K
								21			
								22			
		4.36	A1 Vn					23	"	clouds all over 3.5K	~~MAX 4.8K~~
								24			
								25			

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Emulsion Batches:
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Spectr. Temp.
Focus .....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CC30318	HD74280	8 38 00	+3 45 28	23 10 22		0 16 E			420	NONE	
19	COMP							FeNe clear	20		
20	BIAS(4)			23 21					—		
21	COMP							"	20		
22	HD100889	11 31 37	-9 14 57	23 32 54		2 34 E			1200		
23	COMP							"	20		
24	HD100889			23 58 49		2 08 E			1200		
25	COMP							"	20		
26	HD100889			00 26 18		1 54 E			400		
27	COMP							"	20		
28	BIAS(4)			00 34					—		
29	COMP										
30	HD114330	13 04 46	-05 00 18	00 40 07		-03 15 E			310		
31	HD114330			00 47 32		-03 05 E			450		
32	COMP								20		

Spectr. Temp. ..... Dome Temp./Hum. −16.4°C/53.6% Transparency Conditions . mostly cloudy .. WNW wind .. 300

Focus ..... 7.24 .....

Spectr. Temp. ..... Dome Temp./Hum. −16.6°C / +54.3%

Comparison Exp.	Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	~~P.H.~~ C.	Program	Remarks	Quality
420	NONE		4.30	B3V	CASS CCD	600 ℓ/mm(c) tilt=25.4°	250μ	4200Å	26	Km MK Stds	cloud thinning/dispersing	7.3K
20									27			
-									1/2			
20			4.70	B9.5IIIn					28			
1200		(8")	↓	↓					29	"	really thick cloud here.	~~3.8K~~ 3.7K
20									30			
1200		(6")							29	"	saturated first 2½ rows in column 29.	
20									30		clouds thinner.	
400		5"→4"							29	"	clear again.	11.0K
20									30			
-									1/2			
									3			
310			4.38	AIIIs+Am					4			8.5K
450									4			12.3K
20									5			

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Date 1995 Feb 11/12 Observers KM/SMT

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30333	COMP							FeNe clear	20
34	HD 129956	14 40 25	+01 08 22	01 02 50		-04 21 E			700
35	"	"	"	01 16 21		-04 04 E			900
36	COMP							"	20
37	~~COMP~~ BIAS (4)			1 38					—
38	COMP							"	20
39	HD 74280	8 38 00	+3 45 28	01 53 16		2 24 W			240
40	COMP							"	20
41	COMP							"	"
42	HD 100889	11 31 37	-9 14 57	02 04 49		0 16 E			330
43	COMP							"	20
44	COMP							"	"
45	HD 114330	13 04 46	-5 00 18	02 22 55		1 32 E			300
46	COMP							"	20
47	BIAS (4)			2 30					—

Spectr. Temp. -10.2° C ..... Dome Temp./Hum. -16.7°c./+54.4°/o Transparency Conditions ... clear 302

Focus ..... 7.24 .....

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

Comparison Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20	NONE								6			
700			5.69	B9.5V					7	Km Mk Stds		5.0K
900									10	"		7.3K
20									8			
–									½			
20									9			
240		4"	4.30	B3V					10	"	telescope being blown by wind – 1st attempt heavily saturated & deleted.	12.1K
20									11			
1									12			
330		3"-4"	4.70	B9.5Vn					13	"		10.3K
20									15			
11									16			
300			4.38	A1IVs +Am					17	"		14.1K
20									18			
–									1/2			

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Date .1995..Feb..11/12.. Observers ..Km./Smt.....

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
cc30348	COMP							FeNe clear	20	NONE	
49	HD129956	14 40 25	+1 08 22	2 35 50		2 44 E			900		4
50	COMP							"	20		
51	COMP							"	"		
52	HD74280	8 38 00	+3 45 28	3 01 51		3 33 W			260		5
53	COMP							"	20		
54	COMP							"	"		
55	HD100889	11 31 37	-9 14 57	03 13 01		0 52 W			330		4.0
56	COMP							"	20		
57	COMP							"	"		
58	HD114330	13 04 46	-5 00 18	03 26 47		0 21 E			300		
59	COMP							"	20		
60	BIAS(4)			03 34					—		
61	COMP							"	20		
62	HD129956	14 40 25	+1 08 22	03 40 26		+1 38 E			800		
63	COMP										

Spectr. Temp. -100°C Dome Temp./Hum. -16.5°C/55.1% Transparency Conditions .. clear ... with ... "haze" 304

Focus ..... 7.24 .....

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

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CCD	P.H.	Program	Remarks	Quality
20	NONE				CASS CCD	600 gl/mm(c) tilt = 25.4°	250μ	4200Å	19			
900		4"	5.69	B9.5V					20	Km MK Stds		10.3 ~~K~~ K
20									21			
"									22			
260		5"-6"	4.30	B3V					23	"		8.0K
20									24			
"									25			
330		4"-5"	4.70	B9.5Vn					26	"	hazy	10.1K
20									27			
"									28			
300			4.38	A1Vs + Am					29	"	trailed to prevent saturation - used 300 obs	8.8K
20									30			
-									1/2			
20									6			
800			5.69	B9.5V					7	"		9.5K
									8			

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Date 1995 Feb 11/12 Observers Km/smt

Emulsion Batches:
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Spectr. Temp.
Focus .....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
364	COMP							FeNe clear	20	None	
365	HD ~~74280~~ 100889	11 31 37	-09 14 57	04 07 51		01 49 W			330		
366	"			04 15 31		02 01 W			700		
367	COMP							"	20		
368	COMP							"	"		
369	HD 74280	08 37 60	+03 45 28	04 53 06		05 33 W			800		
370	COMP							"	20		
371	COMP							"	"		
372	HD 114330	13 04 46	-05 00 18	05 17 31		1 24 W			300		
373	COMP							"	20		
374	BIAS (4)			05 24					—		
CG40756-9	HD128178	14 33 24	+48 39						4x.067s		
60/61	"				5 36	0 10 W	85° Alt	1.003 air mass	2x.133s		
CC30375	COMP							FeNe clear	20		
76	HD129956	14 40 25	+01 08 22	5 45 12		0 26 W			900		
77	COMP							"	20		

Spectr. Temp. ..... Dome Temp./Hum. -16.5°C / +58.2% Transparency Conditions clear, increasing cloud 30%

Focus ..... 7.24 .....

Spectr. Temp. ..... Dome Temp./Hum. -17.2 / 63.1% @ seeing test FANS OFF

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cs	P.H.	Program	Remarks	Quality
20	NONE				CASS CCD	600 ℓ/mm(c) 25.4°	250μ	4200 Å	9			
330			4.70	B9.5 V					10	Km Mk Stds		4.4K
700									13	"		8.7K
20									11		TEL W SIDE	
"									12		TEL E SIDE	
800			4.30	133T					13	"	Tel is in west side Too large airmass ~7	0.8K
20									15			
"									16			
300			4.38	AlMg + Am.					17	"		8.0K
20									18			
~									1/2			
4x.08's 2x.125 airmass			6.7	F2	EEV-CCD		above		—	SEEING TEST	Tel on E side! Dome NW, med W wind, in cloud.	
		5"-6"					250μ		~			
20					CASS CCD				19			
900		7"	5.69	B9.5I					20	Km Mk Stds	in a bit of cloud.	5.5K
20									21			

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Date 1995 Feb 11/12 Observers Km/Smt

Emulsion Batches:
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Spectr. Temp. ..
Focus .....
Spectr. Temp. ..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seein
cc 3078	COMP							FeNe clear	20	NONE	
79	HD 100889	11 31 37	-9 14 57	06 11 59		4 02 W			926		1.8"
80	COMP							"	20		
81	bias (4)			6 30					—		
82	COMP							"	20		
83	HD 114330	13 04 46	-05 00 18	6 36 00		2 44 W			400		1.7"
84	COMP							"	20		
85-93	FLAT x 9					2 48 W	-5° 30'	Tung clear	5		

Spectr. Temp. −100.°C @ 6:30 Dome Temp./Hum. −16.2°C / 62.8% Transparency Conditions cloudy

Focus 7.24

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

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	~~P.H.~~ c/	Program	Remarks	Quality
20	NONE				CASS CCD	600 ℓ/mm (c) 25.4°	250μ	4200 Å	22		TEL STILL ON E SIDE	
926		~8"	4.70	B9.5 V n					23	Km Mk Stds	wind making guiding difficult heavy cloud for some time and rack moved early	1.4K
20									24			
-									1/2			
20									~~26~~ 25			
400		~7"	4.38	A1 V s + Am					26	"	starting to get light. in cloud.	4.7K
20									27			
5									2			13.3K → 12.1K
				All to Perseus & WORM								

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pg.

Date 1995 Feb 12/13. Observers Km./Smt

Emulsion Batches:
@ H2 { GG 385 FILTER IN STELLAR BEAM & FLATS
06 560 FILTER IN COMP BEAM

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 30394	BIAS (4)			20 51				06 560 FILTER	–
95	COMP							Fe Ar clear	60
96	(Vys 428A) BD+16 502	3 38 12	+16 21 30	21 00 31		2 37 W			401
97	COMP							Fe Ar clear	60
98	COMP							"	"
99	(Vys 226) AC+53 2250-45	3 49 06	+53 16 23	21 23 51		2 50 W			600
cc 30400	COMP							"	60
401–09	FLAT x 9					2 31 W	+31°	Tung ¼ Ap	3
10	BIAS (4)			22 00				with GG 385 FILTER	
11	COMP							FeNe clear	20
12	HD87737	10 01 53	17 15 01	00 37 45		0 14 E			80
13	COMP							"	20
14	HD87737			00 42 08		0 10 E			85
15	COMP							"	20
16	BIAS (4)			00 46					

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

No Filter Exp. Mtr.	Seem
285	
267	
BG 39 FILTER	
6700	
7000	

Spectr. Temp. -100°C Dome Temp./Hum. -11.3°C / 65.2% Transparency Conditions. partly cloudy → overcast 310

Focus 7.09 set for -14°C = TP, T1C = -13.5°C from cassetup DOME FANS ON

Spectr. Temp. ..... Dome Temp./Hum. ..... 375 0 50 1024 4 1 CCDEMT

NO FILTER Exp. Mtr.	Seeing	V ~~Pig.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Cs	~~P.H.~~ C.	Program	Remarks	Quality
				CASS CCD	1200 ℓ/mm 42.3 degrees	306μ	6563 Å (Hα)	1/2			
								3			9.1K
285		10.3	MO					4	Km V45 Hα	CSS 386 clock 10 s ahead of WWV, in cloud. S/N ~ 40	150 above b/g
								5			
								6		CSS 386 clock reset to WWV before hand	
267		10.5	MO					7	"	lots of cloud.	
								8		SE DOME FAN NOW OFF.	
								2		clock drive off. OVERCAST NOW. dome shut	12.8K → 12.2K
								1/2			
BG 39 FILTER				CASS CCD	600 ℓ/mm (c) 24.6°	250μ	3800 Å	3	410 0 50 1024 4 1 CCDEMT		
6700		3.52	AOIb					4	Km MK Stds		14.7K
								5			
7000		"	"					6	"		14.0K
								8			
								1/2			

3½
p 2

Date 1995 Feb 12/13 Observers Km./Smt

Emulsion Batches:
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Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seen
30417	COMP							FeNe clear	20	8639 FILTER	
418	HD100889	11 31 37	-09 14 57	00 53 56		-01 24 E			240	416	
19	COMP							"	20		
20	COMP							"	"		
21	HD84025	10 11 08	+23 54 57	01 07 23		0 6 W			87	7000	
22	COMP							"	20		
23-25	MOON "FLATS" x3	07 50	+15 18				3 03 W	NO FILTER	10s	-	
26	COMP							FeNe clear	20		
27	HD101501	11 35 47	+34 46	01 48 59		0 29 E			523	7000	
28	COMP							"	20		
29	BIAS(4)			02 00					—		
30	~~HD100~~ COMP							"	20		
31	HD 100889	11 31 37	-9 14 57	02 06 52		0 10 E			330	490	5"
32	COMP							"	20		
33	COMP										
34	HD 103287	11 48 34	54 15 03	02 28 13		0 10 E			26	~~430~~	

Spectr. Temp. -10.1°C Dome Temp./Hum. -12.0°C / 70.7% Transparency Conditions clear, moon near full 312
Focus 7.09 @ MOON "FLATS" NE FAN ON ONLY
Spectr. Temp. ..... Dome Temp./Hum. ..... 410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	600 l/mm 24.6°	250μ	3800Å	9			
4161		4.70	B9.5Vn					10	Km MK Stds.		5.8K
								11			
								12			
7000		3.44	F0III					13	"		12.6K
								14			
—		C'MON	NOW.					16	FLUX CALIBRATION		11.4K → 9.8K
								17			
7000		5.33	G8V					18	Km MK Stds	some thin haze.	10.2K
								19			
								1/2			
								20			
6990	3"	4.70	B9.5Vn					21	"		10.7K
								22			
								23			
~~6500~~ 6500		2.44	A0V					24	"	trailed a bit	10.5K

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13

Date 1995 Feb 12/13 Observers Km/Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30435	COMP							FeNe clear	20
36	COMP							"	"
37	HD109358	12 29 00	+41 54 03	02 38 04					200
38	COMP							"	20
39	BIAS(4)			02 44		~~0 18 E~~	~~87° Alt~~		
GG40762-65	HD108100	12 20 06	+43 25						
66/67	"	"	"		02 53	0 18 E	87° Alt	1.0817	airmass
CC30440	COMP							FeNe clear	20
41	HD153210	16 52 56	+9 31 49	03 09 21		4 30 E			240
42	COMP							"	20
43	COMP							"	20
44	HD 114330	13 04 46	−05 00 18	03 28 37		0 24 E			210
45	COMP							"	20
46	COMP							"	"
47	HD 113226	12 57 12	11 29 48	03 41 45		−0 05 E			60
48	COMP							"	20

CCD
Spectr. Temp. ....-100°C..... Dome Temp./Hum. -12.0°C/70.2% Transparency Conditions clear, cloud increasing from south west.

Focus .....7.09.....

Spectr. Temp. ..... Dome Temp./Hum. -12.1°C/70.1% @ seeing test start N FAN ON ONLY

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CR	P.H. ci	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	600 l/mm (c) 24.6°	250μ	3800Å	25			
								26			
7300		4.26	G0 V					27	Km MK Stds		12.8K
								28			
								1/2			
~200	2"!	7.14	F2			above		~	SEEING TEST	Dome W, med to strong W wind clouds coming from SW but really clear right now bright near full moon.	
"						250μ		~	"		
								28			
7500	4"	but 2.6 airmass. 3.20	K2 III					29	Km MK Stds	hazy here, clouds approaching from the west	3.2K
								30			
								3			
6700		4.38	A0Vs + Am					4			13K
								5			
								~~6~~ 5			
7500		2.83	G8 III					6			10K
								8 ci			

315
p 1

Date 1995 Feb 12/13 Observers Km/Smt

Emulsion Batches:
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Spectr. Temp.
Focus .....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
30449	~~comp~~ bias (4)				03 46			FeNe clear ↓	"	86 39 FILTER	
30450	comp								20		
51	HD 121370	13 49 55	18 53 56	03 53 40		-0 45 E			37	7400	
52	comp							"	20		
53	comp							"	"		
54	HD 127665	14 27 31	30 48 37	04 03 02		-0 13 E			115	7700	
55	comp							"	20		
56	comp							"	"		
57	HD 120315	13 43 36	49 48 45	04 ~~18~~ 20 ~~39~~ 52		-0 ~~12~~ E			~~8~~	8000	
58	comp							"	20		
59	comp							"	"		
60	HD 113139	12 56 26	56 54 19	04 30 23		0 49 W			300	7000	3"
61	comp							"	20		
62	bias (4)			4 38					—		
63	comp							"	20		
64	HD 114330	13 04 46	-05 00 18	4 45 24		0 54 W			239	7000	

Spectr. Temp. ..... Dome Temp./Hum. 12.7°C/71.7% Transparency Conditions Clear 316

Focus 7.09 @ 4:30

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

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	B6 39 FILTER								9/			
20			2.68	G0IV					9			
39	7400	✓							10	Km MK Stds		13.9K
20									11			
"									12			
115	7700		3.58	K3III					13	"		9K
20									14			
"									15			
8	6000		1.86	B3V					18	"		11.7K
20									19			
"									20			
300	7000	3"	4.93	F2V					21	"		12.5K
20									22			
-									1/2			
20									23			
239	7000		4.38	A1IVs+Hm					24	"		12.3K

317

Date 1995 Feb 12/13 Observers Km./Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc30465	COMP							Fe Ne clear	20
66	"							"	"
67	HD161797	17 42 33	+27 46 45	04 59 52		3 29 E			120
68	COMP							"	20
69	"							"	"
70	HD164058	17 54 17	+51 30 02	05 09 25		3 32 E			49
71	COMP							"	20
72	HD164058			05 13 26		3 27 E			120
73	COMP							"	20
74	"							"	"
75	HD172167	18 33 33	+38 41 26	05 26 42		3 56 E			5
76	COMP							"	20
77	BIAS(4)			5 30					—
78	COMP							"	20
79	HD185144	19 32 33	69 29 28	05 45 11		4 18 E			900

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

Exp. Mtr.	Sec
BG 39 Filter	
7000	2
7000	3
18 500	3
6500	8
14 500	25

CCD
Speetr. Temp. −101°C Dome Temp./Hum. −12.8°C/71.6% Transparency Conditions clear 318

Focus 7.09

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	~~P.H.~~ ci	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	600 ℓ/mm (1) 24.6°	250μ	3800Å	25			
20								25			
120	7000	2"?	3.42	G5 IV				26	Km MK Stds		11.0K
20								28			
11								11			
49	7000	3"	2.23	K5 III				29	11	weak but late type.	3.3K
20								30			
120	18 500	3"	2.23	K5 III				29	11		10.5K
20								30			
11								3			
5	6500	artificial 8"-10"	0.03	A0 V				4	11	made star image REALLY out of focus	11.6K
20								5	11		
-								1/2			
20								5			
900	14 500	~5"	4.68	K0 V				6	11	TURNED OFF NE FAN - seeing improved - Dome NNE	13.7K

3/98

Date 1995 Feb 12/13 Observers Km / Smt

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30480	COMP							FeNe clear	20
81	"							"	"
82	HD114330	13 04 46	-5 00 18	06 10 00		2 19 W			268
83	COMP							"	20
84	BIAS(4)			6 24					—
85	COMP							"	20
86	HD 206 936	21 40 27	+58 19 17	06 26 46		5 50 E			686
87	COMP							"	20
88-96	FLAT x 9					0 30 E	+7°32	Tung clear	13
97	SKY "FLAT"					"	"	clouds	180
98	"					"	"	"	240
99	"			7 11 40		"	"	"	"
CC30500	BIAS (4)			7 19					

CCD
Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr.	Seco
#39 FILTR	
1000	3
#000	5

CCD
Spectr. Temp. -100°C Dome Temp./Hum. -13.0°C/71.5% Transparency Conditions. clear → cloudy 320

Focus 7.09 FANS OFF

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	V ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	600 ℓ/mm(c) 24.6°	250μ	3800 Å	8			
								9		B16 ~~SLIT~~ DROP IN LOWER HALF (25-50 columns) INTENSITY FROM	
7000	3"-4"	4.38	A1 ~~IV~~s + Am					10	MK Std.		11.7K
								11			
								1/2			
								12			
16 000	5"	4.08	M2Ia					13	Km MK Stds		1.7K
								14			
								2		clock drive off	16K →15.1K
								16		clouds but sun up somewhere.	3.5K
								16			9.5K
								16			16K
								1/2			
			All to Perseus & WORM								

3 of 7 Mon/Tues

Date 1995 Feb 13/14 Observers [Rm]/Tn/Smt

Emulsion Batches:

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CCD Spectr. Temp. ...

Focus ... 6.9

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	See
CC30501	BIAS(4)								—	CG 560 FILTER	
02	COMP							Fe Ar clear	60		
03	HD 65583	7 54 18	+29 31	23 16 21		00 45 W				≈2800	
04	COMP							Fe Ar clear	60		
05	"							"	"		
06	HD 44990	6 19 49	+7 08 25	23 35 35		2 37 W			530	5930	
07	COMP							"	60		
08	Comp							"	60		
09	HD 30282	4 41 05	+36 32 00	23 55 49		4 43 W			1032	3200	3"
10	Comp							Fe Ar clear	60s		
11	BIAS(4)										
12	Comp							Fe Ar clear	60s		
13	HD 25361	03 56 42	+58 23	00 23 59		6 04 W			1610	4300	3"
14	Comp							Fe Ar clear	60sec		
15	Comp							"	"		

CCD
Spectr. Temp. -100°C Dome Temp./Hum. -9.2°C 60.5%H Transparency Conditions Clearing 327

Focus 6.94 no focus test possible 90 Cgain as usual Gusty SW wind

Spectr. Temp. Dome Temp./Hum. -10.6°C 63.3%H

410 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	✓ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CX CI	~~P.H.~~	Program	Remarks	Quality
06 560 FILTER				CASS CCD	1800 gl/mm 54.9°	306μ	6392 Å	1/2		≈	THAX HD4
								3			
≈2800		7.00	G8V					4	STD VEL.	≈	5.3K
		~~7.00~~	~~G8V~~					5			
								6			
5930		B 6.5-8.0	F7Iab - K1Iab					7	Rm T Mon	≥ 350/1 S/N	12.1K
								8			
								9			
3200	3"	B 7.9-8.8	F6 - G1					10	Rm pgm	AW Per 250/1 S/N	6.4K
								11			
								1/2		CCDT = -101.7°C	
								12		Telescope East side	
4300	3"	✓ ~~7.30~~ 8.07	F6Ib - G2Ib					13	Rm pgm	RX Cam	8.1K
								14			
								14		Telescope West Side	

323 pg #2

Mon / Tues

Date ..1995. Feb. 13/14..... Observers [Rm] / Tm / Sm + / {Vys} Tm / Sm + / [Hlw]

Emulsion Batches: .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc30516	HD 90861	10 24 18	+29 05	01 02 38					60Z
17	Comp							Fe Ar clear	60s
CG407→71 (68)	HD 90861	10 24 18	+29 05					4x	67ms
CG40772/3	"	"	"			0 02 W	75° Alt	2x	133ms
cc30518-26	FLAT x 9							Tung Ap 1/4	6
cc 30527	BIAS(4)								
28	Comp							FeNe Clear	20s
29	BD-2 3000 (Vys 560)	09 48 10	-03 13 04	02 47 09		2 40 W			1679
30	Comp							FeNe Clear	20s
31	BD-2 3000 (Vys 560)	09 48 10	-03 13 04	03 17 36		3 17 W			2084
32	Comp							FeNe Clear	20s
33	BIAS(4)			3 54					
34	COMP							"	20
35	BD+01 2447 (Vys 127)	10 23 49	+01 21 36	3 58 36		3 08 W			1200
~~36~~	~~Comp~~							"	20

Spectr. Temp. ..

Focus ... 6.94

CCD Spectr. Temp. ..

Exp. Mtr. CC 5.0	Seeing
FILTER	
2100	3'
NO FILTER	
1050	3'
1320	3'
135	3'

Spectr. Temp. ..... Dome Temp./Hum. -10.6°C 63% H Transparency Conditions ... thin cloud ... coming 324

Focus ... 6.94 ... / ... 7.00 for 5305Å work

Spectr. Temp. -10.0°C ..... Dome Temp./Hum. -12.8°C 67.5% H

medium gusty WSW wind

410 0 50 1024 4 1 CCD FMT

Exp. Mtr. CG 560	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Lambda	P.H.	Program	Remarks	Quality
FILTER 2100	3"	V 7.2	K2III	CHSS CCD	1800 l/m Ti H 5349°	306u	6392Å	15c.	Std Vel		
								16			
		V 7.2	K2III		ABOVE 306u SLIT			-	Seeing Test	, Dome SW, medium	
								-	" "	Strong SW wind	
								2			12.3K → 11.4K
NO FILTER				CHSS CCD	~~1800 l/m~~ CHSS CCD 47.9° tilt	306u	5305Å	1/2		CCD FMT THE SAME	
								3			
1050	2"-3"	V 10.54	M0					4c;	Vys - Hlw	Full moon ≈ 25° away S/N ~ 55:1 above bkg	
								5c;			
1320	3"	V 10.54	M0					6	"		
								7			
								1/2d			
								8			
1135	3"	V 9.65	M2					9	Marcy Standard	S/N ~ 60:1 $RV_\odot$ = +8.36	
								10			

325 ~~Sept~~ 3

Mon / Tues

Date 1995. Feb 13/14..... Observers .[H.w/[Vys]./Smt/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	Comparison Exp.
Cc 30537	Comp							FeNe clear	20s
38	(Vys 594) HD 95735	10 57 54	+36 38 00	04 29 30		2 56 W			6.99
39	Comp							FeNe Clear	20
40	BIAS(4)			4 43					
41	COMP							FeNe Clear	20
42	(Vys 148) AC+79 4347	13 54 15	+79 20 23	4 53 52		0 54 W			2193
43	Comp							FeNe Clear	20
44	~~Comp~~ BIAS(4)			5 36					—
45	COMP							"	20
46	BD+81 465 (Vys 152)	14 10 24	+81 04 30	5 37 33		01 19 W			1932
47	Comp							FeNe Clear	20
48	Comp							"	"
49	(Vys 759) AC+53 2527-1	16 06 49	+53 12 11	6 32 54		0 10 E			471
50	COMP							FeNe Clear	20s
51-59	FLATS x 9					0 1 E	+53°	Twilight Flats	4
60 ~~Flat~~	BIAS(4)			6 49					

Spectr. Temp. −100.°C..... Dome Temp./Hum. −12.9°C 68.3% H Transparency Conditions .. Fine..... 326

Focus ... 7.00.....

Spectr. Temp. −102.0°C..... Dome Temp./Hum. −13.0°C / 64.9% @ FLATS

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSSCCD	1800 l/mm Tilt 47.9°	306	5305Å	11			
4500	2-3"	7.48	m2					12	Std Vel (Marcy)		
								13			
								1/2			
								14			
910	2-3"	10.6	m0					15	{V45} pgm	Encoders Δ α = +00 19 sec Δ δ = +00 42	
								16			
								1/2			
								17			
900	2-3	10.4	M0					18	{V45} pgm		
								19			
								20			
720 but mostly sky		10.19	M0					21	{V45} pgm.	sky getting bright.	
								22			
								23			~11 K
								1/2		All to Perseus & WRM	

337 pg 41 Tues/Wed

Date 1995 Feb 14/15 Observers [Blu.] T.n./Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 30561	BIAS (4)								
62	Comp			1821				Fe Ar Clear	60s
63	HD24760	03 51 08	+39 43 16	18 38 40					55
64	Comp							Fe Ar Clear	60s
65	Comp							"	"
66	HD37017	05 30 25	-04 33 36	18 49 21		0 58 E			1641
67	Comp							Fe Ar Clear	60s
68	~~Comp~~ BIAS (4)			19 20				"	"
69	Comp							Fe Ar Clear	60s
70	ADS 4241 D	05 33 42	-02 39 12	19 24 51		0 29 E			1400
71	Comp							Fe Ar Clear	60s
72	"							"	"
73	HD37017	05 30 25	-04 33 36	19 56 15		0 02 W			1209
74	Comp							Fe Ar Clear	60s
75	BIAS (4)			20 19					

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

Exp. Mtr.	Seen
BG39 Filter	
210K	2"
6095	2"
6300	3"
6200	3"

CCD
Spectr. Temp. −100°C ..... Dome Temp./Hum. −9.0°C 58.2% Transparency Conditions ... Slight haze ... 3.8

Focus ... 7.04 ... 90C gain as usual

CCD
Spectr. Temp. −101.2°C ..... Dome Temp./Hum. −9.8°C 59.9%H

FANS BOTH ON Some cloud DURING SETUP

410 0 50 1024 41 CCDEMT MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
BG39 Filter				CASS CCD	1800l/mm Tilt 42.7°	306u	4475Å	1/2		S FAN TURNED OFF.	
								3			
≈10K	2"	B 2.6	B0.5V					4	Old program eps Per and was	260/1 S/N Encoder Normalization star.	≈6.3K
								5			
								6			
5095	2"-3"	B 6.42	B2Vp					7	He Rich Bln	>200/1 S/N	3.0K
								8			
								1/2			
								9		≈200/1 S/N	
5300	3"	B 6.3	B2V					10	Bln dbl	(centred on 38/39 col (note Hecoordinat) guided with AB off slit)	3.0K
								11			
								12			
6200	3"	B 6.42	B2Vp					13	He Rich Bln		
								14			
								1/2			

329 pg 82

Tues/Wed

Date 1995 Feb 14/15 Observers [Blu.] T.u./Smt

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 30576	Comp							FeAr clear	60s
77	ADS4241C	05 33 44	-02 39 28	20 23 18		00 36W			1820
78	HD37468	05 3344	-02 39 26	20 55 09		0 40 W			133
79	Comp							"	60
80	"							"	"
81	HD37017	05 30 25	-4 33 36	21 04 21		1 10 W			1200
82	COMP							"	60
83	BIAS(4)			21 27					-
84	COMP							"	60
85	HD21364	3 21 45	+9 23 03	21 35 12		3 34 W			300
86	COMP							"	60
87	"							"	"
88	HD37017	05 30 25	-4 33 36	21 50 48		2 00 W			1421
89	Comp							FeAr clear	60sec
90	BIAS(4)			22 19					

cc
Spectr. Temp.
Focus
Spectr. Temp.

Exp. Mtr.	Seein
1170 (23")	
10K	
1060	
11K	4"
6200	4"
60sec	

CCD
~~Spectr.~~ Temp. −100.2 °C Dome Temp./Hum. −9.9°C 59.7%H Transparency Conditions Only slight Haze 330

Focus 7.04

Spectr. Temp. ..... Dome Temp./Hum. ..... (winds SSW 4 kms/hr on Radar)

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm Tilt 4270	306μ	4475Å	15			
1170 (2.3")		V 3.75		* well separated from	AB			16	Closest of companions	ADS 4241 C Bln (SW companion)	
10K		B 3.57	09.5V					17	(ADS 4241 AB)	guided with AB mostly off slit.	5.0K
								18		guided at slit's centre i.e. D is on slit as well.	
								19			
7060		B 6.42	B2Ip					20	Bln Herich		3.9K
								21			
								1/2			
								22			
17K	4"	B 3.66	B8p					23	Bln Sp. Bin.		7.3K
								24			
								25			
6200	4"	B 6.42	B2Ip					26	Bln Herich		
60sec								27			
								1/2			

33 pg#3 Tues/Wed

Date 1995 Feb 14/15 Observers [Bln] Tn/Smt

Emulsion Batches:
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CCD Spectr. Temp.
Focus.....
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
CC30591	Comp							FeAr Clear	60s		
92	HD86360	09 52 51	12 55 19	22 24 04		1 59 E			806	1405D	3"
93	Comp							FeAr Clear	60s		
94	COMP							"	"		
95	HD37017	5 30 25	-4 33 36	22 46 37		3 01 W			1700	4900	4"-6
96	COMP							"	60		
97	HD37017			23 19 40		3 21 W			930	2550	4"-5
98	COMP							"	60		
99	BIAS(4)			≈2346							
CC30600	Comp							FeAr Clear	60		
01	HD112028	12 48 23	+83 57 24	23 50 00		3 25E			847	13500	2-3
02	Comp							FeAr Clear	60		2"
03 11	FLATS x 9					0 18E	20°	TUNG Clear	15sec		

CCD
~~Spectr~~. Temp. ...-100°C..... Dome Temp./Hum. -11.0°C/63.9% Transparency Conditions ...slightly hazy.... 332
full moon.

Focus .....7.04.....

Spectr. Temp. ..... Dome Temp./Hum. -11.5°C / 64.5% H

c lambda c

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
					1800 l/mm	30u	4475A	3c			
14050	3"	B 5.22	B9 IV					4c	SB Bln	210° FROM moon Full moon nearby	7.0K
								5			
								6			
4900	4"-5"	B 6.42	B2 Vp					7	Bln He Rich	S/N ~ 175:1 ADD SECOND ONE TO THIS	1.9K
								8			
2550	4"-5"							7	Bln He Rich	not much time left for 4405 one. S/N ~ 115:1	1.1K
								8			
								1/2			
								9c			
13,500	2"-3"	5.2	A0 shell					10c	A0 shell	Bln	10K
	~~2"-4"~~	~~5.2~~	~~A0 shell~~					11c			
								12			12.7K
									CONTINUED ON NEXT SPACE BUT CHANGE IN WAVELENGTH		

333 Pg #4 Tues/Wed

Date 1995 Feb 14/15 ... Observers [illegible] T.S. ISMT

Emulsion Batches:
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Spectr. Temp.
Focus 7.0
CCD Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Sec
cc 30612	Comp							FeNe Clear	20s	no filter	
13	Brighter star to the SW of BD-02 3000	09 48 10	-03 13 04	00 38 30		0 40 W			1976	1700	3
14	Comp							FeNe Clear	20s		
15	BIAS (4)			1 19							
16	Comp							FeNe Clear	20		
17	BD+02 3000	09 48 10	-3 13 04	01 23 44		1 25 W			1930	1646	2
18	Comp							FeNe Clear	20		
19	Comp							"	"		
20	Vgs 127 BD+01 2447	16 23 49	+1 21 36	020349		1 07 W			600	825	
21	Comp							FeNe Clear	20s		
22	BIAS (4)			2 16					—		
23 → 31	~~Comp~~ FLATS x 9					0m W, -25°	TUNG Ap = 1/2	FeNe Clear	~~25~~ 5s		

Spectr. Temp. ..... Dome Temp./Hum. -11.9°C 66% Transparency Conditions ... Slight haze ... 334.

Focus 7.02

CCD
~~Spectr~~. Temp. -10.8 Dome Temp./Hum. -12.3°C / 67.5% @ 1:50

Light SE wind now

410 050 1024 4 1 CCD FLAT

Exp. Mtr.	Seeing	Prg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CHSS CCD	1800 l/mm T.H 47.9°	306u	5303 ? *	3		* actually < 5300 Å (missing 5400 Å line in FeNe)	
1700	3"	< 10.54	? (M0)					4	Vys pgm	real Vys 560 dimmed out by moon = 10° from full moon ∴ we thought this was it.	
								5			
								1/2			
								6			
1696	2"-3"	10.54 ~~9~~	MO ~~M2~~					7	Sp. Bin ?. Hlw & Vys 560	very dim in moonlight < 10° from full moon.	
								8			
								9			
825 mostly sky		9.65	M2					10	Std vel (Arcy)	cloud & bright moon	
								11			
								1/2			
								14 cirr		Cloud now.	16.1 K → 14.8K
									All to Perseus & WORM.		

335
pg#1 Thurs/Fri

Date 1995 Feb 16/17 Observers [Rm.] S.n.t./T.n

Emulsion Batches:

CSS 386 = 6 secs ahead of W.W.V. Time ✱

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 30632	BIAS (4)								
33	Comp							FeAr Clear	60s
34	HD 214975	22 36 54	+56 1900	19 45 21		7 13 W			2346
35	Comp							FeAr Clear	60
36	BIAS(4)			20 27					
37	Comp							FeAr Clear	60s
38	HD 215159	22 38 15	+53 2300	20 34 33		7 38 W			6500
39	Comp							FeAr Clear	60s
40	Comp							"	"
41	VY Per	02 20 19	+58 28 06	20 59 10		4 35 W			2040
42	Comp							FeAr Clear	60s
43	BIAS (4)			21 37					
44	COMP							"	60
45	HD 25361	3 56 41	+58 23 00	21 42 28 [illegible]		3 35 W			1677
46	Comp							FeAr Clear	60

CCD Spectr. Temp.
Focus 6.94
Spectr. Temp.

Exp. Mtr. | See

2744 4"
6500 3-4
317 3"
3430 3"

CCD
Spectr. Temp. −100°C ..... Dome Temp./Hum. −2.7°C 64.5%H Transparency Conditions ..Clearing.. PARTIALLY 336

Focus ...6.94.....

90C gain −4.2°C 67.0%H 410 0 50 1024 4 1 CCDFLAT

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

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				XX	1800 l/mm G=5930	306u	6466Å	1/2			
	4"			Note Recent Grating Angle Repairs resulted in a "G" value change				3		Telescope East side	2.6K
no filter 2744	4"	8.40	GOIb					4	Rm pgm 2 Lac	7200/1 S/N	3.7K
								5			2.5K
								1/2			
G 560 FILTER NOW IN								6			
6500	3-4"	6.19	K2					7	Rm pgm "Comparison" for previous star	450/1 S/N	9.0K
								8			
								9			
317	2"-3"	10.8 -11.66	F5 -F9					10	Rm pgm	Cloud attend	400 above b/g
								11		X CSS 386 Time correction now	2.4K
								1/2			
								12			
3430	3"	7.30 -8.07	F6 Ib -G2 Ib					13	Rm RX Cam	thin patchy cloud here.	7.0K
								14			

337 Pg #2 Thurs/Fri

Date 1995 Feb 16/17 Observers [Rm] Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30647	COMP							FeAr Clear	60
CC30648	HD 30282 ~~HD 44990~~	4 41 05 ~~6 19 48~~	+36 32 36 ~~+7 08~~	22 21 48		3 15 W			673
49	Comp							FeAr Clear	60
50	BIAS(4)			22 42					
51	COMP							FeAr clear	60
52	HD44990	6 19 48	+7 08	22 48 29		2 11 W			1055
53	COMP							FeAr clear	60
54	COMP							"	"
55	HD84441	9 40 11	24 14 05	23 16 30		0 58 E			95
56	COMP							FeAr clear	60
57	COMP							"	"
58	HD 89449	10 ~~11~~ 14 18 ~~30~~	+19 ~~58~~ 58 42 ~~58~~	23 26 09		1 17 E			379
59	COMP							FeAr clear	60
60	BIAS(4)			23 36					
61	Comp	FOR CORES (next page)						FeAr Clear	60s

Spectr. Temp.
Focus 6-9
Spectr. Temp.

Exp. Mtr.	Sec
0650 Filter	
519	3
3716	4
6200	
5900	~4

Spectr. Temp. ..... Dome Temp./Hum. -4.4°C 66% Transparency Conditions .. Some cloud ..... 338.

Focus ... 6-9.4 .....

Spectr. Temp. ..... Dome Temp./Hum. -5.2°C 67% increasing from SW

TEL E SIDE

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60	OG 560 Filter				CASS CCD	1800 l/mm G= 5930	306u	6400Å	15		≈ 100/1 S/N	
673	519	3"	B 7.9 -8.8	F6 - G1					16	Rm pgm AWPer	CCS 386 or CCD3 crashed ~~during~~ readout. Re-booted 386 after ? Recovered image in same cache. Much cloud.	880 above 6/y
60									17			2.4K
									1/2			
60									18			
1055	3716	4"	B 6.5-8.0	F7Iab - k1Iab					19	Rm T Mon	cloud	Bok
60									20			
11									21			
95	6200		V 2.18	G1II					22	Std. Velocity		12.6K
60			~~2.98~~	~~G1II~~					23			
1									24			
379	5900	~4"	V 4.79	F6V					25	Std. Vel		12.4K
60									26			
									1/2			
63									3			

Pg #3 339

Date 1995 Feb 16/17 Observers [R.M.] T.A./Smt

Emulsion Batches:
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Spectr. Temp. ...
Focus 6.94
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC30662	Ceres	09 09 48	3 10 810	23 44 25		0 30 W			1492	2827	4"
63	Comp							FeAr 4 sec	60s		
64 — 72	FLAT x9					0 33 W	+31°	Tung ¼ Ap	7		
73	COMP							FeNe clear	25	06560 Filter still in	
74	CERES	09 09 48	3 10 810	00 28 44		1 04 W			901	2190	4"
75	COMP							FeNe clear	25		
76	BIAS (4)			0047							
77	Comp							FeNe clear	25s		
78	BD-02 3000	09 48 10	-03 13 04	00 57 22		1 04 W			1800	609	
79	Comp							FeNe clear	25s		
80	BIAS (4)			01 37							
81	Comp							FeNe clear	25s		
82	HD 95735	10 57 54	+36 38 00	01 44 37		0 37 W			1528	1420	2½"
83	Comp							FeNe clear	25s		
~~84~~	~~Comp~~	~~for HD 103095~~									

Spectr. Temp. ..... Dome Temp./Hum. ~5.3°C .67.8% Transparency Conditions ..Part. Cloudy..... 340

Focus ....6.94..../.6.97 for 5303Å Region increasing cloud again

Spectr. Temp. ..... Dome Temp./Hum. ..... c Lambda TEL E SIDE

Comparison Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1492	2827	4"	565	G2	CASS CCD	1800 l/mm G=5930	306μ	6400Å	4	Std vel	use (asteroid)	5.5K
60s	[illegible]								5			
7									6			12.6→
25	OG560 Filter still in				CASS CCD	1800 l/mm G=5140	306μ	5303Å	7			
901	2190	4"							8	Std Vel.	S/N ~ 200:1	1.2K
25									9			
25s									11			
1800	609		10.54	M0					12	Hlγ Vγs	Cloud 30° from Full moon Pgm	300 above b/g
25s									13			
25s									14			
1535	1420	2-3"	748	M2					15	Std vel	(Marcy) cloudy	850
25s												

344 pg #4

Date 1995 Feb 16/17 Observers (Hall / Vyas) Tu / Sant

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CG407 74/77	HD103095							4x	.067
CG407 78/79	4					=00	+38°	2x	.133
CC3084	Comp							FeNe Clear	25
85	HD103095	11 47 13	+38 26 10	02 25 37		0021 W			108
86	Comp							FeNe Clear	25
87	BIAS (4)								—
88	Comp							FeNe Clear	25
89	HD123782	14 04 33	+49 55 50	02 50 53		1 40 E			388
90	Comp							FeNe Clear	25
691 – 699	FLAT x 9					1 30E	+50°	TUNG Ap=1/2	6s

CCD
Spectr. Temp. ...
Focus 6.9
Spectr. Temp. ...

Exp. Mtr.	Seeing
OG 560	3"
5200	4"
2100	3-4"

CCD
Spectr. Temp. -100.3°C Dome Temp./Hum. -5.6°C 69.4%H Transparency Conditions Cloudy & clear early then cloudy again.

Focus 6.97

Spectr. Temp. Dome Temp./Hum. Central ♂ NE fun on All night.

Exp. Mtr.	Seeing	Pkg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~No FH~~ OG 560 in	3"	6A5	G8Vp	CCD GUIDE CAMERA	ABOVE	306u	Slit		Seeing Test	(Tel still East side)	
									" "	no wind, Dome SE	
				CASS CCD	1800h G-5140 TiH 478°	306u	5303Å	20			
5200	4"	6.45	G8Vp					21	Std vel (IAU)		9K
								1/2			
								24			
2100	3-4"	5.25	IIIaJ					25	IAU std vel		2.5K
								26			
								27			16.1K ~~7~~

343 pg#2 Fri / Sat

Date 1995 Feb 17/18 Observers [Blank] / [illegible] / t. student, Andy

Emulsion Batches:
NOTE: 2 SETS OF FLATS CORRESPOND TO 2 SETTINGS

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 30700	BIAS(4)			18 37					
701	Comp							FeAr Clear	60sec
702	HD37017	053025	-043336	18 46 55		0 45E			1834
703	Comp							FeAr Clear	60sec
704	BIAS(4)								
705	Comp							FeAr Clear	60s
706	HD21364	032145	-092303	19 28 30		W			249
707	Comp							FeAr Clear	60s
708	Comp							"	"
709	HD37017	05 3025	-04 33 36	19 42 01		00 02E			1100
710	Comp							FeAr Clear	60s
711	Comp							"	"
712	ADS 4241 C	053344	-023928	20:11:44		00:31 W			1530
* 713	~~Comp~~			20:01:45				FeAr Clear	60s
714	BIAS(4)			21:03:17					

CCD Spectr. Temp. ...
Focus ... 6.94
Spectr. Temp. ...

Exp. Mtr.	Seeing
3639 filter	
1000	3.6"
30000	4"
6200	2.5"
715	2"

~~Spectr.~~ CCD Temp. ~100°C Dome Temp./Hum. ~00.4°C 53.9%H Transparency Conditions Part cloudy To mostly cloudy.

Focus 6.94

90C gain

Spectr. Temp. Dome Temp./Hum.

Clumbda 410 0 50 1024 4 1 CCDFMT

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	BG39 Filter				CASS CCD	1800 l/mm G= 4575	30µ	4475Å	1/2 ci			MAX ADU
10sec					* Equivalent Region to OLD	G= 4558			5 ci		Telescope East side	
1834	6000	3"-6"	6.42	B2Vp					6 ci	He Rich Bln	(Lots of cloud) Δα –00:00:15 Δδ –00:01:48	3.3K
10sec									7 ci		≥ 200/1 S/N	1.8K
									1/2			
60s									8			
249	70000	4"	3.66	B8p					9	Sp Bin Bln		
60s									10			
"									11			
1100	6200	2"-3"	6.42	B2Vp					12	He Rich Bln		4.4K
60s									13			
"									14		The faint close companion	
1530	715	2"	~7		~60:1	SNR			15	Bln pgm	guided with AB just off end of slit.	
60s					* Grating single: Comparison	Not useable			16		Sp. controller needed to be reset before Comp c16 taken	
									1/2		[illegible] crashed. as well	

345
Pg#2

Fri/Sat

Emulsion Batches:

Date 1995 Feb 17/18 Observers [Bln] T.A. III + (Andy DABYDEEN 4th year student)

CCD Spectr. Temp. ...
Focus 6.94
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
cc 30 715	Comp									BG39 Filter	
16	HD37017	05 30 25	-4 33 36	21 09 38		01:34W			15 19	6309	2"
17	Comp			21:37 03				FeAr Clear	60s		
18	Comp							"	"		
19	AOS4241D	05 33 44	-02 39 28	21:47:2		02 03 W			1267	4750	2"
20	HD37468	05 33 44	-02 39 28	22 09 04		02 06 W			140	7100	
21	Comp							FeAr Clear	60s		
22	BIAS(4)			22 13							
23	Comp							FeAr Clear	60s		
24	HD37017	05 30 25	-4 33 36	22 19 20		02 45W			1661	6000	3"
25	Comp							FeAr Clear	60s		
26	Comp							"	"		
27	AOS4241C	05 33 44	-02 39 28	22 53 02		03 18 W					3.5"
28	Comp							FeAr Clear	60s		
29	~~Comp~~ BIAS(4)			23 24				~~4~~ "	~~4~~ "		
30	Comp							FeAr Clear	60s		

Spectr. Temp. CCD -101.2°C ..... Dome Temp./Hum. -13°C 68% H ..... Transparency Conditions ... OK ... 346

Focus ... 6.94 ...

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

* Note Grating Angle slightly changed starting Exp # cc30713. It's an 8 pixel shift to Red

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	1800 l/mm * G-4575	306u	* 4475A	17			
6309	2"	G42	B2V p					18	He-Rich Bln		
								19			
4750	2"	B 6-3	B2V					— 20	Bln dbl	Guided = AB just off edge of slit	
7100		B 3.57	09.5V					21	O OR> AB		4.6K
								22			
								1/2			
								23c			
6000	3"	6.42	B2V p					24c	He Rich Bln		
								25			
								26			
	3.5"	≈7						27	Bln pgm	NOT too well separated Bln Another Try with AB off end of slit	
								28			
								~~29~~ 1/2c			
								29			

367
Page #3 Fri/Sat

Emulsion Batches:

Date 1995 Feb 17/18 Observers [Bln] / III / Tn + Andy Daby cleen

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Cc 30 731	HD 37017	5:30:25	−4:33 36	23:30:07		4:09 W			2443
32	Comp			0:12:00				FeAr Clear	60s
33	Comp			0:17:58				"	"
34	HD 86360	09 52 54	+12 55	0:20:42		0:07 W			658
35	Comp			0:32:23				FeAr Clear	60s
36	Bias(4)			0:33					
37	Comp			0 3845				FeAr Clear	60s
38	HD37017	5 3025	−4 33 36	0 40 35		4:58 W			1220
39	Comp			1:02:46				FeAr Clear	60s
40-48	Flat ×9	At Second Setting		1:11		~2:10W, −1°		Tung AP=1/2	17s
49	Comp							FeAr Clear	60s
50	HD112028	12 4823	+83 57 24	01 2801		1 28E			1082
51	Comp			01 47 29				FeAr Clear	60
52	Bias (4)			01 48					

CCD
~~Spectr.~~ Temp. ~10.2.0°C... Dome Temp./Hum. ~1.9°...73.9% Transparency Conditions ..hazy.-.cloudy. 3.48

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

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5237	4"	6.42	B2 Vp	Cass CCD	1800 l/mm G=4575	30μm	4475Å	5ci	He Rich Bln	~180:1 SNR	
								6ci			
								7ci			
8900	4-5"	5.22	B9 IV					8ci	Bln SB		5.2k
								9ci			
								1ci			
								10			
443	8"	6.42	B2 Vp					11	He Rich Bln (thin cloud too)		
								12			
				~~MTFC~~				13			13.3 k
								15		Tel west side now	
6100	(8-15")	5.2	A0 shell					17	Bln Shell Star		
								19			
								1			
								22			

349 pg #4

Date 1995 Feb 17/18 Observers [Bln]. III./.Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
			19515						
CG40780	HD103095	11 52 43	+374504						
84									
-85	"	"	"			00 12E			
CC30753	Comp							FeAr Clear	60s
54	HD103095	11 47 13	+382610	02 09 23		00 26W			2142
55	Comp							FeAr Clear	60s
56	BTHS(4)								
CC30757									
-765	FLATS x 9	With Same	d setting as at start of night, ie before slight accidental change shift of 8 pixels.						
		At First Session							
						00 30W +38°			17se
66	Comp			(For purposes of verification against earlier position)				FeAr Clear	60s

Spectr. Temp. .
Focus 6.9
CCD Spectr. Temp. .

Exp. Mtr.	Seem
1300	2'

This we

Spectr. Temp. ..... Dome Temp./Hum. −1.6°C 67.8%H Transparency Conditions .... PART cloudy 380

Focus .... 6.94 completely cloudy again.

CCD Spectr. Temp. −100.5°C .... Dome Temp./Hum. −1.6°C 66.8%H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		✓ 6.45	G8V p	EEV CCD GUIDE CAMERA	Hare	396μ	slit		Seeing Test	Dome SW Medium SW wind	
				CASS CCD	1800 l/m G=4575		4475Å				
1300	2"-4"	✓ 6.45	G8V p					23c;	Stilbel	= 60/1 S/N	
								25			
								1/2c;			
This was Recovered to within 1 pixel of original / comp line positions											14K
								4			

38
pg #1 SAT/Sun

Emulsion Batches: .....

Date 1995. Feb 18/19..... Observers [Bln] Tests. T.n / [H.lw] [Vys] Shelton checking for observing .....

Spectr. Temp. ...
Focus ... 6.90
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC 30767	BIAS(4)			18 55							
68	Comp			1901				FeHr Clear	90s		
69	Comp							FeNe Clear	60s		
CC 307 70/72	TL841 x 3			191932		01 13W	−21 08		1000	874	One
CC 307 73/75	TL830 x 3			202333					1000		
CC 30776	BIAS(4)			2126							
77/79	TL 850 x 3			212628					900		
80	Comp							FeNe Clear	60s		
81 – 83	FLATS x 3							TUNG Ap 1/4	12s		
	OBSERVING FOR [H lw] now										
CC 30784	BIAS(4)			2232							
85	Comp							FeNe Clear	25s		
86	HD 62509	07 39 12	+28 16 04	224038					31s	9K	1½
87	Comp							FeNe Clear	25		
88	Comp	for V/S 560	next page					"	"		

Spectr. Temp. ~~-100°C~~ ..... Dome Temp./Hum. +2.0°C ... 64.5% Transparency Conditions ... Mostly Cloudy ... 352

Focus ... 6.90 ... 90 Cgain

Spectr. Temp. ..... Dome Temp./Hum. ..... C LAMBDA

MAX ADU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5323	306u	5568Å	1/2c			
90s					TILT = 49.7°		I·5 E Row 512	~~4c~~		FOR FeAr map.	
60s								3c			
1000	~~8,740~~	(One	Other then weak line noticed @ Row ± 3/6 ≃ 40 ADU above background.	strong Blue end				5c	Pair of Fluorescent lamps under	(8K max for 600sec)	11.8K
1000								6c	end of Telescope Tube		10 K
								1/2			
900								7c			11.4K
60s								8c			
125								9c			12.8K
				CASS CCD	1800 l/mm G=5140	306u	5303Å	1/2c			
25s								3c		And was encoder norm STAR	10K
31s	9K	1-2"	✓ 1.14	KOIII 5				4c	Bright Std vel	guided quickly	14K
25								5			
1								6			

353
pg#2 Sat/Sun

Date 1995 Feb 18/19 Observers [Hlw] Tm

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

Spectr. Temp. ...
Focus ... 6.90
ccd Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
cc30789	vys 560 BD-02 3000	09 48 10	-03 13 04	22 51 14		00 46 E			2213	no filter 7.60	1-3"
90	Comp							FeNe Clear	25s		
91	BIAS(4)			23 30							
92	Comp							FeNe Clear	25s		
93	BD+01 2447	10 23 49	+01 21 36	23 35 26		00 51 E			1508	9.30	2"
94	Comp							FeNe Clear	25s		
95	Comp							"	25s		
96	HD95735	10 57 54	+36 38 00	00 06 21		00 59 E			1237	3.20	3"
97	Comp							FeNe Clear	25s		
98	BIAS(4)										
99	Comp							FeNe Clear	25s		
cc30800	BD-02 3000	09 48 10	-03 13 04	00 35 04		00 47 W			1667	6.00	2"
01	Comp								25s		
02-810	FLATS x 9					00 55 W	-3 40	TIMING Ap 1/2	5 sec		
811	BIAS(4)										

Spectr. Temp. ..... Dome Temp./Hum. +0.5°C ... 79.5%H Transparency Conditions ... Hazy 354

Focus ... 6.90 ..... Telfocus 2756 (Cass) Then cloud again

CCD Spectr. Temp. −100.2°C ... Dome Temp./Hum. 0.0°C ... 76.8%H (AIRPORT AIR Pres 102.21 kpscalse Falling) @ 23EST

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
2713 no filter 7 60	1"-3"	10.54	m0	CASS CCD	1800 l/mm G-5140	306	5303A	7ci	Vys 560	> 50/1 S/N some doubt at end	
25s								8ci			
								11/2			
25s								10			
1508 930	2"-4"	9.65	m2					11	std vel	≈ 70/1 S/N Marcy some cloud	
25s								12			
25s								13			
1237 3 320	3"	7.48	m2					14	std vel	Marcy cloud	2.2K
25s								15			
								1/2			
25s								16			
1657 600	2"	10.54	m0					17	Vys 560 again,	50/1 S/N some cloud	
25s								18		max comp	10K
5ss								19			14K
								1/2			
									All to Persons & Worden		

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

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

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