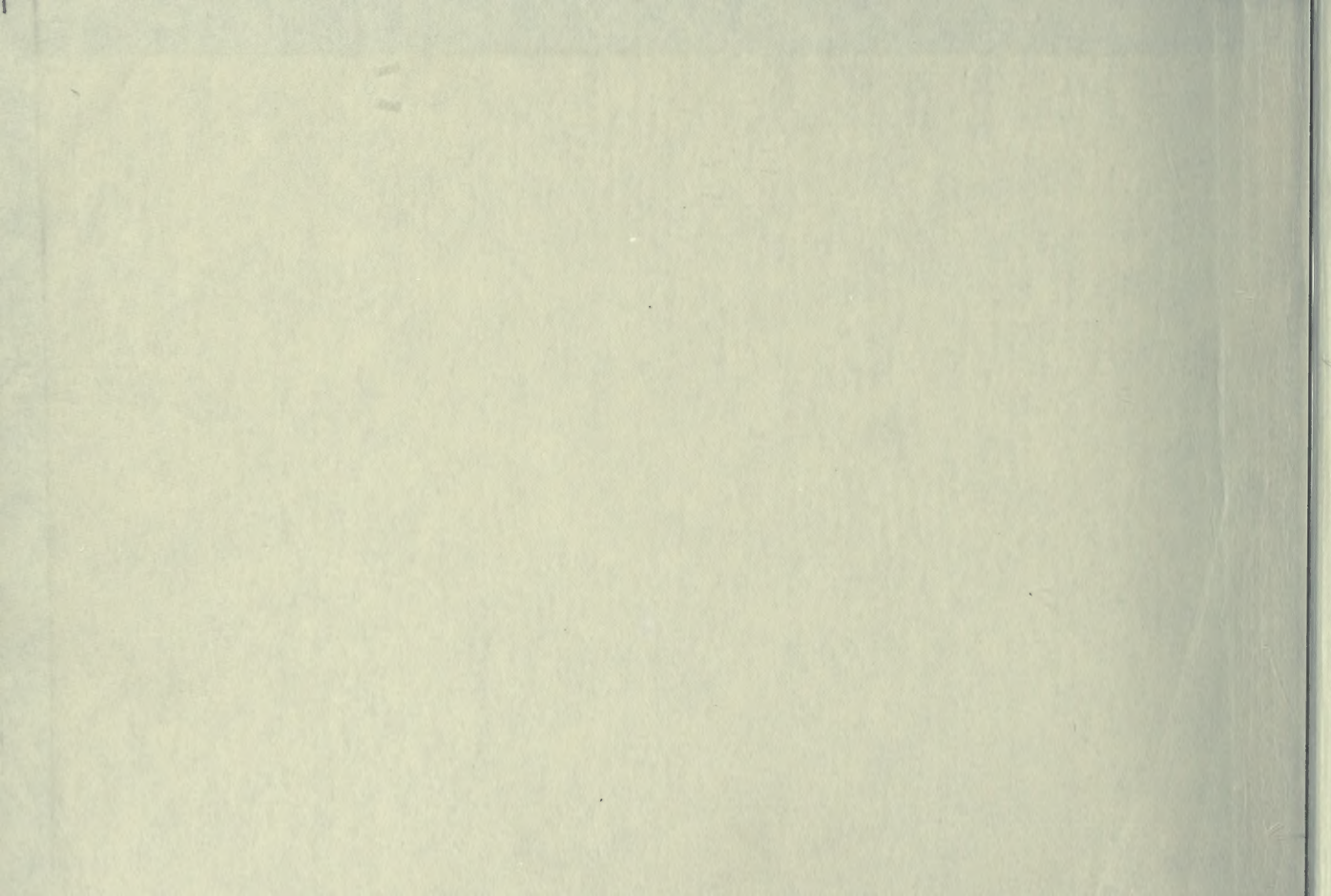


77



Cass Flexure Tests : Jun 30/ Jul 1 /1994



Case Files 1914-1915

1914

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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 77	
										PLATE NOS CC22814-CE07813	
										Comp	
				3:43	S/N					HD3251	
				3:24	S/N					HD3251	
										Comp	
				4:13	S/N					HD3251	
				4:54	S/N					HD3251	
										Comp	
										Comp (H)	
				4:43	S/N					HD3251	
				4:28	S/N					HD3251	

5 page #1

Thu/Fri

Emulsion Batches:

Date 1994 June 2/3 Observers [BIn] Wde/Hlw

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC22814	stellar/comp hartman			21:00		01239	403605	FeAr Clear	60 60
816	Bias (4)								
817	comp							FeAr Clear	60
818	HD 93521	104242	380600	21:20:41		03:13			82
819	HD 93521	"	"	<del>21:50:23</del> 21:34:35					787
820	Comp							FeAr Clear	60
821	HD 93521	"	"	21:50:23		3:43			792
822	HD 93521	"	"	22:03:57		3:57			794
823	Comp							FeAr Clear	60
824	HD 93521	"	"	22:19:25		4:13			800
825	HD 93521	"	"	22:33:39		4:27			800
826	Comp							FeAr Clear	60
827	Bias (4)								
828	HD 93521	"	"	22 50 07		4:43			800
829	HD 93521	"	"	23 03 53		4:58			887



Spectr. Temp.  $-100^{\circ}\text{C}$  Dome Temp./Hum.  $+12.2^{\circ}\text{C}/66.1\%$  Transparency Conditions Clear.....(lowely).....<sup>6</sup>  
 Focus  $6.83$  Fans turned on @ 2120  
 Spectr. Temp.  $6.91$  Dome Temp./Hum. South one turned off @ 2220

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	<del>Slit</del> Emission	P.H.	Program	Remarks	Quality
12.2°	for focus	test		CASS CCD	1800 2/mm G=6065	300 mm	G604A	3/4	focus test	T = +12.2, $\theta_c = 6.83$	✓
								1	bias 4. bat	Chip warmed up during day. Had to be cooled at beginning.	
								5			
1400	3-4"	7.04	095V					6	BLNO*		
1400	"	"	"					7	"	Humidity 78% on catwalk	
								8	"		
1400	"	"	"					9	BLNO*		
1400	"	"	"					10	"		
								11			
1335	"	"	"					12	BLN 0*		
1336	"	"	"					13	"		
								14			
								1	bias 4. bat		
1224	"	"	"					15	Blu 0* <sub>pgm</sub>		
1270								16			





Spectr. Temp. .... Dome Temp./Hum.  $10.8^{\circ}\text{C}/67-79\%$  Transparency Conditions ..... Clear 8  
 Focus ..... 6.83  
 Spectr. Temp. .... Dome Temp./Hum. .... North Fan ON

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 $\mu\text{m}/\text{mm}$ G=6065	300 $\mu$	6604A	17		81% Humidity on catwalk	
	4-5"	6.66	G8V						Seeing Test	Dome WSW @ 2330	
	"	"	"						Seeing Test	very light W wind.	
								18		-Telescope now flipped to E side of piers.	
1095	4-5"	7.04	095V		S/N = 160			19	Bln 0* pgm		
1067		7.04	095V					20	Bln 0* pgm	80% Humidity on Catwalk @ 0000	
								21			
								1			
856		7.04	095V		S/N ~ 145			22	Bln 0* pgm		
760		7.04	095V		S/N ~ 140			23	Bln 0* pgm		
								24			
619		7.04	095V		S/N ~ 135			25	Bln 0* pgm		
459		7.04	095V					26	Bln 0* pgm		
								27			







Spectr. Temp. .... Dome Temp./Hum.  $+10.2^{\circ}\text{C}/70.3\%$  Transparency Conditions ... Clear ..... 10  
 Focus ... 6.83 / 6.85  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	√ Prg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800l/mm G=6065	300μ	6604A	28			
5500		5.28	B6 IV					29	Telluric Std.	Air Mass @ End = 1.0216	
								30			
								5			
5678		4.02	B9 IV-Vn					6	Telluric Std.	Air Mass @ End = 2.733	
								7			
								8		Max ADU ~ 12K	
						pinhole slit		11	Scattered light test	one unsaturated one saturated.	
								1			
				Cass CCD	1800l/mm G=5910	300μ	6400A	3/4	Focus Test	T = $+10.2^{\circ}\text{C}/\text{foc} = 6.85$	✓
								1			
								5			
1000		7.48	G0 Ib					6	Rm Pgm		
								7			
								8			



Spectr. Temp. .... Dome Temp./Hum.  $+10.2^{\circ}\text{C}/70.1\%$  Transparency Conditions *Clear* .....

Focus *6.85* .....

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

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
300	4.5	8.40	G0Ib	Cass CCD	1800l/mm G=5910	300 $\mu$	6400Å	9	Rm pgm		
								10			
								1			
								17			
1510		5.75	G0Ib					18	Rm pgm		
								21			
								21			
4000		2.91	G0Ib					22	Std. Vel	Twilight.	
								17			
								1			
								31			
								32			
									Scattered light test.		

All to Worm and Iersens



13pg# 1

Emulsion Batches:

Date 1994 June 3/4 Observers [BLN] Wde./Hlw

css 386 clock 6 seconds ahead of WWV 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	Exp.
cc22890	Comp/stellar Hertmann	124450	452812			0:30		Fair Clear	60/60
92	Bias(4)								
93	Comp							Fair Clear	60
94	HD93521	104242	380600	205839		0253	37°		600
95	HD93521	"	"	210902		0258	"		600
96	HD93521	"	"	211914		0312	"		600
97	Comp							Fair Clear	60
98	HD93521	104242	380600	213227		0326	37°		600
99	HD93521	"	"	214244		0336	"		599
cc22900	HD93521	"	"	215301		0347	"		600
01	Comp							Fair Clear	60
<del>02</del>	<del>HD93521</del>	<del>104242</del>	<del>380600</del>	<del>220650</del>					
02	Bias(4)								
03	HD93521	104242	380600	220650		0401			600
04	HD93521	"	"	221707		0411			600

Spectr. Temp. .... Dome Temp./Hum. .... 15.8° ..... Transparency Conditions . part./cloudy ..... 14  
 Focus ..... 6.78 .....  
 Spectr. Temp. .... Dome Temp./Hum. .... 47.0% ..... Dome Fans off.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	1-2"			CASS CCD	1800l/mm G=6065	300um	6604A	3/4	focus test.		
								1			
								5			
1730		7.04	09.5V					6	BLNO*		
missed it		"	"					7	"		
1580		"	"					8	"		
<del>1580</del>								9			
1473		7.04	09.5V					10	BLNO*		
1288		"	"					11	"	S/N = 164	
1271		"	"					12	"		
								13			
		7.04	09.5V					<del>14</del>	BLNO*		
								1			
1245		7.04	09.5V					14	BLNO*		
1936		"	"					15	"	Auto-guiding with SBIG	
										SNR ~ 105	

15pg #2

Emulsion Batches:

Date 1994 Jun 3/4 Observers [Blw] Wde/Hlw

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc22905	HD93521	104242	380600	22 27 29		4:26 W			900
906	Comp							FeAr Clear	60
907	HD93521	10 42 42	38 06 00	22 45 43		4:44 W			900
908	HD93521	10 42 42	38 06 00	23 01 00		5:00 W			903
909	Comp							FeAr Clear	60
910	Bias (4)								
911	HD93521	10 42 42	38 06 00	23 19 53		5:20			985
912	HD93521	10 42 42	38 06 00	23 36 43		5:36			900
913	HD93521	"	"	23 52 09		5:51			900
914	Comp							FeAr Clear	FeAr Clear
915	<del>HD93521</del> Bias (4)								
916	HD93521	104242	380600	0 11 46		06:11			900
917	HD93521	"	"	02702		06 25			900
918	Comp							FeAr Clear	60



Spectr. Temp. .... Dome Temp./Hum. 14:1°C / 48.5% Transparency Conditions *clear*, with some <sup>16</sup> thin haze.  
 Focus ..... 6.78  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
815		7.04	09.5V	CASS LCD	1800L G=6065	300nm	6609A	16	BLNO*	Auto-guiding with SBIG	
								27			
1516		7.04	09.5V					17	BLNO* pgm	Not auto-guiding any more	
1420		"	"					18	"		
								19			
								1			
1518		7.04	09.5V					20	BLNO* pgm		
1340		7.04	09.5V					21	"		
1440		"	"					22	"		
								23			
								1			
1025		7.04	09.5V					24	BLNO*		
516		"	"					25	"		
								25			

→ SN.R ~ 125

SNR ~ 190

SNR ~ 180

SNR ~ 190

S/N ~ 180

S/N ~ 175

S/N ~ 175

Pg #3

Emulsion Batches:

Date 1994 Jun 3/4 Observers [B] Wde/Hlw

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC22919	Comp							FeAr Clear	60
920	HD124224	14 07 12	+2 53 00	00 59 19		3:24W			300
921	HD124224	14 07 12	+2 53 00	01 04 33		3:30 W			300
922	HD124224	14 07 12	+2 53 00	01 09 54		3:35 W			306
923	Comp							FeAr Clear	60
924	Bias (+)								
925	HD124224	14 07 12	+2 53 00	01 18 19		3:43 W			300
926	HD124224	14 07 12	+2 53 00	01 23 40		3:49 W			300
927	HD124224	14 07 12	+02 53 00	01 29 01		3:54 W			300
928	Comp							FeAr Clear	60
929	HD124224	14 07 12	02 53 00	01 36 27		4:02 W			300
930	HD124224	14 07 12	02 53 00	01 41 48		4:07 W			300
931	HD124224	14 07 12	02 53 00	01 47 08		4:13 W			300
932	Comp							FeAr Clear	60
933	HD124224	14 07 12	02 53 00	01 55 23		4:12 W			300

Spectr. Temp. .... Dome Temp./Hum. 13.2°C/49.2 Transparency Conditions Clear

Focus 6.78

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

Exp. Mtr.	Seeing	Pg- Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 $\lambda$ /mm G=6065	300 $\mu$	6604A	26			
1304	5-6"	5.0	ApS:		SNR ~ 215			27	Bln He* pgm		
1488	"	"	"		SNR ~ 230			28	"		
1274	"	"	"		SNR ~ 210			29	"		
								30			
								1			
1198		5.0	ApS:		SNR ~ 200			5	Bln He* pgm		
965		"	"		SNR ~ 180			6	"		
1120		"	"		SNR ~ 200			7	Bln He* pgm		
								8			
1121		5.0	ApS:					9	Bln He* pgm		
969		"	"					10	"		
1035		"	"					11	"		
								12			
1055		5.0	ApS:					13	Bln He* pgm		



ppg # 4

Emulsion Batches:

Date 1994 Jun 3/4 Observers [Bl.] Wde/Hlw

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc22934	HD124224	14 07 12	02 53 00	02 00 41		4:26 W			324
935	HD124224	14 07 12	02 53 00	02 06 31		4:32 W			300
936	Comp							FeAr Clear	60
937	HD124224	14 07 12	02 53 00	02 14 29		4:40 W			300
938	HD124224	14 07 12	02 53 00	02 19 42		4:45 W			306
939	HD124224	14 07 12	02 53 00	02 25 03		4:56 W			600
940	Comp							FeAr Clear	60
941	Bias (4)							"	"
942	Comp							"	"
943	HD178475	19 03 44	35 56 19	02 47 05		0:21 W			510
944	Comp							"	60
945	Comp							FeAr clear	60
946	HD213998	22 30 13	-00 37 59	03 14 15		<del>02:42</del> 2:42 E			317
947	comp							"	60
948	Bias (4)								
949-58	10 x Flats							Tung 5/4 Ap	8 sec

Spectr. Temp. ..... Dome Temp./Hum. 12.8°C/49.2 Transparency Conditions ..... Clear

Focus ..... 6.78

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
862		5.0	Ap 5i	Cass CCD	1800 $\lambda$ /mm G=6065	300 $\mu$ m	6604A	14	Bln He* Str		
850		"	"		SNR ~ 188			15	"		
								16			
760		5.0	Ap 5i					17	Bln He* Str		
702		"	"					18	"		
1127		"	"					19	"		
								20			
								21			
3668		5.28	B6 IV					22	Telluric Std.	Low Air Mass	
								23			
								24			
5000		4.0	B9 IV					25	Telluric Std.	High Air Mass (1.9)	
								26			
								1			
								3			









Spectr. Temp. .... Dome Temp./Hum. +17.0/41.7 Transparency Conditions CLEAR 24  
 Focus 6.75 ..... No Fans tonight  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	180 $\mu$ /mm G=6665	300 $\mu$	6604R	3/4	Focus Test.	~140 people on 2 tours ended at 2220	
								1	bias t. bar		
								5			
1522	7.04	09.5V						6	Bln 0* pgm		
945	"	"						7	Bln 0* pgm		
								8			
855	7.04	09.5V						9	Bln 0* pgm		
716	"	"						10	Bln 0* pgm		
568	"	"						11	Bln 0* pgm		
								12			
								1			
703	7.04	09.5V						13	Bln 0* pgm		
489	"	"						14	Bln 0* pgm		
								15			
								16			



589 #2

Emulsion Batches:

Date 1994 Jun 4/5 Observers [Bl] Mnz/HW

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC22979	HD 213998	22 30 13	-00 37 59	01 15 33		4:37 E			301
80	"	"	"	01 22 50		4:30 E			303
81	Comp							Felr Clear	60
82	Bias (4)								
83	Comp							"	"
84	HD 124224	14 07 12	02 53 00	01 46 09		4:16 W			338
85	"	"	"	01 52 20		4:20			300
86	"	"	"	01 57 43		4:27			300
87	Comp							"	60
88	HD 124224	14 07 12	02 53 00	02 06 11		4:35			300
89	HD 124224	14 07 12	02 53 00	02 12 14		4:41			303
90	"	"	"	02 18 37		4:48			300
91	Comp							"	60
92	HD 124224	14 07 12	02 53 00	02 28 06		4:57 W			300
93	HD 124224	"	"	02 33 33		5:03 W			300

Spectr. Temp. .... Dome Temp./Hum. 15.4°C/47.7% Transparency Conditions clear ..... 26  
 Focus 6.75 .....  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2050		4.02	B9 IV-V	Cass CCD	1800 $\mu$ /mm G=1065	300	6604A	17	Telluric Std	X <sub>end</sub> = 3.97	
2300		"	"					17	"	High Air Mass	
								19			
								1			
								20			
1958		5.0	Aps					21	Bln He* Str		
1640		"	"					22	"		
1525		"	"					23	"		
								24			
1328		5.0	Aps					25	Bln He* Str		
1200		5.0	Aps					26	Bln He* Str		
1003		"	"					27	"		
								28			
750		5.0	Aps					5	Bln He* Str		
690		"	"					6	"		





Spectr. Temp. ....

Dome Temp./Hum. ....

14.9°C/47.7% Transparency Conditions ... Clear .....

28

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

Spectr. Temp. ....

Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
543		5.0	ApS.	Cass CCD	1800 $\mu$ /mm G=6065	300 $\mu$	6604A	7	Bk He* pgn		
								8			
								1			
								9			
3355		5.77	B8 Vn	Cass CCD	1800 $\mu$ /mm G=6065	300 $\mu$	6604A	10	Tellurium STD search	Low Air Mass X = 1.005	
								11			
								12			
2969		4.02	B9 Vn	Cass CCD				13	Tellurium STD Search	Lower Air mass than previous (#79) X = 1.077	
								14			
								1			
								15		Telescope @ zenith.	
All to WORM and Perseus											

Apg#1

Emulsion Batches:

Date 1994 Jun 8/9 Observers Kah, Tn

CSS Clock Reset, Right on WWV Time at Start

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc 2304/15	Camp/stellar Hartman							Fear Clear	69/60
016	Bias X 4							F	
017	Comp							Fear Clear	90
018	(HD120315) HR 5191	49 2026	13 4720	24 10 38		0 1618W			41
19	"	"	"	21 1721					48
20	Camp							Fear Clear	90
21	Camp							"	90
22	HD164284	17 55 33	04 2142	21 <del>1710</del> 5447		03 09E			125 <del>77</del>
23	Camp							Fear Clear	90
24	Comp							"	90
25	HD 77724	19 00 48.8	H3 42 53	22 0603		04 03E			128
26	Comp							Fear Clear	90
27	Bias x 4	using BSum4.BAT							
CG40227 -230	HD135891	15 1230	137 26	22 25				4x	67ms
231	"	"	"					2x	133ms
232	"	"	"						

CCD  
 Spectr. Temp. .... -100°C ..... Dome Temp./Hum. 12, 3 / 56.8 Transparency Conditions ..... Clear ..... 30  
 Focus ..... 6.77 .....  
 Spectr. Temp. .. Gain ..... 90.5 Gain Dome Temp./Hum. .... +10.5°C 57.28H .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/Min G-6065	30µm	6604A	3/4	Focus test	stellar Row #330 W slightly Red	
								1			
								5			
5500		167	B3Vn				Kohst	6c	Kohst	MAX 2/10KADQ S/N ≈ 400/1	
5600		"	"				un	6c	"		
								7			
								7			
*1039 <del>2100</del>	5"	4.8	B3e				Kohp9m	8	Kohp9m	SATURATES ADL em at 2000 expected counts MAX 9 KADQ this time	
								7			
								7.			
5300	6"	289	A0Vn					10	Telluric	MAX 8 KADQ Std Air mss 2000	
								7			
								1c			
		7.08	F8V						Seeing test	Dome West. medium gusty N N W wind	
									" "		

Only NE Fan on as  
 per standard procedure.



31 p 9 #2

Emulsion Batches:

Date 1994 Jun 8/9 Observers Kehl, Jr

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc23028	Comp							Fear clear	90
29	HD 193237	20 14 06	37 47 30	22 47 30					439
30	"			22 49 08					46
31	"			22 54 38					35
32	Comp							Fear clear	90
33	Comp							"	"
* 34	HD 200775	21 02 24	67 46 06	23 07 40		04 50 E			750
35	"	"	"	23 26 01		04 30 E			629
36	" <small>edited JUNE 13</small>	"	"	23 38 12		04 21 E			577
37	Comp							Fear clear	90
38	Bias x4								
39	Comp							Fear clear	90
40	HD 201733	21 06 00	45 05 33	00 00 39		04 09 E			396
41	"	"	"	00 08 23		03 49 E			1093
42	"	"	"	00 27 12		03 30 E			1231

Spectr. Temp. .... Dome Temp./Hum. +10.6... 56.8 Transparency Conditions ..... Clear ..... 32  
 Focus ... 6.7.7 .....  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Hg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							6604A	7			
3336		4.8	Bsh					13	Koh pgm		
380		"	"					13	"		
34A		"	"					13	"		
								7			
								7			
790	5"	7.2	B					14	HERBIG Be pgm	some Hd saturation (few pixels)	
613	"	"	"					15	"		
610	"	"	"					16	"	13.7K ADIA max	
								7			
								17			
								<del>17</del>			
960		6.6	Bsh					17	Koh pgm		
2540		"	"					18	"		
2996		"	"					19	"		

\* Header wrong  
 This one looks like a flat  
 In June 13

319 #3

Date 1994 Jun. 8/9... Observers ... Kuhn, To.....

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC23043	Comp (For previous star)							Fear clear	90
44	<del>Comp</del>							"	"
44	HD 164447	17 56 13	19 30 36	01 06 39		00 06 W			451
45	Comp							Fear clear	90
46	BIAS x 4	Sum of 4 Bias.							
47	Comp							Fear clear	90 <sub>SE</sub>
48	HD 187811	19 46 46	22 21 18	01 34 45		01 21 E			179
49	"	"	"	01 39 50		01 12 E			366
50	Comp							Fear clear	90
51	Comp							"	90
52	HD 217050	22 52 41	48 09 00	02 02 34		04 03 E			257
53	"	"	"	02 05 52					138
54	Comp							Fear clear	90 <sub>S</sub>
55	Comp							"	90 <sub>S</sub>
56	HD 217675	22 57 18	41 47 00	02 17 28		03 48 E			82
57	"	"	"	02 20 47					



CCD Spectr. Temp.  $-160^{\circ}\text{C}$  ..... Dome Temp./Hum.  $59, 1$  ..... Transparency Conditions  $\text{Clear}$  ..... 34

Focus  $6.77$  .....

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

C LAMONDA

Exp. Mtr.	Seeing	PR Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/n/mm G=6065	300um FULL	6604P	7 <del>207</del>			
1215	4.6"	6.4	B9c					20c 7 1c 7	Kohppgm	1.097 air mass MAX ADU 4000.	
1980	4"	4.9	B3c					21	Kohppgm	MAX = 2K ADU	
4600								22	" "	MAX = 7K ADU	
								7			
								7			
340	3.4"	5.4	B2c					23	Kohppgm	MAX 10K ADU 1.33 air mass	
1160								24	"		
								7			
								7c			
3300	3.62		B6c					25	Kohppgm		
	"		"					25	"		



spectr. Temp. .... Dome Temp./Hum.  $29.2 \dots 62.2$  Transparency Conditions ..... Clear - 5/14/92 <sup>36</sup>  
 Focus ..... 6.77  
 Spectr. Temp. .... Dome Temp./Hum.  $+8.8^{\circ}C \dots 66\% \text{ H}$   
clambda

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800nm G=600	300 Full	6600A	7			
								"			
1180		66	Bsh					26	Koh pgm		
2400	3"	"	"					"	"		
								7			
								1c			
								7c			
		54	B3					27c	Kok pgm	MAX 4800ADU (250/1 S/N)	
3600	2-3"							28c	"	MAX 6800ADU	
4200								27c		very Bad cosmic RAY event @ Helium Line	
								7c			
								30c		MAX 1A K ADU	
	T=8.7°C		Set still 6.77					3/4c	focus test	stellar row of 2 pixels Blue	
								1c			
									CCD Temp held all night.		





CCD  
 Spectr. Temp. ... -100°C ..... Dome Temp./Hum. 16.9°C/54.5% Transparency Conditions ... Partially clouds ..... 38  
 Focus ... 6.80 ..... Fans off.  
 Spectr. Temp. C.Gain. = 90 ..... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. c9482	Program	Remarks	Quality
				Cass CCD	1800 $\mu$ /mm G=5115	300 $\mu$ FULL	S303A	3/4	Focus Test.	T = 16.9°C / foc = 6.80	good
								5c	bsum4.bat.		
339	2.3"	8.48	M1					6c	Vys Std.		
								7c			
								8			
68		10.7	MO					9	Vys Pgm		
								10			
								11			
82		10.11	MO <sub>e</sub>					12	Vys Pgm		
								13			
								14		Telescope on East	
96		10.8	MO					15	Vys Pgm	Side of piers	
								16			





Spectr. Temp. .... Dome Temp./Hum. 15.6°C/49.4% Transparency Conditions Clear with some haze and low clouds. 40  
 Focus ..... 6.80  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	P. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 $\mu$ /mm G=5115	300 $\mu$	S303A	1		Telescope Reversed	
								17			
130	2.3"	10.6	M0					18	Vys Pgm	= 45/1 S/N	
								19			
								20			
140	2"	10.4	M0					21	Vys Pgm	> 50/1 S/N	
								22			
								1			
								23			
225	2"	9.95	M1V					24	Vys Pgm		
								25			
								26			
346	2"	9.15	M5					27	Vys Pgm		
								28			
								5			

4pg #3

+ Boyd Duffee

Emulsion Batches:

Date 1994 Jun 9/16

Observers Tn./H/W {Vys} + Nova Cas 1993

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc23113	BD+45 2743	18 32 26	+45 39 53	01 20 29		0:02 E	+46°		934
23119	Comp <sup>← note</sup> out of number sequence.							Felt Clear	20
114	Bias x 4								
cg40233-6	<sup>4x</sup> HD176844	18 57 03	+40 32 36						.067
cg40237/8	<sup>2x</sup> HD176844	18 57 03	+40 32 36		0150	0:14 E			.133
cc23 <sup>116</sup> <sub>116</sub>	Comp/Stellar	HARTMAN				No filter	for Comps	Felt Clear	10/15
117	Comp							Felt Clear <del>OG 385</del> FILTER	40s
118	Nova Cas 1993	23 36 59	+56 57 45	02 56 51				OG 385 in Beam	55
120	Nova Cas 1993	23 36 59	+56 57 45	02 58 28			"		640
121	"	"	"	03 09 24			"		720
122	Comp							Felt Clear	40s
123-5	3x Bias (4)								
126-9	4x Flats					OG 385 in	FLAT Beam	lung VAP	3s

Spectr. Temp. ..... \* Dome Temp./Hum. 14.7°C/47.9% Transparency Conditions Clear  
 Focus ..... 6.80 - 6.97 for 831 grating  
 Spectr. Temp. .... Dome Temp./Hum. +13.6°C 50.0% H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
174		9.83	M0	Cass CCD	1800 $\lambda$ /mm G=5115	300 $\mu$	5303	6	Nys Std.	Telescope Still Reversed	
								7			
								1			
		6.65	M2 IV						Seeing Test	Gusty N wind	
		6.65	M2 III						Seeing Test	Some E	
		set <u>6.97</u> T = +14.2°C			831 $\lambda$ /mm G=3616	300 $\mu$ Full	6563A	3/4	focus Test	730 @ 50 1024 & 1 CCD FMT	
5		211?	em					11	Nova Cas Pgm		
~30			em					12	Nova Cas Pgm		
30	1.2"		em					13	" " "		
								14			
								1			
				All to WORM &	Persens.			2c			



43pg #1

Fri/SAT

Emulsion Batches:

Date 1994 Jun 10/11... Observers Kiky, Jm.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc 23730-1	Comp/stellar		Hartman					FeAr Clear	30 60
132	Bias(4)								
133	Comp							FeAr Clear	60
134	HD 120 315	134720	49 2026	21 38 46		0 56 W			47
35	"	"	"	21 44 53		0 57 W			61
36	Comp							FeAr Clear	60
37	Comp							"	"
38	HD 103287	114836	541500	21 58 36					86
39	"	"	"	22 00 51					100
40	Comp							FeAr Clear	60
41	bias(4)								
42	Comp							FeAr Clear	60
43	HD 164284	175533	04 21 42	22 21 14		2 37 E			511
44	Comp							FeAr Clear	60
45-7	Flats x 3							Tung A=1.10	1.10

Spectr. Temp. .... Dome Temp./Hum. ~~15.6~~ 44.7 Transparency Conditions ... clear, <sup>some</sup> clouds ..... 44  
 Focus ..... 6.83 .....  
 Spectr. Temp. .... Dome Temp./Hum. .... <sup>climbed</sup> 480 0 50 1024 4 1 CCDPMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSCO	1800/mm G=4810	300x FULL	4865	3/4	Focus test		
								1/2			
								5			
3075		1.67	B3V6					6	Std		
3615		n	n(n)					7		10800 ADP	
								8			
								9			
3342		2.44	A0V					10	Std.	11600 ADP	
3466		n	n					11			
								12			
								1			
								14			
1878	1-2"	4.8	B3c					15	Koh p gm	Thin cloud	
								16		max 13.6	
								17			

45 pg#2

Emulsion Batches:

Date ... 1.994 Jan. 10/11 Observers Kok., T.R. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC 23 #48	Comp							Fair Clear	60s
49	HD 193237	20 14 06	37 43 18	22 51 11		4 22 E			219
50	"	"	"	22 56 26		4 16 E			206
51	"	"	"	23 01 29					247
52	Comp							Fair Clear	60s
53	Comp							"	"
54	HD 200775	21 00 21	67 46 06	23 20 54		4 27 E			726
55	"	"	"	23 34 29					1600
56	Comp							Fair Clear	60
57-61	Plats X5								
62	Bias (4)								
63-4	Comp/stellar	hartman						Fair Clear	60



<sup>CCD</sup>  
 Spectr. Temp. .... -100°C ..... Dome Temp./Hum. 14.6°C 46.9%<sup>H</sup> Transparency Conditions .... P.A.R.F. cloudy ..... 46  
 Focus .... 6.83 .....  
 Spectr. Temp. .... Dome Temp./Hum. ....  
 C LAMBDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/mm G- <del>310</del>	300μ FULL	4865Å	18c			
698		4.8	Bsh					196	Kohpgm	MAX 11.5K ADY Strong Em	
530		"	"					20	"	MAX 6.5 KADY	
1300	1.2"	"	"					21	"	MAX 8.0K ADY	
								22			
		<del>7</del>	<del>B5</del>					23	1		
42	2"	<del>7</del>	<del>B5</del>					24	Kohpgm	Thicker cloud 260/1	SIN
-		<del>7</del>	<del>B5</del>					25	"	14.6 K	
								26			
								27			
								1			
								3/4			

47

#1

Notes:  
CSS 386

Emulsion Batches:

Date 1994 June 12/13

Observers [B.I.] III / T.n.

Header times are

See ahead of  
WV time.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
<del>23</del> 65-6	Hartman comp / stellar			20:35:48				Fe Ar clear	39 /60
167	BIAS (4)			20:48					
68	Comparison			20:52:43				Fe Ar clear	60
69	HD 87901	10 03 03	+12 27 22	21:01:59				<del>Fe Ar clear</del>	
70	HD 87901			21:04:30				<del>Fe Ar clear</del>	26
71	Comparison							Fe Ar clear	60
72	Comparison							Fe Ar clear	60
73	HD 93521	10 42 42	+ 33 06 00	21:15:12		3:47:48		<del>Fe Ar clear</del>	688
74	HD 93521			21:26:57	21:40	3:59:33			792
75	Comparison			21:41:17				Fe Ar clear	60
76	HD 93521			21:43:47		4:08:21			787
77	BIAS (4)			21:58:02					
78	HD 93521			21:59:05	22:12	4:32:12	Air Mass 1.57		809
79	Comparison			22:13:41				Fe Ar clear	
80	HD 93521			22:16:40	22:30	4:49			800

Spectr. Temp. <sup>CCD</sup> -100°C ..... Dome Temp./Hum. 20.3°C / 67.7% Transparency Conditions .....

Focus ..... 6.73 ..... Fans ON

Spectr. Temp. .... Dome Temp./Hum. 19.0°C ..... 73.3% H CCD FMT 480 0 50 1024 41

Exp. Mtr.	Seeing	Filter Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
+20.3°C	Set 6.73			Cass	1800 21mm	300					
				CCD	G=6065	um	6604 Å	3/4	Focus TEST	67% humidity in entrance	
								1ci			
								5		TELESCOPE REVERSED	
2250	1.36	B7V						6	Telluric standard	(on East side of pier)	
2200								7	- " -		
								8			
								8			
		<del>7.04</del> 09.5V									
800	7.04	09.5V		S/N		180:1		8	B10 pgm	72% humidity in entrance	19.9°
845								9			
								10			
590				S/N		160:1		11		intermittent cloud	19.5°
								11ci			
845				S/N		180:1		12			
								5			
815								13			

NOTE:  
"slow" exposure meter.  
max 7576 ADU



49

Pg 12

Emulsion Batches:

Date 1994 Jun 12/13... Observers [Bln] III/Ta.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
23181	HD 93521	10 42 42	+38 06	22 30 43		S:03:52	Air mass 1.77		805
282	Comparison							F2 Ar clear	60
83	B/AS(4)								
84	Comp			22:53:36				F2 Ar clear	60
85	HO 136049	15 17 43	+33 17 30	22:58:26		0:48:46	Air mass 1.03		estimate 240
86	Comparison			23:11:53				F2 Ar clear	60
87	Bias (4)			23:13:31					
88	Comparison			23:18:12				F2 Ar clear	60
89	HD 93521	10 42 42	+38 06 00	23:21:17		S:56:51	Air mass 2.32		942
90	HO 93521			23:37:17		6:12:00	2.54		900
91	Comparison			23:53:04				F2 Ar clear	60
92	HD 93521			23:55:38		6:30:31	Air mass 2.87		900
93	HO 93521			0:11:17		6:46:16	3.23		900
94	Comparison			0:27:10					
95	Bias (4)			0:28:31					

Spectr. Temp. <sup>ccd</sup> -160°C

Dome Temp./Hum. +19.1°C 73.5%

Transparency Conditions ... mostly clear

50

Focus ... 617.3

Spectr. Temp. ....

Dome Temp./Hum. ....

*c lambda*

Exp. Mtr.	Seeing	Ex. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
787	2"	7.04	09.5V	CASS ccd	1800/n/mm G=6065	300um FULL	660A	14ci	Rh of pgn		19.1°
								5ci			
								1ci			
								5ci			
1550		<del>5.37</del> 5.37	<del>B9Vn</del> B9Vn					15ci	Telluric standard	Note: ccd crash during "import" → reset CBS 386 twice (caused by disk full on Perseus)	18.9°
								5ci			
								1ci			18.8°
								5ci			
634		7.04	09.5E	170:1	SIN			16ci	Bln O <sup>A</sup> pgn		18.3°
809								16ci			
								5ci			18.3°
460				SIN	165:1			16ci		8.3% humidity on catwalk	18.3°
383				SIN	150:1			16ci			18.0°
								5ci			
								1ci			

Date 1994 Jun 12/13. Observers [Bla]. III. I.T.O. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
23196	H093521	104242	+280600	0:30:27		7:05:26	Air mass 3.78		900
197	Comparison			0:46:23				Fe Ar clear	60
198	Comparison			0:51:45				Fe Ar clear	60
199	Cu Vir HD124224	140712	+25300	0:54:16		4:05:23	Air mass 2.65		900
200	Cu Vir HD124224			1:10:10		4:21:28	3.02		910
201	Comparison			1:26:22				Fe Ar clear	60
202	Bian (4)			1:27:47					
203	Cu Vir HD124224			1:28:53		4:55:4	Air mass 4.31		1800
204	Comparison			1:59:45				Fe Ar clear	60
205	<del>FLAT</del> FLAT							1/4 up Tung	9
206-227	FLATS					5:31:12		1/4 up Tung	9
220	Bian (4)			2:34:40					
CG402 39 42	HD187120	1943.2	+452900			00 10W	+45°44'	4x	67ms
CG402 43 44	"	"	"					2x	133ms
cc23229	Comparison			2:58:36				Fe Ar clear	60



Spectr. Temp. ... Dome Temp./Hum. 18.0°C / 78.3% Transparency Conditions ... *PART. cloudy* ...  
 Focus ... *6.73* ...  
 Spectr. Temp. ... Dome Temp./Hum. ...

Exp. Mtr.	Seeing	V + Hs Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
218	7.04	09.5V		Cass CCD	1800x1mm G=6065	300 um	<del>clambda</del> 6604A	16ci 5ci 15ci	B1n O <sup>+</sup> pgn	S/N 130:1	17.8°
1763	2-3"	5.00	ApSi	S/N	345:1			17ci	B1n He k <del>ApSi</del>		17.8°
1727				S/N	370:1			17ci 5ci 1ci			17.6°
1324				S/N	310:1			17ci 5ci 18ci 18ci 1ci			
	OK 7.52 KOIII					Above 300um slit		18ci	Seeing Test	Telescope on W. side of pier fence on j. dome west NORTH EAST ON	
	VERY light west wind							11 "			
	Dome West							5ci			16.7°

NOTE: ADU levels of flats range 12500-14900



Spectr. Temp. .... Dome Temp./Hum. 16.7°C / 93.7% Transparency Conditions .. Increasing cloud .....

Focus ..... 6.73 .....

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

Exp. Mtr.	Seeing	V <sub>4</sub> Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<del>+355</del>	2"	<del>6.31</del>	AZV <sub>II</sub>	Cass CCD	1800 x 1mm ( $\lambda = 6065$ )	300 $\mu$ m	6604A	17ci 19ci	Telluric Std <del>search</del>	(Holding OK) CCDT still - 100% NOTE: possibly slight emission lines and line is asymmetric	<del>250+</del> <del>570</del> 16.6°
								5ci 1ci			
								3/4	Focus TEST		
<p><u>Note.</u> a 15 pixel Row shift seen between 1st focus test of night and last one. Something shifted during the night more than normally would be expected.</p>											
<p>All to WORM. &amp; Perseus now - [note: pixel shift was between 1st focus test with Telescope on west side, and 1st comp with Telescope on East side. Should be no problem with observations.]</p>											
<p>To June 14</p>											



55pg #1

Emulsion Batches:

Date 1994 Jun 14/15 Observers III/Hlw [Blu]

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc23235/6	Comp/Stellar	Hartman	Mask	posn'				FeAr Clear	60/60
37	Bias (4)			20:47					
38	Comparison			20:57:16				FeAr clear	60
39	HD93521	10 42 42	+38 06	21:00:26		3:41 W	Air mass 1.33		794
40	HD93521	10 42 42	+38 06 00	21:14:05					900s
41	Comparison			21:30:56		3:56 W	Air mass 1.39	FeAr Clear	60s
42	Comparison			21:35:36				FeAr Clear	60
43	HD87901	10 03 03	+12 27 22	21:38:35			4:46 W		27
44	HD879001	10 03 03	+12 27 22	21:40:34		Air mass 2.80	4:48 W		55
45	Comparison			21:42:55				FeAr Clear	60s
46	Comparison			21:52:02				FeAr Clear	60s
47	Bias (4)			21:53					
48	HD93521	10 42 42	+38 06 00	21:54:38		4:37 W			900
49	HD93521	10 42 42	+38 06 00	22:10:04		4:52 W			900
50	Comparison			22:25:54				FeAr clear	

Spectr. Temp. .... Dome Temp./Hum.  $+20.4^{\circ}\text{C} / 73.2\%$  Transparency Conditions Partially Cloudy + Hazy<sup>56</sup>  
 Focus ..... 6.73 Dome Fans ON at start  
 Spectr. Temp. .... Dome Temp./Hum. .... 480 0 50 1024 4 / 1 ccd fnt.  
 South one turned off @ 2100

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality	
				Cass CCD	1800 l/mm G = 6.065	300 $\mu$	6604A	3/4	Focus Test	T = 20.4, foc = 6.73	good	
								1				
								5		} Catwalk Humidity 79% @ 2120 Telescope Reversed		
900		7.04	09.5V					6	Bln 0* pgm			
		7.04	09.5V					7	Bln 0* pgm			
	879							5				
								5				
2000		1.36	BT V					8	Telluric Std.	Air Mass = 2.72		
4000		1.36	BT V					9	Telluric Std.	Air Mass = 2.80		
								5				
								5				
								1				
612	3-4"	7.04	09.5V					10	Bln 0* pgm			
660		7.04	09.5V					11	Bln 0* pgm		19.3°	
								Sci				

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Emulsion Batches:

Date 1994 Jun 14/15 Observers III / Hlw [Bin]

Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle		Declination		Comparison	
		1900		1900		E.S.T.		E.S.T.		End			Type/Filter	Exp.	
cc23251	Comparison					22:45:41								FEAR clear	60
52	HD136049	15 17 43		+33 17 30		22:47:46				0:47 W		Air mass 1.03			331
53	HD136049	15 17 48		+33 17 30		22:54:31				0:56 W		1.037			442
54	Comparison					23:04:14								FEAR clear	60
55	<del>Comparison</del> Bias (4)					23:05									
56	Comparison					23:11:16								FEAR clear	60
57	HD 93521	10 42 42		38 06 00		23:13:22				5:55 W		Air mass 2.30			900
58	HD 93521	10 42 42		38 06 00		23:29:39				6:12 W		2.547			900
59	Comparison					23:42:17								FEAR clear	60
60	Bias (4)					23:47									
61	HD 93521	10 42 42		38 06 00		23:50:38				6:33 W		2.937			900
62	HD 93521	10 42 42		38 06 00		0:07:09				6:49 W		~3			900
63	Comparison					00:23:01								FEAR clear	60
cg40245- 8	<sup>4x</sup> HD163075	17 49 15		+46 40 10		00:34									.067
cg40249 50	<sup>2x</sup> HD163075	17 49 15		46 40 10				00:37		0:02 W					.135



Spectr. Temp. .... Dome Temp./Hum. 19.1°/75.6% Transparency Conditions ... Hazy  
 Focus ..... 6.73 ..... N Fan On  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion S. L. 4000	P.H.	Program	Remarks	Quality
				Cass CCD	1800 l/mm	300 1/2=6065 um	6604A	Sci		Telescope still reversed.	
1400	5.37	B9	II <sub>n</sub>					12ci	Telluric Std.	81% humidity meatwalk	
2000								13ci	— 11 —		
								Sci			
								1ci			
<del>39</del>								5ci		Catwalk Humidity = 84%	
398	7.04	09.5V	S/N		120:1			5ci	Bln 0* pgm	@ 2330	
398			S/N		120:1			15ci	"	85% @ 0000	18.6°
								Sci			
								1ci			
319				S/N	115:1			16ci	Bln 0* pgm		18.3°
253				S/N	110:1			17ci	Bln 0* pgm		
								5			
	4-5"								Seeing Test	Dome E, no wind	
	4-5"								Seeing Test		

Date 1994 Jun 14.15 Observers ... III (H.W. [B.L.J.]..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
u23264	Comparison			01:49:06			Air Mass Ex	Fe Ar Clear	60
65	HD 124224	14 07 12	+ 2 53 00	01:53:17		4:13 W	2.82		960
66	Comparison			01:10:29				Fe Ar Clear	60
67	Bias (4)			01:11'					
68	HD 124224	14 07 12	+02 53 00	01:13:37		4:47 W	3.93		1800
69	Comparison			01:44:41				Fe Ar Clear	60
70	HD 124224	14 07 12	+02 53 00	01:47:42		5:21 W	6.64		1800
71	Comparison			02:18:26				Fe Ar Clear	60
72	Bias (4)			02:20					
73	Comparison			02:35:56				Fe Ar Clear	60
74	HD 166228	18 04 36	+49 41 44	02:38:18		2:17	1.0944		1800
75	Comparison							Fe Ar Clear	60
76	Bias (4)			03:12					
77	Comparison			03:17:04				Fe Ar Clear	60
78	HD 167965	<del>18 12 32</del> 18 04 36	42 07 30	03:19:52		2:29	1.13		450

Spectr. Temp. .... Dome Temp./Hum. 18.0°/81.2% Transparency Conditions Hazy ..... 60

Focus ..... 6.73 .....

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

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800/mm	300μ	G=6065	6604A	5		
1668	~6"	5.00	ApSi	S/N	300:1			18	BlN He* pgm		17.50
								5			
								19			
2320		5.00	ApSi	S/N	~375/1			19	BlN He* pgm		
								5		92% on catwalk @ 0145	
971		5.00	ApSi	S/N	265:1			20	BlN He* pgm		
								<del>20</del>		T=16.8°C	
								1			
								5			
1820		6.32	AZV	[*Clouds for 1st 10 minutes of this exposure]				21	Telluric Std Search	SNR ~ 285 93% on catwalk at 2:50am looks fine but telluric line in Hα so strong as to possibly "hide" Hγ emission	
								5			
								1			
								5			
1665		5.59	B7IV	S.N.R. ~ 285				22	Telluric Std Search	Hα has a "flat" bottom looks fine but telluric line in Hα so strong as to possibly "hide" Hγ emission	





Spectr. Temp. .... Dome Temp./Hum. 17.0°C/85.3%. Transparency Conditions Some clouds + Hazy +<sup>62</sup>  
 Focus ..... 6.73 ..... Humid  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality	
				Cassegrain CCD	1800/mm G=606J	mm500 microw	6604A	S				
								<del>S</del>				
2000	5.00	BB III						23	Telluric Search.	Hex has "flat" bottom	17.0°	
								S				
								24ci		→ Done with 7flat.bat, no repeat command. (long batch file)		
								24ci		→ Done with repeat 7test.bat 15		
								24ci		→ Done with normal keyboard commands.		
								1ci				
								3/4	FocusTest.			
				All to WORM & Perseus.								
				///								





Spectr. Temp. .... Dome Temp./Hum.  $22.2^{\circ}\text{C}/77.4\%$  Transparency Conditions *Really Hazy, some clouds<sup>64</sup> at horizon*  
 Focus .....  $6:63$  Dome Fans off  
 Spectr. Temp. *again = 0* Dome Temp./Hum. .... 480 360 320 320 1 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Focal Reducer	Flat / 18°	skylight filter	Imaging			Max ADU ~10,000	
	~3"	Globular Cluster M3						4	Engineering	*Note for files cd00026 to cd00037 chip temperature was set to coldest $\approx -114^{\circ}\text{C}$	
								4	"		
								4	"		
159								5	"		
133								3	"		
132								4	"		
								1		CCD Temperature set to $-114^{\circ}\text{C}$	
								1		CCD Temperature set to $-100^{\circ}\text{C}$	
		Ring Nebula						4		↓	
								4			
				All to	WORM &	ferrous		1			

pg #1

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Fri/Sat

Date 1999.1.40E 17/18... Observers [Bm]..Tn/Hlw.....

Emulsion Batches:

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CSS Time Reset to U.W.V. time.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc23327/28	Comp / Stellar	Hurtmann						FeAr Clear	60/60
29	B/HS(4)								
30	Comp							FeAr Clear	60
31	HD145001	16 03 36	+17 19 00	21 33 22		0:58 E			498
32	Comparison							FeAr Clear	60
33	Comparison							FeAr Clear	60
34	HD144579	16 01 30	+39 24 00	21 54 14		00:33 E			646
35	Comp							FeAr Clear	60 sec
cg40251 -4	4x HD144579	16 01 30	+39 24 00	22 08					.067
cg40255/6	2x "	"	"	22 10		0:27 E			.133
cc23336	Bias (4)								
37	Comp							FeAr Clear	60
38	HD180583	19 12 00	+27 45 00	22 19 31		3:19 E			600
39	Comparison							Iron-Argon Clear	60s
40	Comparison							Iron-Argon Clear	60 seconds

CCO  
 Spectr. Temp.  $-100.0^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+26.5^{\circ}\text{C}/63.8\%$  Transparency Conditions *Part. Cloudy* ..... 66  
 Focus .....  $6.55$  .....  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	$\checkmark$ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. C	Program	Remarks	Quality
				Cass CCD	1800/nm G = 59/10	300 $\mu$ Full Length	6400 $\text{\AA}$	3/4	Focus Test	T = 26.5, foc = 6.65	
								1			
								5			
2200	3.4"	5.00	G5 III					6	Std. Vel.		
								7			
								8			
1250	3"	6.66	dG8					9	Std. Vel.		
								10c			
		6.66	dG8						Seeing Test	Dome W, light wind from variable direction	
		"	"						Seeing Test		
								1			
								11			
1657		6.19	F6I-II6					12	Rm pgm		
								13			
								14	cache		





Spectr. Temp. ..... Dome Temp./Hum. 25.5°C/66.27 Transparency Conditions Partially Cloudy  
 Focus .....  
 Spectr. Temp. ..... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Mag. V	Sp.	Inst.	Grating/ Tilt	Slit	central emulsion wavelength	A.H. cache	Program	Remarks	Quality
1321		6.15	GOIb	Cass CCD	1800/mm G=5910	300μ	6400	15	Rm pgm		
								16			
								1			
onds								2			
								17			
706		8.40	GOIb					18	Rm pgm	S/N 200/1	
								19			
								1			
								20			
2145		5.75	GOIb					21	Rm pgm		
								22			
								23			
2270	2-3"	5.8 -5.9	F2					24	Rm pgm	S/N >300/1	
								25			
								26			

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pg #3

Date 1994 Jan. 17/18..... Observers [Rm.] H.W. / T.G.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC23361	HD173297	18 3900	-20 4500	00 5003		00 02W			1761
62	Comp							FcAr Clear	63
63	Bias(4)								
64	Comp							FcAr Clear	603
65	HD180583	19 1200	+27 45	01 29 54		00 07E			665
66	Comp							FcAr Clear	602
67	Comp								4
68	HD187691	19 4612	+10 10	01 4901		00 29E			295
69	Comp							FcAr Clear	603
70	Comparison							FcAr Clear	60
71	HD194071	20 18 30	27 55 00	02 00 34		00 27E			1694
72	Comparison							FcAr Clear	602
73	Bias(4)								
74	Comparison							FcAr Clear	603
75	HD214975	22 3655	+56 1824	02 51 53		1.52 E			1726



Spectr. Temp. .... Dome Temp./Hum.  $7.24.6^{\circ}\text{C}$  69% RH Transparency Conditions ... 5/6/99, some cloud .....

Focus ..... 6.65 .....

Spectr. Temp. .... Dome Temp./Hum. ....  
C LAMBDA

Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1060	3"	7.48	GOI6	CASS CCD	1800x/6x G=5910	300x Full	6400A	27c	Rm pgn	5/14 7/200/1	
								28			
								1c			
								29c			
1960	1.2"	6.19	FGI-DB					30c	Rm pgn	2nd exposure of night	
								31		CCDT = -10.5°C	
								5c			
2130	1"	5.11	F8I					6c	Std Vel		
								7			
								8			
1266	1.2"	8.13	G8III					9	Std. Vel		
								10			
								1		Then a Topup	
								11a			
998	1.2"	8.40	GOI6					12c	Rm pgn	2nd exposure tonight.	









CCD  
 Spectr. Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $25.8/64.6\%$  Transparency Conditions  $\text{clear - s/hazy}$  74  
 Focus  $6.70$  .....  
 Spectr. Temp.  $90^{\circ}\text{C GAIN}$  ..... Dome Temp./Hum. ....  
 2 Large Saturday night TOURS  
 M3 viewel

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 $\lambda$ /nm G=5115	300 $\mu$	S303	3/4	Focus Test	Exposure meter speed wavering during comp	
								1	bsum 4.bat		
								5		Tour ~100 people	
140		8.48	M1					6	Vys Std.		
								7			
								8			
138	2"	10.1	M2					9	Vys Pgm		
								10			
								1			
								11			
138	2"	9.0	M5e					12	Vys Pgm		
								13			
								14			
128		10.59	M0					15	Vys Pgm		
								16			

Tp #2

Date 1994 Jun 18/19 Observers T<sub>2</sub>/Hlw {Vys}

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc23395	Comparison							Iron Neq Clear	20
396	BD+45 2743	18 32 26	+45 39 53	00 57 16		0:14 W	+46°		1265
397	Comparison							Iron Neq Clear	20
398	Bias x4								
399	Comparison							"	"
400	AC+54 1780-45	18 54 12	+54 22 09	01 27 43		0:35 W	+54°		1958
401	Comparison							"	20
cg40257 <sup>-60</sup>	4x HD187120	19 43 12	45 29 00	02 09				4x	.067
cg40261 <sup>2</sup>	2x HD187120	"	"	02 11				2x	.133
cc23402	Bias x4								
403	Comparison							FeNe Clear	20s
404	AC+39 60670	21 32 36	+39 00 29	02 19 22		1:22 E	+39°		1366
405	Comparison							FeNe Clear	20s
406	Comparison							FeNe Clear	20
407	AC+31 68884	22 18 56	+31 57 15	02 50 14		1:41 E	+32°		1200



Spectr. Temp. .... Dome Temp./Hum.  $+25.1^{\circ}\text{C}/64.8\%$  Transparency Conditions Hazy ..... 76  
 Focus 6.70 .....  
 Spectr. Temp. .... Dome Temp./Hum. ....  
 North Fan ON

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 $\lambda$ /mm G=5115	300 $\mu$	S303A	17			
127	2"	9.83	M0					18	Vys Std.		
								19			
								1			
								20			
31		12.0	M0					21	Vys pgm		
								22			
	1.5"	7.52	K0 III						Seeing Test	Dome W, med. NW wind.	
	"	"	"						Seeing Test		
								1			
								23			
82	1.5"	10.17	M0					24	Vys pgm		
								25			
								26			
42		10.7	M0e					27	Vys pgm	SNR ~ 60	









Spectr. Temp. .... Dome Temp./Hum.  $+23.4^{\circ}\text{C}/55.7\%$  Transparency Conditions  $\text{Hazy, some scattered clouds}$ <sup>80</sup>  
 Focus  $6.70$  Dome Fans off  
 Spectr. Temp.  $\text{Gain} = 90$  Dome Temp./Hum. .... 480 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		$\text{foc} = 6.70$ $T = 23.3$		Cass CCD	$1800\lambda/\text{mm}$ $G = 5115$	$300\mu$	$5303\text{\AA}$	$3/4$	Focus Test	CCD had warmed to ambient dome temperature when I arrived. Focus Test was done while CCD was cooling. <del>11/11</del> CCD Temp (Focus Test) $\sim -85^{\circ}\text{C}$	
		$\text{bsum 4.bat}$						$1$ $5$			
148	8.48	M1					SNR $\sim 90$	6	Vys Std.		
								7			
								8			
35	11.1	M0					SNR $\sim 35$	9	Vys Pgm		
								10			
								1	$\text{bsum 4.bat}$		
								11			
32	11.3	M0					SNR $\sim 35$	12	Vys Pgm		
								13		$\rightarrow$ Image is dark, Don't know why. -HW-06/94	
								14			
70	10.5	M0					SNR $\sim 35$	15	Vys Pgm		
								16			





Spectr. Temp. .... Dome Temp./Hum. <sup>+20.6°C/66.4%</sup> Transparency Conditions *Clear with scattered clouds* <sup>83</sup>  
 Focus *6.70* .....  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				<i>Cass CCD</i>	<i>1800l/mm</i>	<i>300μ</i>	<i>S303A</i>	<i>17</i>			
<i>108</i>		<i>9.3</i>	<i>M</i>		<i>G=5115</i>			<i>18</i>	<i>Vys Pgm</i>		
								<i>19</i>			
								<i>1</i>			
								<i>20</i>			
<i>72</i>		<i>9.8</i>	<i>M0</i>					<i>21</i>	<i>Vys std,</i>		
								<i>22</i>			
								<i>23</i>		<i>Lost safety backup</i>	
				<i>All to WORM &amp; Perseus</i>				<i>1</i>			

883 pg#1

Tues / wed

Emulsion Batches:

Date 1994 Jun. 20/21 Observers ... Kok... J... In.....

CSS 10 secs ahead of E.M.V.V. Time.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
C 23455/56	Comp / Stellar Hartmann posts					2		Fear Clear	30/45
57	BIAS(4)								
58	Comp							Fear Clear	60
59	HD 103287	114836	541500	210555		2'50' W			85
60	"	"	"	210838		2'59 W			86
61	Comp							Fear Clear	60
62	Comp							"	60
63	HD 120315	134336	494900	211744		1'14 W			37
64	"	"	"	211926					48
65	Comp							Fear Clear	60
66	BIAS(4)								
67	Comp							Fear Clear	60
68	HD 193237	201406	37438	214244					219
69	"	"	"	214719		0438 E			586
70	"			215811					620
71	comp							Fear Clear	60

Spectr. Temp. <sup>CCD</sup> -100°C ..... Dome Temp./Hum. 22.3°C 439% Transparency Conditions FINE .....

Focus 6.75 .....

Spectr. Temp. Gain = 9.0 eqm Dome Temp./Hum. .... 480 0 50 1024 4 1 CCD FWT

Exp. Mtr.	Seeing	Prg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800lmm 6=4460	300µ	4340A	5/6c	focus		
								1			
								7			
5800	2.44		A0V					8	Kok std.	12400 max ADU.	
5100	"		"					9	"		
								10			
								4			
4073	1.67		B3V					11	Kok std		
4400	"		"					12	"		
								7			
								7			
1510	3"	4.8	Bsb					13	Kok pgm	3.6 K Max (H8em)	
4000	"	"	"					14	"	MAX 10 K ADU (H8)	
4000	"	"	"					15	"		





Spectr. Temp. .... Dome Temp./Hum. ... 21.0°C ... 500% H Transparency Conditions ... FINE

Focus ... 6.75 .....

But gusty NW wind

Spectr. Temp. ... ~~6.75~~ .....

Dome Temp./Hum. ... 18° ... 63% H

A "NO FAN" night

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	3"	666	G8V	CASS CCD	1800l/mm @ 24960	309μ	4340A°			Seeing test	Dome west Gusty NW wind.
						(Above 300μ slit)					
							4340A°	16c			MAX 12.4 KADY MIN 7.7 KADY
								17c			
635	3.4"	B 7.0	B5					18c	Kok pgn	Herbig Be <sup>SN</sup> ( $\approx 80/1$ )	
785	4.6"							19c			
750								20c			
								21			
								1			
								22			
1150	5"	B 6.5						23	Kok pgn	no em 150/1 SINE H $\delta$	
980								24			
								25			
								30/1c			

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pg#1

Wed / Thurs

Emulsion Batches:

Date 1994 June 22/23

Observers

WDE / [BLN] / TN

CSS 386 ABOUT 6 secs ahead of WWV Time.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC23493/94	comp / stellar Hartman						+49°	F <sub>4</sub> Ar Clear	60/60
495-518	FLATS x 24		Yikes!	<del>#518</del>		00 30W	+49 20	ring Ap 1/4	7sec
CC23519	B/AS(4)							F <sub>4</sub> Ar Clear	60s
20	Comp							F <sub>4</sub> Ar Clear	60s
21	HD 87901	10 03 03	+12 27 22	21 15 30				F <sub>4</sub> Ar Clear	32 48
22	HD 87901 Comp	"	"	21 18 56				F <sub>4</sub> Ar Clear	60s
23	Comp							F <sub>4</sub> Ar Clear	60
24	Comp							F <sub>4</sub> Ar Clear	60
25	HD 93521	10 42 42	38 06 00	21 18 56		4 42 W			900
26	HD 93521	"	"	21 44 19					900
27	comp							F <sub>4</sub> Ar Clear	60
28	B/AS(4)								
29	HD 93521	10 42 42	+38 06 00	22 03 22		5 17 W			900
30	"	"	"	22 18 43					900
31	Comp								60s
32	HD 93521	10 42 42	+38 06 00	22 36 58		5 51 W			900





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p942

Emulsion Batches:

Date 94 June 22/23 Observers WDE [BLN] / TN

Plate No.	Object	R.A.	Declination	Starting Time	Ending Time	Hour Angle	Declination	Comparison	
		1900	1900	E.S.T.	E.S.T.	End		Type/Filter	Exp.
4235 33	HD93521	104242	380600	225227		0606 W			900
34	comp							FeAr clear	60s
35	BIAS(4)								
36	Comp							FeAr clear	60s
37	HD167965	181232	+20730	231845		0054 E			829
38	"	"	"	238316		0041 E			295
39	Comp							FeAr clear	60s
40	BIAS(4)								
<del>41</del>	comp 1 stellar Hartman							FeAr clear	60s
43/44	comp 1 stellar hartman							FeAr clear	60s/90
45	comp							FeAr clear	60
46	HD 138629	152812	411419	0:27:11		02:53 W			568
47	"	"	"	0:38:33					457
48	comp							FeAr clear	60
49	comp							FeAr clear	60

Spectr. Temp. .... Dome Temp./Hum. 20.5°C Transparency Conditions cloud in SW  
 Focus 6.72 ..... Clear in NE  
 Spectr. Temp. .... Dome Temp./Hum. 56.8% .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Clear body Emulsion	P.H.	Program	Remarks	Quality
365	2.3"	7.04	09.5I	CASS CCD	1800 l/mm G=6065	300mm	6604A	14c	BLN 0*	<del>BLN 0</del>	
								15	"		
								16c			
2015	2"	V= 5.59	R7M					17c	Telluric Std.	6.5K ADV MAX ADM = 1.027	
2000								18c	" "	Some cloud	
								19c			
								1c			
					G=6065			20c	focus test		
					G=4565 1800 l/mm	300mm	4490A	21c	focus test		
								22c/23c	test		
								24c			
2250		V= 5.02	AST					25c	A shell*	MAX ADV = 5K	
2250								26c	"		
								27c			
								28c			



9169 #3

Emulsion Batches:

Date 94 June 22/23 Observers [BLN] WOE/TN.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC23550	HD112028	124823	835724	0:55:18					574
51	"	"	"	01:05:15		06:14 W			570
52	comp							FeAr Clear	60
53	BIAS(4)								
54	comp							FeAr Clear	60
55	HD 148283	162150	373718	01:24:36					867
56	"			01:39:30					788
57	comp								
CG40 270 <del>8273</del>	HD187120	194312	+4529			700			4 x 67 <sup>ms</sup>
CG40 274 75	"								2 x 133 <sup>ms</sup>
CC23558	BIAS(4)								
59	Comp							FeAr Clear	60s
60	HD 192518	201008	282330	021224		0:05 E			559
61	"	"	"	022204					604
62	comp							FeAr Clear	60

CCD  
Spectr. Temp.  $-100^{\circ}\text{C}$   
Focus  $6.82$   
Spectr. Temp.  $\checkmark$

Dome Temp./Hum.  $19.9^{\circ}\text{C}/59.1\% \text{H}$

Transparency Conditions  $\text{part cloudy}$

Dome Temp./Hum.  $18.5^{\circ}\text{C}/63.2$

Clear in NE  
clearing in SW  
Telescope still East Side of Piers

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2250		5.28	A1IIIsh	CASS CCD	1800 lmm G=4565	30mm	4490A	29	Ashell *		
2250	2.3"							30	"	25K HDU max	
								3c			
								1c			
								5c			
2030		5.52	A5V					7c	Ashell *		
2055								8c	"		
								9c			
	1.2"	7.52	K0III							Seeing test Dome East, Tel East Side	
										" " Light NW wind	
								1c			
								10c			
2500	1.2"	5.18	A7IVh					11c	Ashell *		
2500								12c	"		
								13c	"		

93pg #4

Emulsion Batches:

Date 74 JUNE 22/23 Observers [BLN] WDE / TN

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC 23563	Comp							FeAr clear	60
64	HD 210459	22 0533	+32 415	02 40 11		01:35 E			490
65	"			02 48 12					348
66	Comp							FeAr clear	60s
67	comp							FeAr clear	60
68	HD 187691	19 46 12	10 10 00	03 10 00		01:18 W			657
69	Comp							feAr clear	60
70	BIAS (4)								
71-81	FLATS x 11					01 20 W	+44°	Tung clear	13s
80/ 183	Comp / stellar HURTMAN					00 00	+43°	FeAr clear	60/90



<sup>ccD</sup>  
Spectr. Temp. .... -100 °C ..... Dome Temp./Hum. ... 18.5/63.2 ..... Transparency Conditions *part cloudy* ..... 94

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

Spectr. Temp. .... Dome Temp./Hum. ... 18.1 °C 65% H<sub>2</sub>O

*C LAMBDA*

*Tel still East side*

Exp. Mtr.	Seeing	Fl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $\mu$ /mm G=4565	300 $\mu$	4490A	14		ccDT = -101.5 °C	
4050	2.3"	4.29	F5III					15	A shell ppm	$\approx$ 5k ADU max	
4100								16	"		
								17			
								18			
1600	3"	5.11	F8II					20	R.V. std.	<i>cloudy too</i> Full Moon 30° to SW	
								21			
								1			
								22		13.8k ADU max	
								24/23	Focus test		

$T = +18.1 °C$

All to WORM + PERSEUS.



CCD Spectr. Temp. -100°C

Dome Temp./Hum. 19.7°/71.6%

Transparency Conditions Clear with cloud on horizon <sup>96</sup>

Focus 6.75

FANS ON

Spectr. Temp. ....

Dome Temp./Hum. ....

430 0 50 1024 41 CCD FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1900 x 1mm h = 6065	300 um	6604A	3ci/ 4ci	Focus Test		
								1			
								5		Telescope Reversed	
2000	4.5"	1.36		B7X Max ADU = 4500				6	Telluric std	Air Mass End = 3.3	
4050		1.36		B7X Max ADU = 8400				7	"		
								8			
								9			
744		5.00	Apsi	~ 240:1 SIN				10ci	Bl He* pgm	clarkled in	
								11ci			
								12ci			
								13ci		NOTE: flat fields range from 9963 to 12318	
<p>All to WORM and PERSEUS</p>											



27 pg. #1

Emulsion Batches:

Date 1994 Jun 30/Jul 1 Observers T./H/W [Cass Flexure Tests] .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc23615/6	Comp/Stellar	Hartman	Mask Position			0	45°	FeNe Clear	2/2
17	Bias (4)								
18	Comp			23 08 40 <del>22 53 11</del>		9 E	45°	FeNe Clear	1 sec
19	Comp			23 01 59		8 E			
20	Comp			23 03 21		7 E			
21	Comp			23 04 29		6 E			
22	Comp			23 05 38		5 E			
23	Comp			23 06 48		4 E			
24	Comp			23 07 36		3 E			
25	Comp			23 08 28		2 E			
26	Comp			23 09 17		1 E			
27	Comp			23 14 10		0			
28	Comp			23 15 36		1 W			
29	Comp			23 16 38		2 W			
30	Comp			17 30		3 W	↓	↓	↓

Spectr. Temp. .... Dome Temp./Hum.  $-17.9^{\circ}\text{C}/72.4\%$  Transparency Conditions ... Cloudy 98

Focus ... 6.75

Spectr. Temp. gain = 9.0 ..... Dome Temp./Hum. .... c LAMBDA 578 0 30 1024 1 1 ccdfmt

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C455 CCD	1800 l/m G=585D	200 $\mu$ Pinhole	6350A	3/4	Focus Test	T=17.9, foc=6.75	
								1			
								5	Flexure Test	Max ADU = 7187	
								6		7596	
								7		8453	
								7		8627	
								8		8328	
								9		7404	
								10		6972	
								11		7257	
								12		7609	
								13		6706	
								14		6874	
								15		6963	
								16		6806	

Dome Turned to NW / Spectrograph Controller died and was reset. (with grating disabled)

Page #2

Emulsion Batches:

Date 1994 Jun 30/Jul 1 Observers Tn/Hlw [Cass Flexure Tests]

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC23631	Comp			23 18 22		4W	45°	FeNe Clear	1 sec
32	Comp			23 19 38		5W	↓		
33	Comp			23 20 51		05:50 W	↓		
34	Comp			23 32 24		05:45 E	0°		
35	Comp			23 33 24		5E			
36	Comp			23 34 18		4E			
37	Comp			23 35 11		3E			
38	Comp			23 36 17		2E			
39	Comp			23 38 23		1E			
40	Comp			23 39 29		0			
41	Comp			23 40 38		1W			
42	Comp			23 41 29		2W			
43	Comp			23 42 15		3W			
44	Comp			23 43 27		03:45 W	↓		
45	Bias (4)								
46-48	3 x Flats					0	30°	Tung Clear	5 sec



Spectr. Temp. .... Dome Temp./Hum.  $17.8^{\circ}\text{C}/72.7\%$  Transparency Conditions ... Cloudy .....

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

Spectr. Temp.  $99912 = 90$  ..... Dome Temp./Hum. .... 578 0 30 1024 1 1 ccdfmt.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 $\lambda$ /mm G = 5850	200 $\mu$ pinhole	6350 $\text{\AA}$	17	Flexure Test	Max ADU = 5147	
								18	 ↓	5621	
								19		6279	
				Large Dome Movement				20		8221	
								21		7419	
								22		8017	
								22		8380	
								23		7904	
								24		7592	
				Dome Motion				25		7543	
				"				26		6820	
				"				27	6484		
								28	6538		
								29	6896		
								1			
				Spectrograph Controller blew fuse, was replaced.				30	All to Worn & Perseus.		

pg #1

Emulsion Batches:

Date JULY 11 1994 Observers WDE./Th. EBLN]

Plate No.	Object	R.A.	Declination	Starting Time	Ending Time	Hour Angle	Declination	Comparison			
		1900	1900	E.S.T.	E.S.T.	End		Type/Filter	Exp.		
cc23649150	comp/stellar Hartman							FeAr Clear	60/60		
651	BIAS (4)	}	}	Note, These files not seen when backup started. Recovery attempted, unsuccessful.							
652	comp									FeAr Clear	60
653	HD 87901						10 03 03	12 27 22	20:52:16		05:07W
654	HD 87901	"	"	20:59:30		05:08W		56			
655	comp							FeAr Clear	60		
656	comp							FeAr Clear	60		
657	HD 93521	10 42 42	38 06 00	21:01:53		04 46 W			614		
658	HD 93521	"	"	21 12 25		05 02 W			903		
659	Comp							FeAr Clear	60s		
660	HD 93521	10 42 42	+38 06	21 29 58		05 20 W			900s		
661	HD 93521	"	"	21 45 29					901s		
662	comp										
663	BIAS (4)										
664	HD 93521	10 42 42	38 06 00	22 04 33					900s		

CCD Spectr. Temp.  $-100.0^{\circ}\text{C}$  Dome Temp./Hum.  $22.6^{\circ}\text{C}/62.2\%$  Transparency Conditions *Semi cloudy* 102  
 Focus  $6.75$  CHINA DAY: Lots of fireworks about  
 Spectr. Temp. *gain = 90* Dome Temp./Hum.  $21.2^{\circ}\text{C}/71.6\%$  Top up from scratch @ 20:15 EST

Exp. Mtr.	Seeing	P <sub>1/2</sub> Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $\lambda$ mm G=6065	300mm	6604A	314	focus test		
				Telescope Reversed.				1ci		BLAS4. BAT	
								5ci			
2000	good	V= 1.36	B7V					Air mass = 3.06		Telluric std.	
2000		"	"					6ci		Telluric std.	
								7ci			
								8ci			
535	1.2"	B= 6.76	O9.5V					9ci	BLNO* pgm	Air mass 1.65 - increasing cloud	S/N 130/1
586	2"							10ci	"		S/N = 145
								11ci			
493	2"	B=6.76	O9.5V					12ci	BLNO* pgm	Air mass = 1.90	
520								13ci	"		
								14ci			
								1ci			
283		B=6.76	O9.5V					15ci	BLNO*	~ 110 S/N	



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Pg #2

Emulsion Batches:

Date JULY 1/2 1994 Observers [BLN] WDE./Tn..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc23665	HD93521	104242	380600	222001					900
666	comp							FeAr Clear	60
667	BIAS (4)								
668	comp							FeAr clear	60
669	HD124224	140712	025300	224346		0303W			550s
670	HD124224	"	"	225322					550s
671	HD124224	"	"	230257		0325W			614s
672	Comp							FeAr clear	60
673	HD124224	140712	025300	231610		0342W			900
674	HD124224	"	"	233328		0359W			875
675	Comp							FeAr Clear	60s
676	HD124224	140712	025300	235053					900
677	HD124224	"	"	00617					903
678	COMP							FeAr clear	60
679	HD124224	140712	025300	02517					703

CCD  
Spectr. Temp.  $-141^{\circ}\text{C}$   
Focus  $6.75$   
Spectr. Temp.  $29.91^{\circ}\text{h} = 90$

Dome Temp./Hum.  $21.2^{\circ}/71.7\%$  Transparency Conditions  $\text{hr. 2.7} - \text{cloudy}$   
Dome Temp./Hum.  $72.0^{\circ}\text{C} \quad 72.7\text{H}$

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	<del>Emission</del>	P.H.	Program	Remarks	Quality
354		B = 6.76	09.5V	CASS CCD	1800 $\text{mm}^{-1}$ G = 6065	300 $\mu\text{m}$	6604A	16ci	BLN 0*	125 S/N	
								17ci			
								1ci			
								18ci	<del>BLN He*</del>		
2005	12"	V = 5.0	ApSi					19ci	BLN He*	315/1 S/N	
2200	13"	"	"					20ci	"	AIR MASS = 1.091, 315 S/N	
2000		"	"					21ci	"	305 S/N.	
								22ci			
2045	2"	V = 5.0	ApSi					23ci	BLN He*	> 300/1 S/N increasing cloud	
2007	12"							24ci	"	~345 S/N	
								25ci			
2090	2"	V = 5.0	ApSi					26ci	BLN He*	AIR MASS : 2.6	
1383		"	"					27ci	"		
								28ci			
		V = 5.0	ApSi					29ci	BLN He*	CLOUDY (really low signal)	





CCD

-111 °C

Spectr. Temp. ....

Dome Temp./Hum. +20.4°C 73.2%

Transparency Conditions ... Part cloudy

106

Focus ... 675

Spectr. Temp. ....

Dome Temp./Hum. +20.0°C 75.9%

I noticed that we forgot to set CCD Temp to -110°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	<del>Emulsion</del>	P.H.	Program	Remarks	Quality
				CASS CCD	1800-2um G=6065	300um	6604A	30ci			NOTE CCD TEMP!
								5ci		CCDT = -111.4°C	
2000	2.5"	V=5.77	B2Vh	MAX	ADU ~ 8K			6ci	Telluric STD	1.01 Air Mass	
2030	"	"	"					7ci	Telluric	CCDT = -112.5°C	
								8ci			
								11ci		14K ADU at start of writes	
								1ci		CCDT = -114.0	
								3/4	focus test		

All to WORM + PERSEUS

Date 24 JUL 1951 2.13 Observers [Bin] III / Tr  
Sat / son

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC 23709 10	Comp / Stellar						0 08W +40 <sup>B</sup>	Fe Ar clear	60/60
11	Bias (4)			20:55:00					
12	Comp			21:16:02				Fe Ar clear	60
13	HD 124 224	14 07 12	+2° 53'	21 18 23		02 03W	Air Mass 1.54		1859
14	Comp			21:50:25				Fe Ar clear	60
15	Bias (4)			21:51:49					
16	HD 124 224	14 07 12	2 53	21:53:17		02 37W	Air Mass 1.704	F	1800
17	Comp			22:24:26				Fe Ar clear	60
18	HD 124 224	14 07 12	2 53	22:26:32		03 10W	Air Mass 1.943		1800
19	Comp			22:57:27				Fe Ar clear	60
20	Bias (4)			22:58:45					
21	HD 124 224	14 07 12	2 53	23:00:22		03 35W	Air Mass 2.207		1291
22	Comp			23:22:47				Fe Ar clear	60
23	<del>HD 124 224</del>	<del>14 07 12</del>	<del>2 53</del>	<del>23:26:29</del>		<del>03 50W</del>	<del>Air Mass 2.418</del>		<del>600</del>
24	Comp			23:38:10				Fe Ar clear	60

CCD  
Spectr. Temp. ... -100°C .....

Dome Temp./Hum. 7.7.6°C... 65.6%RH

Transparency Conditions... Part cloudy... clearing <sup>108</sup>

Focus ..... 6.80 .....

Top-up from scratch

Spectr. Temp. ... 90.0 gain .....

Dome Temp./Hum. ....

c Lambda

CCD FMT 480 0 50 1024 4 1

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/n/mm G=6065	300μ Full	6604A	3/4 1	focus test	Telescopes on W side of pier Too cloudy for Regulus	17.4°
								5ci		thick cloud + 3.65 AIR MASS	17.1°
806	2"-3"	S.0	ApSi	~ 140:1	S/N			6ci 7ci	Bln He*	Telescope on East side of pier	16.4°
								1ci			
1231	3.4"	S.0	ApSi	~ 175:1	S/N			8ci 9ci	Bln He*		16.2°
								10ci 11ci 1ci	Bln He*		15.6°
1244		S.0	ApSi	~ 180:1	S/N			12ci	Bln He*		15.6°
								12ci			
2203		S.0	ApSi					13ci	Bln He*		15.6°
								14ci			
2499		S.0	ApSi					13ci 14ci	13ln He*	Lost one	15.5°



Date 94 July 2/3 Observers [B] [J] [H] / [K] .....

Set (Sun)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CG23725	<del>HD</del> 124224	14 07 12	+ 2 53 00	23:51:39		4:14W	Air mass 2.871		535
26	Comp			00:01:18					
27	Bias (4)			00:02:43					
28	HD 124224	14 07 12	+ 2 53 00	00:04:10		4:29W	Air mass 3.281		693
29	Comp			00:16:39				Fe Ar clear	60
30	Comp			00:22:35				Fe Ar clear	60
31	HD 130109	14 41 12	+ 2 18 51	00:24:34		4:09W	Air mass 2.811		302
32	HD 130109	14 41 12	+ 2 18 51	00:30:16		4:16W			356
33	Comp			00:37:09				Fe Ar clear	60
34	BIAS (1)			00:43					
CG40276 79	HD 176844	18 57 03	+ 40 32 36					4x	0.067 sec
CG40280 81	"	"	"			00 20W		2x	0.133 sec
35	Comp			00:00:51				Fe Ar clear	60
36	HD 187235	19 43 55	+ 38 09 36	01:03:37		00 01 E	Air Mass 1.004		954
37	— " —			01:20:42		00 15W			911

Spectr. Temp. .... Dome Temp./Hum. ... 15.4°/75% Transparency Conditions . Mostly clear now..... 110

Focus ..... 6.80 .....

Spectr. Temp. .... 90.0 gain ..... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2200	4"	5.0	Aps:	Cass CCD	1900 lmm G=6065	300 um	6604A	15ci	Bln He*	~260:1 SIN Telescope tilt on E side of pier	15.3°
								16ci			
								17ci	Bln He*	MAX 6K ADU	15.3°
								18ci			
								19ci			
4025		3.72	AOV	~310:1	SIN			20ci	Telluric standard	Max 8K ADU	15.3°
4425		3.72	AOV	~395:1	SIN			21ci	— " —	Max 10K ADU	
								22ci			
								1ci			15.2°
<p>* 6.65 m2.0          } Both were with default 1ms integration by accident) <sup>ABOVE 300um slit</sup>          Seeing test Dome East, Tel East too          " " Medium N/W breeze,</p>											
								22ci			15.1°
4240		5.77	B8Vn	~360:1	SIN			23ci	Telluric standard	Max 10.5K ADU	14.9°
4000		5.77	B8Vn					24ci	— " —		

Date 94 July 213 Observers [Bin] III / T.n.

Sat / Sun

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
23 7 30	Comp			01:37:03				Fear clear	60
39	Bias (4)			01:38					
CG40282 285	100 Her (double star)			FROM Norton's Atlas				4x	67ms
286 -287	100 Her	18 05.8	+2605			2215W	+2610	2x	133ms
CC23740	-60 FLATS x 21 (7 flat bat)			02:03:23	02:16:58	0235W	+2°30	TUNG Ap/1A	7sec
CG40288 92	61 Cgg (Pair)	21 06.9	+3845					4x	67ms
CG40293 97	"	"	"			0007E	+3845	2x	133ms
CC23761	Comp			02:40:05					
62	HD 19629	20 53.7	+404655	02:42:40		0013W	A.R. MASS 1.002		106
63	— " —			02:47:16					128
64	Comp			02:51:03				Fear clear	60
65	Bias (4)			02:52					
66	Comp			03:00:53				Fear clear	60
67	HD 201903	21 07 30 <del>201903</del>	+77 43 15	03:03:54		0:37W	Air mass 1.213		764
68	— " —			03:17:11		0:50W			747



CCD Spectr. Temp. ... -100.4° ... Dome Temp./Hum. ... 14.7°/74.0% Transparency Conditions ... Five ...  
 Focus ... 6.80 ...  
 Spectr. Temp. ... 90.6 gain Dome Temp./Hum. ... NE Fan still on

112

Exp. Mtr.	Seeing	Avg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800.1mm G=6065	300 μm	6604A	25ci			
	3"	5.9 5.9	(185° PA, 14" sp, 1923)					1ci		Dome SW, Telescope still east side NO WIND Seeing test scale & test for current camera. (EEV 100438, installed June 21)	
(Intensifier <350)			for All sets)					26ci			
* RANGE:		11000 5.2 6.0	-14000 ADU (149° PA, 30.2" sp)					26ci		Seeing test / scale test again. FOR SAME EEV 100438 camera	
								27ci			
2500		3.94	ALV <sub>n</sub>	Max 8100 ADU				28ci		Telluric Std check [It has the Emission troughs]	
3000		3.94	ALV <sub>n</sub>	~ 300:1 S/N & Max 10K ADU				29ci	" "		
								56ci			
								1ci			
								5ci			13.8°
3000		5.91	88V <sub>n</sub>	~ 270:1 S/N				6ci	Blk Telluric Std Check	Max 6800 ADU	
3000		5.91	88V <sub>n</sub>					7ci	— 1. —		



CCD Spectr. Temp. ... 99.8° ... Dome Temp./Hum. ... 13.4° / 77.3% Transparency Conditions ... Fine

Focus ... 6.80

Spectr. Temp. ... 90.67°C Dome Temp./Hum. ... 13.4° / 77.2%

Exp. Mtr.	Seeing	Mag. √Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emission line	P.H.	Program	Remarks	Quality
				Cass CCD	1800/1mm G=6065	300 um	6604A	5ci		Telescope still on E. side of pier	
2510		5.44	B7V	245:1 S/N				5ci	Bin Telluric std check	Max ADU ~ 5.5K	
3000	3"	5.44	B7V					9ci	- " -		
								5ci			
								1ci			
								3/4	Focus Test	Telescope on W side pier	13.5°
All to WORM & PERSONS.											



115

p#1 Sun/mon

Emulsion Batches:

Date 1994 July 3/4

Observers

[Bn] III / Tr

~~overwrite cc23777~~

..CSS 386 only. 1-2 sec ahead

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc 23777 78	Comp / Stellar					00 18W	+44°		60/60
79	Bias (4)			20:45					
80	Comp			20:50:44				Fear clear	60
81	HD 87901	10 03 03	+12 27 22	20:55:14		5:18W	Air Mass 3.630		49
82	— " —	10 03 03	+12 27 22	20:57:10		5:20W	3.746		54
83	Comp			20:59:37				Fear clear	60
84	Comp			21:07:13				Fear clear	60
85	HD 121409	13 50 10	54 13 13	21:10:18		1:56W	Air Mass 1.072		53B
86	— " —	13 50 10	54 13 13	21:20:02		2:06W			570
87	Comp			21:31:47				Fear clear	60
88	Bias (4)			21:33					
89	Comp			21:38:08				Fear clear	60
90	HD 124224	14 07 12	+02 53 00	21 40 34		02 04 W	<del>Air Mass</del>		294
91	HD 124224	14 07 12	+02 53 00	21 46 43		2:11 W	Air Mass 1.573		364
92	HD 124224	14 07 12	+02 53 00	21 53 48		2:19W	1.608		426

CCD  
Spectr. Temp. ... -100°C  
Focus ... 6.77  
Spectr. Temp. ... 9.0. C. h. in.

Dome Temp./Hum. 18.8°C .. 57.2% H  
Dome Temp./Hum. ... C 24.6 BDA

Transparency Conditions . v. s. / hazy  
Top-up from scratch  
Telescope East Side again tonight  
CLD FMT 480 050 1024 4 1

Exp. Mtr.	Seeing	Mag. ✓	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/m G=6065	300 $\mu$	6604A	3/4	Focus Test		
								1ci			
								5ci		Telescope on E. side of pier	
2290		1.36	B7V					6ci	Telluric standard	Max 8.1 K ADU	18.1°
2524		1.36	B7V					7ci	— " —		
								8ci			
								9ci			
2001		5.70	AOV	~260:1	S/N			10ci	Bln Telluric Std Search	Max 10.0 K ADU	
2000		5.70	AOV					11ci	— " —		
								12ci			
								1ci			
								13ci			18.0°
7000	2"-3"	5.0	Aps1					14ci	Bln He*	MAX 7.1 K ADU	
4890		5.0	Aps1					15ci	— " —	Max 7.5 K ADU	17.4°
6000		5.0	Aps1	~315:1	S/N			16ci	— " —	Max 12.5 K ADU	

Date 1994 July 31st Observers [E.B.] III / T.n.

Sun / Mon

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC23793	Comp			22:02:51				Fear Clear	60
94	HD 124 224	14 07 12	+02 53 00	22:06:15		2:31W	Airmass 1.671		433
95	HD 124 224	14 07 12	+02 53 00	22:14:54		2:41W	1.725		476
96	HD 124 224	14 07 12	+02 53 00	22:23:58		2:50W	1.786		498
97	Comp			22:33:45				Fear Clear	60
98	Bias (4)			22:35					
99	HD 124 224	14 07 12	+02 53 00	22:36:59		3:09W	1.890		559
800	HD 124 224	14 07 12	+02 53 00	22:47:26		3:16W	1.990		618
01	HD 124 224	14 07 12	+02 53 00	22:59:26		3:28W	2.117		642
02	Comp			23:11:37				Fear Clear	60
03	HD 124 224	14 07 12	+02 53 00	23:14:03		3:42W	2.294		623
04	HD 124 224	14 07 12	+02 53 00	23:26:03		3:56W	2.496		698
05	Comp			23:40:44				Fear Clear	60
06	Bias (4)			23:42					
07	HD 124 224	14 07 12	+02 53 00	23:44:00		4:15W	2.885		796



Spectr. Temp. .... Dome Temp./Hum. 17.5/53.9% Transparency Conditions .....

Focus ... 6.77 .....

Spectr. Temp. 90.0 Gain ... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality	
				Cass CCD	1800/1mm h=6065	300 um	6604A	17c		Telescope still on E. side of pier		
6000	5.0	Aps:	~330:	1	S/N			18c	Bln He *	13.5 K ADU Max		
6000	5.0	Aps:	~325:	1	S/N			19c	— " —	11.3 K ADU Max	17.1°	
6200	5.0	Aps:	~345:	1	S/N			20c	— " —	10.5 K ADU Max	17.0°	
								26c				
								1c				
6610	5.0	Aps:	~360:	1	S/N			22c	Bln He *	12.4 K ADU Max		
6600	5.0	Aps:	~370:	1	S/N			23c	— " —	13.4 K ADU Max		
6610	5.0	Aps:	~360:	1	S/N			24c	— " —	12.7 K ADU Max	16.8°	
								25c				
6610	5.0	Aps:	~380:	1	S/N			26c	Bln He *	13.3 K ADU Max	16.7°	
6635	5.0	Aps:	Notes: exposure meter response changed from previous exposures						27c	— " —	col 24: parts saturated	
								28c				
								1c				
6000	5.0	Aps:	~390:	1	S/N			29c	Bln He *	13.1 K ADU Max	16.6°	

Date 1994 July 3/4 Observers L.B. J. III. J. T. ....

Sun/Mon

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
u23808	HD 124224	14 07 12	+02 53 00	23:58:53		4:31W	A: Mars 3.349		903
9	Comp			00:15:23				Fe Ar clear	60
10	HD 124224	14 07 12	+02 53 00	00:17:29		4:54W	4.278		1096
11	Comp			00:36:44				Fe Ar clear	60
12	Bias(4)			00:38:07					
13	Comp			00:48:01				Fe Ar clear	60
14	HD 187235	19 43 55	38 09 36	00:51:19		0:19 E	1.006		393
15	HD 187235	19 43 55	38 09 36	00:58:28		0:10 E			430
16	Comp			01:06:55				Fe Ar clear	60
CG402 94	HD 187120	19 43 12	+45 29						4 x 67ms
97									2 x B3ms
98									
99									
17	Comp			01:27:18				Fe Ar clear	60
18	HD 187961	19 47 30	+10 05 42	01:29:53		0:28W	1.207		1219
19	HD 187961	19 47 30	+10 05 42	01:50:50		0:50			1259
20	Comp			02:13:19				Fe Ar clear	60

Spectr. Temp. .... Dome Temp./Hum. ... 16.6°/56.5% Transparency Conditions .. Sl. hazy .....

Focus ..... 6.77 .....

Spectr. Temp. ... 6.6 mm. 9.2. Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Mag. √	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion element	P.H.	Program	Remarks	Quality
5800		S.0	ApSi	Cass CCD	1800 l/mm G=6005	300 um	6604A	14ci	Bln He*	Telescope still on E side of pier	
								17ci			16.4°
5000		S.0	ApSi					19ci	Bln He*		
								21ci			16.2°
								1ci			
								25ci		CCD T = -100.4°	16.3°
3600		5.77	B8Vh	~ 260:1 S/W				26ci	Telluric Standard	8.1 K ADU max	
4000		1.5° 5.77	B8Vh					26ci	— " —	10.3 K ADU Max	
								28ci			
		1.2° 7.52	K0 III						Seeing Test	No fons tonight	
									" "	Telescope still East Side	
								5ci			16.2°
4000		2.3° 6.54	B7V	~ 275:1 S/W				6ci	Telluric Std Search Bln	Max ADU 7.1 K	
4200		6.54	B7V					7ci	— " —	↑ Hα shows emission	15.5°
								8ci			



Date 1994 July 314 Observers [Bln] III / Tn

Swal Min

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
a 238 21	Bias (4)			02:15					
22	Comp			02:17:45				Fe Ar clear	60
23	HD 196504	20 32 49	+ 26 6 50	02:20:38		0:21W	Airmass 1.051		394
24	HD 196504	20 32 49	+ 26 6 50	02:28:04					435
25	Comp			02:36:18				Fe Ar clear	60
26	Comp			02:41:41				Fe Ar clear	60
27	HD 207636	21 45 15	69 41 13	02:43:45		0:15W	Airmass 1.115		1014
28	HD 207636	21 45 15	69 41 13	03:01:38					1024
29	Comp			03:19:27				Fe Ar clear	60
30	Bias (4)			03:20					
31	Comp			03:23:07				Fe Ar clear	60
32	HD 211211	22 10 32	42 27 28	03:25:14		0:10 E	Airmass 1.000		457
33	HD 211211	22 10 32	42 27 28	03:33:24					484
34	Comp			03:42:26				Fe Ar clear	60
35-55	FLAT X 21 (7 flat bat)					3:30W	+ 3:30	Fe Ar tung ap '14	7







Spectr. Temp. ....

Dome Temp./Hum.  $LS: 2^{\circ}/59.3\%$ 

Transparency Conditions .....

Focus ..... 6.177 .....

Spectr. Temp. ..  $LS: 59.9^{\circ}$ 

Dome Temp./Hum. ....

Note by 4:25 it seems dewar  
was just starting to warm up.

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion C. K. 100	P.H.	Program	Remarks	Quality
				Cass CLA	1900 $\mu$ /mm h=6065	300 $\mu$ m	6604A	1ci			
								3/4	Focus Test	Telescope still on E side of pier	
				All	to	worms	perseus.				



CCD Spectr. Temp.  $-130^{\circ}\text{C}$

Dome Temp./Hum.  $+20.4^{\circ}\text{C}$  54.8%

Transparency Conditions .. Part. cloudy

Focus ... 6.7A

FANS ON. SOUTH TURNED OFF @ 2100

Spectr. Temp.  $\text{cgain} = 90$

Dome Temp./Hum. ....

480 0 50 1024 4 1 ccd fmb.

C 214MB/DX

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Temp = $+20.2^{\circ}\text{C}$				CASS CCD	1800/1mm G = 5910	300m Full length	6400P	3/aci	focus test		
								1			
								5			
40*	6.19	F6I -IIb		4700	Max ADU			6	Rm Pgm	* Exposure meter reading very slow	
								7			
	1-2"	6.66	dG8						Seeing Test	Dome W, light E breeze	
	"	"	"						Seeing Test		
								8			
1000	6.66	dG8		5480	Max ADU			9	Std. Vel.		
								10			
								1			
								11			
1200	2-3"	6.15	G0Ib	6400	MAX ADU			12ci	Rm Pgm		
								13ci			
								13ce			





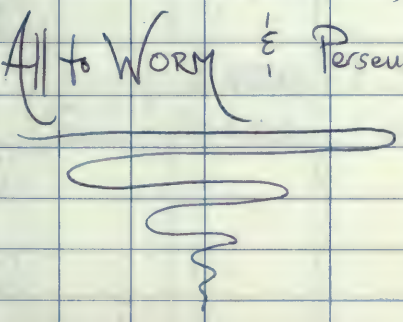
Spectr. Temp. .... Dome Temp./Hum.  $+19.8^{\circ}\text{C}$   $56\% \text{RH}$  Transparency Conditions .. Hazy .. + Clouds .. 128  
 Focus ... 6.74 .....  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	$\frac{F}{\lambda}$ √Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10.70		6.01	GO V	CASS CCD	1500nl/mm G=5910	300 $\mu$	6400A	17c1	Std Vel Rm pgm	Max ADU 5480	
								15			
								16		Clouds rolling in ..	
<del>10.70</del> 1340		5.75	GO Ib					17	Rm pgm	Max ADU = 7400	
								18			
								1			
								19			
271		7.48	GO Ib					20	Rm pgm	Max ADU = 1100	
								21			
								22			
Not * functioning	1.2"	5.8 -5.9	F2					23	Rm pgm	MAX ADU = 2900	VERY hazy < 200/1 S/N
								24c1			
870*		"	"					23	Rm pgm	Max ADU = 4920	





Spectr. Temp. .... Dome Temp./Hum.  $+18.5^{\circ}\text{C}/65.6\%$  Transparency Conditions *Thick Purple Haze* <sup>130</sup>  
 Focus *6.74* .....  
 Spectr. Temp. .... Dome Temp./Hum. ....  
*All Around.*

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 $\mu\text{m}$	300 $\mu\text{m}$	6400A	25			
200	8.4	GOIB			$G=5900$			26	Rm pgm		
								27			
								1			
								28			
1200	2"	6.19	T6I -IIb			4400		29	Rm pgm	2nd exposure of night	
								30			
								31			
								3/4	Focus Test	High Humidity + very hazy and cloudy.	
								1		= close.	
<p><i>All to WORM <math>\frac{1}{2}</math> Perseus</i></p> 											

Date 1994 July 5/16 Observers [Blm.] III / H. lw  
Tue/Wed

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc 23907/B	Comp / Seller Hartman							FeAr clear	60/60
09	Bias (4)			21:03					
10	Comp			21 16 58				FeAr clear	60
11	HD87901	10 03 03	+12 27 22	21 19 27		5:51 W			128
12	HD87901	10 03 03	+12 27 22	21 22 12		5:53 W			105
13	Comp			21:25:11				FeAr clear	60
14	Comp			21 34 10				FeAr clear	60
15	HD93521	10 42 42	+38 06 00	21 36 35		5:39 W	Air mass 2.104		757
16	Comp			21:51:36				FeAr clear	60
17	Comp			22:10:20				FeAr clear	60
18	HD 159139	17 27 54	28 28 47	22:12:52		0:28 E			669
19	HD 159139	17 27 54	28 28 47	22:24:19		0:21 E	Air mass 1.040		425
20	Comp			22:32:33				FeAr clear	60
21	Bbias (4)			22:34					
22	Comp			22:40:47				PeAr clear	60

CCD  
 Spectr. Temp. .... 100.0° ..... Dome Temp./Hum. 23.8°C / 76.4% Transparency Conditions ... Partially Cloudy .....  
 Focus ..... 6.71 .....  
 Spectr. Temp. ... Again ..... Dome Temp./Hum. ....  
 CCDENT 490 0 50 1024 4 1

Exp. Mtr.	Seeing	$\frac{F}{V}$ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion <i>elementa</i>	P.H.	Program	Remarks	Quality
* Counts at 2 per second exposure meter closed.				Cass CCD	1800 $\lambda$ mm $\lambda = 6065$	300 $\mu$ m	6604A	3/4	Focus TEST	T = 23.8, foc = 6.71	
								1			
								5		Telescope Reversed Now	
2025		1.36	BTV					6	Telluric	Air Mass End = 5.86	
2200		1.36	BTV	max AQu	11.3K			7	Telluric	6.707	
								8			
								9			
1245		B = 6.76	09.5V	~ 110:1	S/W			10	Bin 0* pgm	clouded in from N NW	
								11			
								12			
1706		5.62	AIV	~ 160:1	S/W			13ci	Bin Telluric Std Search	Through many clouds Air Mass End = 1.0432	
2005		5.62	AIV	~ 200:1	S/W			13ci	— 11 —		
								14ci			
								1ci			
								15ci			



Date 1994 July 5/6 Observers [Bin.] III / H.L.W.

Tue / Wed

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
23	HD 160181	173324	242210	22:43:20		0:06 E			53A
24	Comp			22:54: <del>00</del> <sup>29</sup>				FeAr Clear	60
25	Bias (4)			22:55					
26-46	FLATS x 21					5:30 W	+30	Tung ap 1/4 FeAr clear	7 60
47	Comp			23:58:07					
48	HD 167965	181232	420730	00:01:14		0:31 W	Air Mass 1.005		441
49	HD 167965	181232	420730	00:09:20		0:43 W	1.0098		622
50	Comp			00:23:28				FeAr Clear	60
51	Bias (4)			00:24					
52/3	Comp/Stellar	Hartman Mask	Position			0:50 W	+42°	FeAr Clear	60/60

Spectr. Temp. .... Dome Temp./Hum.  $22.5^{\circ}/84.5\%$  Transparency Conditions *Partially Cloudy*

Focus ..... *6.71* ..... Notes: exposure meter at ambient

Spectr. Temp. ... *Gain* ..... Dome Temp./Hum. .... *dome temp.*

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1363		562	A2Vn	Cass ccd	1300x1mm h=6065	300 um	6604A	17 <sup>12</sup> <del>10ci</del>	Bln Telluric Std Search	Telescope still on E. side of pier → Clouded in totally at end, Air Mass End=1.0615 SNR ~100	
								1B			
								1			
								18ci			
								19ci			
2810		559	B7IV	~205:1 S/W				20ci	Telluric Standard	Max ADU 4.3K	21.8°
2300		554	B7IV					21ci	"	cloud took over	
								16			
								1ci			
								3/4	Focus Test	Telescope still on E. side of pier	

NOTE: ADU values range  
7770-10258





Spectr. Temp. .... Dome Temp./Hum. 21.8°/86.1% Transparency Conditions Partially Cloudy, Hazy<sup>130</sup>  
 Focus ..... 6.71 ..... Dome Fans Off. Hot & Humid.  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr. *	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality	
* No Exposure Meter tonight (It's being baked out)				Cass CCD	1800ℓ/mm G=5115	300μ	5303A	3/4	Focus Test	T=21.7, f <sub>oc</sub> =6.71	good	
								1				
								5				
			9.83	MO				6	Vys Std.			
								7				
								8				
			10.7	MZ				9	Vys Pgm			
								10				
								1				
								11				
								1				
			All to Perseus & WORM								95% Humidity on catwalk, Clouds rolling in.	

137 #1

Sat/Sun

Date 1994 JULY 9/10

Observers [BLN]/WDE/HLW/SMT

Emulsion Batches:  $\downarrow$  Note the most that  
 ..... was not turned down  
 ..... all observations are  
 ..... at about  $-113^{\circ}\text{C}$

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc23971/2	stellar/comp Hartman							FeAr clear	20/30
973	Bias x 4								
974	comp							FeAr clear	60
975	HD 148 283	16 21 50	$37^{\circ} 37' 18''$	02:41:44		5:24 W	$+37^{\circ}$		789
976	HD 48 283	"	"	02:55:05		5:37 W			759
977	comp							FeAr clear	60
978	comp							FeAr clear	60
979	HD 158 352	17 23 44	$+00^{\circ} 24' 42''$	03:18:28		4:57 W	$0^{\circ}$	799 <sup>6</sup>	<del>60</del>
980	comp							FeAr clear	60
981	Bias x 4								
982	comp							FeAr clear	60s
983	HD 192 518	20 10 08	$+28^{\circ} 23' 30''$	03 40 03		2:31 W	$+29^{\circ}$		600
984	comp							FeAr clear	60s
985	Bias x 4								
986-995	FLAT x 10					2:37 W	$+28^{\circ}$	Tung clear	135

All to WORMes &amp; Perseus





Date 94 Jun 10 11 Observers [Bin] III / H.W. / Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	<del>Declination</del> Air Mass	Comparison Type/Filter	Exp.
CC 23996/97	Stellar/Comp Hertzsprung							FeAr clear	60
98	Bias (4)			20:45					
99	Comp			20:59:46				FeAr clear	60
24000	HD 87901	10 03 03	12 27 22	21:02:27		5:52 W	5.956		33
061	HD 87901	10 03 03	12 27 22	21:04:15		5:54 W	6.230		52
2	Comparison			21:06:19				FeAr Clear	60
3	Comp			21:12:27				"	"
4	HD 124224	14 07 12	+02 53 00	21:15:18		2:06 W	1.555		327
5	HD 124224	14 07 12	+02 53 00	21:21:39		2:18 W	1.606		
6	Comp			21:35:36				FeAr Clear	60
7	Bias (4)			21:38					
8	HD 124224	14 07 12	02 53 00	21:39:29		2:36 W	1.701		704
9	HD 124224	14 07 12	02 53 00	21:52:05		2:49 W	1.781		716
10	Comp			22:05:41				FeAr clear	60
11	HD 124224	14 07 12	02 53 00	22:07:57		3:5 W	1.8956		694

ccd Spectr. Temp. ... -100.0... Dome Temp./Hum. 17.8°/59.9% Transparency Conditions Scattered Clouds on horizon 146

Focus ..... 6.77 .....

Top-up from scratch Foc on  
N-fun turned of @ 2100  
ccd fnt 480 050 1024 41

Spectr. Temp. again = 9.9 Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Filt	Slit	Emulsion Clemnd.	PH Ci	Program	Remarks	Quality
				ccd cass	1800 81mm h=6065	306 um	6604A	3/4	Focus TEST	adjusted but Note: slit not perfectly	
								1		h to dispersion ( $\frac{\Delta x}{\Delta y} \approx \frac{1.5}{40}$ pixels)	
3706								5		Telescope mEast	
2000	1.36		BTV					6	Telluric standard	side of pier	
2590	1.36		BTV					7	Telluric Standard		
								8			
								9			
2528		5.0	ApSi			~250:1 S/N		10	Bln He*		
5180		5.0	ApSi			~375:1 S/N		11	Bln He*		
								12			
								1			
5100		5.0	ApSi			~370:1 S/N		13	Bln He*	Max ADU 11.5K	16.8°
5000		5.0	ApSi			~360:1 S/N		14	"	Max ADU 12.5K	16.7°
								15			
4800		5.0	ApSi			~365:1 S/N		16	Bln He*	Max ADU 12.3K	16.5°
								1			

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PAGE 2 Sun/Mon

Emulsion Batches:

Date 94... July... 10/11. Observers [Bin] ~~PH~~ / Hlw. / Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	AIR MASS Declination	Comparison Type/Filter	Exp.
cc24012	HD 124224	14 07 12	02 53 00	22: 20: 05		3 17 W	2.0065		710
13	comp			22: 32: 59				FcAr clear	60
14	HD <del>124224</del>	14 07 12	02 53 00	22: 35: 32		3 33 W	2.180		753
15	HD 124224	"	"	22: 48: 23		3 47 W	2.3685		829
16	comp			23: 03: 29				FcAr clear	60
17	bias (4)								
18	HD 124224	14 07 12	02 53 00	23: 05: 48		4 09 W	2.7374		1039
19	HD 124224	"	"	23: 23: 39		4 29 W	3.2472		1177
20	comp			23: 44: 20				FcAr clear	60
21	HD 124224	14 07 12	02 53 00	23: 46: 16		4 59 W	4.616		1637
22	comp			00: 14: 43				FcAr clear	60
23	bias (4)			00: 16:					
cg40306 -944	4* HD176844	18 57 03	+40 32 36						.067
cg40310 11	2* " "	"	"		0: 46				.133
24	comp			00: 59: 56				FcAr clear	60



CCD Spectr. Temp. .... -100.0°C. Dome Temp./Hum. 16.4°C / 61.4% Transparency Conditions ... clear.....

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Focus ..... 6.77.....

Spectr. Temp. 29.2 = 90. Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4700		5.0	ApSi	CCD CASS	18002/nm G = 6065	306 μm	6604 A	17	Bln He*	~ 360:1 S/N max ADU 11.2 K	16.3°
								18		Telescope still on East side of pier	
4750		5.0	ApSi	~ 370:	1 S/N			19	Bln He*	max ADU 12.5K	16.3°
4700		5.0	ApSi	~ 375:	1 S/N			20	Bln He*	max ADU 13.3K	16.1°
3419								21			
								1			
4600		5.0	ApSi	~ 385:	1 S/N			22	Bln He*	max ADU 11.5	15.7°
4500		"	"					23	"	max ADU 10K	15.7°
3408								24			
4500		5.0	ApSi					25	Bln He*	(cloud)	15.4°
								25			
								<del>25</del>			15.5°
		6.65	M2III						Seeing Test	Telescope back on W side of pier	
		"	"						Seeing Test	Dome W, wind med NW	
								26			

Date ... 1994 ... Jul. 10/11 Observers ... [B]nJ III / Hlw / Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
24	HD 187235	19 43 55	38 09 36	01 02 40		0:21	Air Mass = 1.007		531
26	HD 187235	19 43 55	38 09 36	01 12 15		0:40 W	1.0138		1069
27	Comp			01:11:52				Fe Ar clear	60
28	Comp			01:37:29				Fe Ar clear	60
29	HD 187961	19 47 29.5	40 05 42	01:40:05		1:07 W	Air Mass 1.2459		1303
30	Bias (4)			02:02:44					
31	Comp			02:05:25				Fe Ar clear	60
32	Comp			02:10:49				Fe Ar clear	60
33	HD 199629	20 53 21	40 46 55	02:13:20		0:16 W	1.0027		147
34	HD 199629	20 53 21	40 46 55	02:17:39		0:22 W	1.0038		
35	Comp			02:23:22				Fe Ar clear	60
36	Comp			02:31:12				Fe Ar clear	60
37	HD 205314	21 29 25	49 32 02	02:34:50		0:15 W	1.0068		912
38	Comp HD <del>205314</del>			02:52:35				Fe Ar clear	60
39	HD 205314	21 29 25	49 32 02	02:55:15		0:37 W	1.00557		1017

Spectr. Temp.  $-100.4^{\circ}C$  Dome Temp./Hum.  $15.2^{\circ}/66.4\%$  Transparency Conditions Clear with passing clouds <sup>144</sup>Focus  $6.77$ 

South Fan ON

Spectr. Temp.  $\text{again} = 90$  Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Fig. ✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion Clear/Date	P.H.	Program	Remarks	Quality
1875		5.77	B8Vn	Cass CCD	1800 f/mm h=600 $\mu$ s	300 um	6604A <sup>o</sup>	27ci	Telluric Standard	Telescope on W. side of pier	
3750		5.77	B8Vn	$\sim 330:1$	S/W			28	Telluric standard	Max ADU 9 K	
								29ci			
								Sci			15.0 $^{\circ}$
2000		6.54	B7V					6ci	Bln Telluric Std Search	H- $\alpha$ emission	14.7 $^{\circ}$
<del>2000</del>								7ci			
								8ci			14.6
3000		3.94	A1Vn					9ci	Bln Telluric Std Search	H- $\alpha$ emission	
4600		3.94	A1Vn					10ci	— 11 —	" —	14.5 $^{\circ}$
3760								11ci			
3719		5.75	A0V					12ci	Bln Telluric Std Search		
3700								13ci			14.4 $^{\circ}$
3659								14ci			
3700		5.75	A0V					15ci	Bln Telluric Std Search		14.2



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Page #4

Date .. 1994 .. Jul. 10/11 Observers .. [Bin] III / ~~HW~~ / 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 <sup>2</sup>	Comparison Type/Filter	Exp.
cc 240 40	Comp			03:13:41				Fc Ar clear	60
41	Bias (4)			03:18					
42	Comp			03:21:59				Fc Ar clear	60
43	Nova Cyg 92	20 27 43	52 17 39	03:24:27		208 W	1,0859		900
44	Comp			03:42:06				Fc Ar clear	60
45	-64 20x Flats					3:30 W	+3:30°	Tung 1/4 ap	6
65	Bias (4)								
66/67	Stellar Hertman							Fc Ar clear	60/60
Jul 11 day work		KK							
68	Comp							Fc Ne Clear	1
69	Comp							" "	"



147g #1

Date 1994 JULY 11/12 Observers [BLN] WDE/HLW

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc24071	comp stellar Hartman					0:23W		FeAr clear	60/6
072	BIAS (4)								
073	comp							FeAr clear	60
074	HD 87901	10 03 03	12 27 22	21:00:47		5:55W			44
075	HD 87901	"	"	21:02:14		5:56W			51
076	comp							FeAr clear	60
077	comp							FeAr clear	60
078	HD 124224	14 07 12	02 53 00	21:12:29		2:06W			202
079	HD 124224	"	"	21:16:28		2:10W			199
080	HD 124224	"	"	21:20:05		2:15W			220
081	comp							FeAr clear	60
082	HD 124224	14 07 12	02 53 00	21:26:50					225
083	HD 124224	"	"	21:30:52					238
084	HD 124224	"	"	21:35:07		2:29W			259
085	comp					2:34W		FeAr clear	60



CCD  
Spectr. Temp. -100°C  
Focus 6.74  
Spectr. Temp. gain = 90

Dome Temp./Hum. 21.2°C/54.5% Transparency Conditions part cloudy

dome fans off.

Exp. Mtr.	Seeing	V. Prtg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2"			CASS CCD	1800nm G=6065	306nm	6604A	314	focus test		
								1		BIAS4.BAT	
								5		Telescope on E side of pier.	
2000	1.36	B7V						6	Telluric std.	Air Mass ~ 5.85	4055/N
2000	"	"						7	"	Air Mass ~ 6.55	←
								8			
								9			
2500	5.00	ApSi						10	Bln He *		
2500	"	"						11	"	S/N ~ 270	
2500	"	"						12	"		
								13			
2700	5.00	ApSi						14	Bln He *		
2900	"	"						15	"	SIN ~ 295	
3000	"	"						16	"		
								17			

Clouds

149 # 2

Emulsion Batches:

Date 1994 JULY 11/12 Observers [BLN] WDE (HLW)

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
086	BIAS (4)								
087	HD124 224	140712	025300	21:44:56					356
088	HD124224	"	"	21:51:35		2:47 W			341
089	HD124224	"	"	21:57:52		2:53 W			365
090	Comp							FeA Clear	60
091	HD124224	140712	025300	22:05:10		3:02 W			352
<del>092</del> 092	HD124 224	"	"	22 13 18		3:09 W			377
093	HD124224	"	"	22:19:55				<del>FeA Clear</del>	<del>60</del>
094	comp							FeA Clear	60
095	HD124224	140712	025300	22:29:26					414
096	HD124224	"	"	22:36:45		3:33 W			418
097	HD124224	"	"	22:43:59		3:41			451
098	Comp							FeA Clear	60
099	HD124224	14 07 12	02 53 00	22:55:05		3:53 W			484
24100	HD124224	14 07 12	02 53 00	23:03:37		4:03 W			574

Spectr. Temp. .... Dome Temp./Hum.  $20.0^{\circ}\text{C}/57.1\%$  Transparency Conditions ... Clear .....

Focus ..... 6.77 .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800nm G=6065	306um	6604A	1		rel. E of pers.	
4000		5.00	ApSi					12.8	K18	BLN He*	
4000		"	"					14.8	19	"	S/N ~ 355
4000		"	"					13.1	20	"	
									21		
4000		5.00	ApSi					13.2	22	BLN He*	
4000		"	"					12.5	23	"	S/N ~ 355
		"	"					14.0	24	"	
									25		
4000		5.00	ApSi					13.2	26	BLN He*	
4000		"	"						27	"	S/N ~ 360
4000		"	"					10.7	28	"	
									29		
4000		5.00	ApSi					11.8	5	BLN He* pgm	
4014		"	"						6	"	S/N ~ 350





CCD  
Spectr. Temp. .... -100 °C  
Focus ..... 6.74  
Spectr. Temp. .... c.gain = 90

Dome Temp./Hum. 18.8°C/56.3% Transparency Conditions Scattered Thin Clouds  
Dome Fans OFF  
CSS Ahead of WWU by 5s. 152

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4000		5.00	APSi	Cass CCD	1800 l/mm G=6065	306μ	6604A	6 8 1	Bln He* pgr		
4000		5.00	APSi		Max ADU = 14.2			9	Bln He*		
		"	"		MAXADU ~ 13.3K			10	"		
		"	"					11	"		
								17			
								2			
5229								12			
4000		2.99	ADIn		Max ADU = 11.5 K			13	Telluric STD		
4000		"	"		Max ADU ~ 11.0 K			14	"		
								15			
		7.32	KD III						Seeing Test	Dome W, no wind.	
		"	"						Seeing Test		
								1			







Pg #1  
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Tue/Wed

Date 1994 Jul 12/13 Observers [B]~] III/Hlw

Emulsion Batches:

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Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle End	Declination	Comparison	
		1900	1900	1900	1900	E.S.T.	E.S.T.	E.S.T.	E.S.T.			Type/Filter	Exp.
cc24153/4	Comp/Stellar	Hartman		Mask posn'						Zenith	West of pier	FeAr Clear	60
55	Bias (4)					20:29						FeAr Clear	60
56	Comp					20:43:08						FeAr Clear	300 <del>400</del>
57	HD87901	10 03 03	12 27 22	20 47 49				5:50 W		Air Mass End = 5.712			300 <del>400</del>
58	H087901	10 03 03	12 27 22	20 54 07				5:56 W		6.472			300
59	Comp					21:01:50						FeAr clear	60
60	Comp					21:07:02						FeAr clear	60
61	HD93521	10 42 42	38 06	21 09 20				5:57 W		2320			1847
62	Comp					21:41:46							
63	Bias (4)					21:43							
64	HD 93521	10 42 42	38 06	21:44:10				6:17 W		2626		FeAr clear	900
65	Comp											FeAr clear	60
66	Bias (4)					22:40							
67	Comp					22:42:24						FeAr clear	60
68	HD 150100	<del>10 33 51</del>	<del>53 60</del>	<del>22 45 10</del>				<del>1:25 W</del>		<del>1.0477</del>			462

Spectr. Temp.  $-100.0$  Dome Temp./Hum.  $24.3^{\circ}\text{C}/71.6\%$  Transparency Conditions  $\text{Partial Clouds}$  156  
 Focus  $6.72$  Dome Fans ON  
 Spectr. Temp.  $\text{Cgs} = 20$  Dome Temp./Hum.  $480 \ 0 \ 50 \ 1024 \ 4 \ 1 \ \text{cdfmt}$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Case CCD	1800 $\mu\text{m}/\text{mm}$ G = 6065	306 $\mu$	6604R	3/4	Focus Test		good
								1			
53				$\sim 360:1 \ \text{S/W}$				5		Tel E. of pier, exposure meter - running very slow.	
		136	B7I	Max ADU $\sim 8518$				6	Telluric Std		
1809		1.36	B7V	max ADU $\sim 9.4\text{K}$				7	" "	obs. through clouds 24.1	
								8		Exposure meter - back to normal for this one.	
								9			
984		7.04	09.5I	$\sim 190:1 \ \text{S/W}$ Max ADU 3500				10	Bln 0* pgm	Catwalk Humidity = 82% at 2100	23.6°
								11			
								1			
150		7.04	09.5I	$\sim 80:1 \ \text{S/W}$ max ADU 850				12ci			
								13ci			
								14ci	Huerikan crashed		
								15ci			
								16ci			22.7°
2200		5.65	B7SV	$\sim 275:1 \ \text{S/W}$ MAX ADU 9K				4ci	Bln Telluric Std <del>Std</del>	B7SV:ini	



Date . 94. JULY . 12/13 Observers ... [Bin] III / Hlw ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination Ar (mag)	Comparison Type/Filter	Exp.
024169	Comp			22:55:12				Fair clear	60
70	Comp			22:57:56				Fair clear	60
71	(HD 150118) HD 150117 →	16 33 52	53 07 31	22:59:53		1:34W	1.0509		279
72	Comp			23:07:01				Fair clear	60
73-92	FLAT x 20		~30°			~ 0:0		Tung 1/4	6
93	Bias(4)			23:55					

Spectr. Temp. ... 101.0 C ... Dome Temp./Hum. ... 22.7°/79.1% Transparency Conditions ... 158

Focus ... 6.72

Spectr. Temp. ... 69.5 in ... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pte. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 21mm G=60x5	306 um	6604A	Sci		Telescope still on E side	
3754								6ci			
2200		6.58 5.56	A11M B9V	~ 200:1 SW MAX ADU 7.1K				7ci	Bin Telluric Std Secck	(Binary - both) stars in slit	
								8ci		Shutters closed	
								9ci		(lightning about) 22.4°	
								1			
				Waited for clouds & lightning to pass					A	1	1
				Moved telescope to W side of pier					T		0
				Clouds re-appeared					W	O	R
				Lightning re-appeared					M		
				Humidity on catwalk now at 92% (01:00)					a	~	d
				Good Close, Good Close...						Perseus	

Date 1994 July 13/14 Observers [Bin] III / H. W...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination Air Mass	Comparison Type/Filter	Exp.
CC24194/95	Comp / STELLAR HARTMAN							FeAr clear	60/60
96	Bias (4)			20:44					
97	Comp			20:49:41				FeAr clear	60
98	HD 87901	10 03 03	+12 27 22	20:51:40		5:54W	6.1592		50
99	HD 87901	10 03 03	+12 27 22	20:53:04		5:55W	6.337		62
200	Comp			20:55:13				FeAr clear	60
01	Comp			21:00:17				FeAr clear	60
02	HD 93521	10 42 42	+38 06 00	21:05:18		5:42W	2.1371		900
03	Comp			21:21:33				FeAr clear	60
04	HD 93521	10 42 42	+38 06 00	21:23:23		6:00W	2.368		907
05	Comp			21:39:58				FeAr clear	60
06	HD 93521	10 42 42	+38 06 00	21:47:46		6:18W	2.654		900
07	Bias (4)			21:57					
08	Comp			21:58:23				FeAr clear	60
09	HD 93521	10 42 42	+38 06 00	22 00 09		6:37 W	3.020		900



Spectr. Temp. ... -100.0 C. Dome Temp./Hum. ... 19.6°/62.2% Transparency Conditions ... Clear, ... scattered clouds ...  
 Focus ... 6.75 ... Dome fins off on horizon,  
 Spectr. Temp. ... again = 9.2. Dome Temp./Hum. ...  
 CCD fnt 480 050 1024 41

160

Exp. Mtr.	Seeing	V Filter Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion element	P.H.	Program	Remarks	Quality
				Cass ccd	1800 21mm (7=6065)	306 um	6604A	3/4	Focus TEST	Telescope on W side of pier	
								1			
3090	1.36	B7V						5ci		Telescope on E side of pier	
2500	1.36	B7V						6ci	Telluric Standard	Max ADU 13.3K	
2500								7ci	— " —	" — " 12.5K	
3041								8ci			
	7.04	09.5V						9ci			18.4°
806					~160:1 S/N			10ci	Blnd* pgm	Max ADU 2.1K	
								11ci			18.2°
660	7.04	09.5V			~160:1 S/N Max ADU 1.9K			12ci	Blnd* pgm	(21:30) Humidity 80% on catwalk	
								13ci			17.9°
570	7.04	09.5V			~155:1 S/N Max ADU 1.7K			14ci	Blnd* pgm		
								1			
3200								15			
455	7.04	09.5V			~145:1 S/N Max ADU 16K			16	Blnd* pgm		

Pg #2  
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Date 1994 Jul 13/14 Observers [Blm] III/Hlw

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination- Air Mass	Comparison Type/Filter	Exp.
CC24210	Comp			22:15:50				FeAr Clear	60
11	HD93521	10 42 42	+38 06 00	22:17:27		6:54W	3.468		915
12	Comp			22:33:45				FeAr clear	60
13	HD93521	10 42 42	+38 06 00	22:36:00		7:02W	>4		900
14	Comp			22:52:02				FeAr clear	60
15	Bias(4)			22:53					
16	Comp			23:00				FeAr clear	60
17	HD167370	18 09 45	38 44 44	23:02:21		0:12W	1.0048		800
18	Comp			23:18:58				FeAr clear	60
19	Comp			23:28:57				FeAr clear	60
20	HD167387	18 09 55	60 23 02	23:32:32		0:55W	1.0547		1450
21	Comp			23:57:54				FeAr clear	60
22	Bias(4)			23:59					
23	Comp			00:05:48				FeAr clear	60
24	HD177724	19 00 49	13 42 53	00:07:40		0:13W	1.1564		63

Spectr. Temp.  $-100.5^{\circ}\text{C}$ Dome Temp./Hum.  $17.2/68.7$ Transparency Conditions *Clear*

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Focus  $6.75$ Spectr. Temp.  $29.9^{\circ}\text{C}$ 

Dome Temp./Hum. ....

Exp. Mtr.	Seeing	V Pts. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion clambda	P.H.	Program	Remarks	Quality
				Cass CCD	18002/mm	306 $\mu$	6604 Å	17		Telescope still on E side of pier	17.1°
340	5-6"	7.04	09.5	$\sim 140:1$ S/N Max ADU 1.3 K				18	Bln O* pgn		17.0°
								19ci			
216		7.04	09.5V					20ci	Bln O* pgn	(22:40) 82% Humidity on catwalk	
3048								21ci			16.6°
								22			
1460		6.04	B9 III	exposure meter reset itself <del>and</del> after about 300 counts Max ADU 4.9 K				23ci	Bln Telluric Std Search	Telescope now on W side of pier $\sim 260:1$ S/N	16.7°
								24			
3325								25ci			16.4°
2000		6.31	A1 Vm	$\sim 270:1$ S/N MAX ADU 6.5 K				26ci	Bln Telluric Std Search		
								27ci			
								1ci			
								28ci			
3000		3.31	ADV	$\sim 310:1$ S/N Max ADU 8520				29ci	Telluric Standard	86% Humidity on catwalk	16.1°



Date 1994 Jul 13/14 Observers [Blm] III/Hlw

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
icc 24225	HD177724	19 00 49	13 42 53	00:09:29		0:15 W	Air Mass = 1.1569	FeAr 71	35
26	Comparison			00:11:48				FeAr Clear	60
cg 40318 -21	4x HD176844	18 57 03	+40 32 36						.067
cg 40322 23	2x HD176844	18 57 03	+40 32 36		00 28				.133
a24 227	Comp			00:38:28				FeAr clear	60
28	HD192983	20 12 49	+ 49 55 29	00:40:36		-0:07E	1.0064		1068
29	Comp			01:01:01				FeAr clear	60
30	Bias (4)			01:02					
31	Comp			01:12:53				FeAr clear	60
32	HD194244	20 19 32	+0 44 41	01:16:38		0:11 W	1.3649	FeAr clear	522
33	Comp			01:28:27					60
34-53	20x FLAT		~38°	01:59		~6:15 W		1/4 Ap Tung	6
54	Bias (4)			02:02					
55	Comp			02:47:37				FeAr Clear	60
56	HD194244	20 19 32	+00 44 41	02:49:48		1:56 W	1.5549		1200

Spectr. Temp. ... -100.4 °C Dome Temp./Hum. 16.1°C/73.2 Transparency Conditions ... Approaching Clouds ... 164

Focus ... 6.75

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3500		3.31	A0V	Cass CCD	1800 $\lambda$ /mm G=6065	306 $\mu$	6604A	30	Telluric Std.	Telescope on W side of pier Max ADU 7.1K (00:30) 88% humidity in catwalk	
	5.6"	6.65	M2 III						Sci		
	5.6"	6.65	M2 III						Seeing Test	Dome W, mod W wind above slit	
4549				NOTE COUNTS ON EXP METER 1.5X HIGHER ~200:1 S/N				6ci		Spectrograph controller failed for no apparent reason	
2600		6.31	A2V					7ci	Bin Telluric Std Search	(01:00) 90% Humidity in catwalk 15.7°	
								8ci			
								1ci			
262				NOTE COUNTS ON EX P <sub>0</sub> METER DOWN BY A FACTOR OF ~15				9ci			
128		6.15	B9V					10ci	Bin Telluric Std Search	closed up → clouds & maybe (?) a little rain	
5333				4 THEN ↓				11ci			
				Telescope on E side of pier Range: 10623 - 11770 ADU					BUT NOTE: H $\alpha$ emission is	(~70:1 S/N) above the continuum!	(Max ADU) 0.5
				Telescope on W side of pier					12	Humidity 92% in catwalk	16.1°
3517		6.15	B9V					13	H $\alpha$ emission	Max ADU 7K	15.6°







Spectr. Temp. ... 100.0° ... Dome Temp./Hum. 15.6°/70.0% Transparency Conditions Clear : Oh... Yeah! 106

Focus 6.75

Spectr. Temp. 99.0° = 90° Dome Temp./Hum. ....

Exp. Mtr.	Seeing	✓ Prg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion etc	P.H.	Program	Remarks	Quality
				Pass ccd	1900/1mm G=600Å	306 µm	6604A	14c			
5146								15		Humidity 92% on catwalk	15.70
1906		S.40	AIN <sub>2</sub>	2220:1	SIN			16	Bin Telluric Std Search	MAX ADU 4.2K	15.7°
								17			
43-k			G2V					18	Just for fun		
All to WORM and Perseus											

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Emulsion Batches:

Date 1994 Jul 14/15 Observers [Bln] III / R: / Smt  
Thu/Fri

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC24263/4	Comp / STELLAR HARTMAN							Fe Ar clear	60 /60
65	Bias (4)			21:25					
66	Comp			21:39:21				Fe Ar clear	60
67	HD 144708	16 02 03	-12 28 35	21:50:11		1:16W	A: rmax 1.9358		900
68	Comp			22:06:19				Fe Ar clear	60
69	Comp			22:16:49				Fe Ar clear	60
70	HD 159139	17 28 54	+28 23 47	22:18:56		0:16W	1.0392		900
71	Comp			22:35:22				Fe Ar clear	60
72	Bias (4)			22:38				<del>Fe Ar</del> <del>clear</del>	<del>60</del>
73	Comp			22:41:49				Fe Ar clear	60
74	HD 167380	18 09 45	38 44 44	22:48:59		0:05 W	1.0041		1200
75	Comp			23:06:04				Fe Ar clear	60
76	Comp			23:14:10				Fe Ar clear	60
77	HD 167387	18 09 55	60 23 02	23:17:34		0:40W	1.0492		1200
78	Comp			23:48:55				Fe Ar clear	60

CCD Spectr. Temp. ... 100.0°C... Dome Temp./Hum. 18.6°/60.5%

Scattered cloud  
Transparency Conditions ... ~~stage~~ ... 168

Focus ... b:??

Dome fms on Top 50 Prm  
Scratch

Spectr. Temp. again = 9.0 Dome Temp./Hum. ....

ccdfmt 480 050 1024 4 1

Exp. Mtr.	Seeing	✓ Prg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
<del>3627</del>				Cass ccd	1800/1mm G=6065	300 um	2 6604A	3/4			
								1			
7302								5ci		N fan off (21:40)	18.2°
3831	5.78	B9.5Vn		~260:1 S/N		Max ADU 5.8K		6ci	Bln Telluric Std Search	← H <sub>2</sub> emission Humidity 87% on the catwalk (22:00)	
								7ci			
								8ci			18.0°
3261	5.62	A1V				Max ADU 9.2K		8ci	Telluric Std		17.7°
3154								8ci			
								1ci			
3214								9ci			17.6°
4080	6.04	B9 III n		~330:1 S/N		Max ADU 10.3K		10ci	Bln Telluric Std Search		17.4°
<del>4080</del>								11ci			
								12ci			
1854	6.31	A1Vn		~220:1 S/N		Max ADU 5.6K		13ci	Bln Telluric Std Search	Humidity 89% on catwalk (23:30)	17.1°
4048								14ci			
* All to Perseus & WORM											



Date 1994 July 14/15 Observers [Bl.] III / Sm + R. i

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination Approx	Comparison Type/Filter	Exp.
CC 24279	Bias (4)			23:40					
80	Comp			23:56:59				Fe Ar Clear	60
81	HD 184606	19 30 11	+19 33 18	23:59:09		0:16E	1.0976		300
82	Comp			00:05:19				Fe Ar Clear	60
83	Comp			00:15:33				Fe Ar Clear	60
84	HD 188107	19 48 24	+04 08 29	00:19:20		0:05W	1.2957		1500
85	Comp			00:45:33				Fe Ar Clear	60
86	Bias (4)			00:49					
87	Comp			00:51:29				Fe Ar Clear	60
88	HD 188293	19 49 13	-08 29 16	00:54:06		0:30W	1.6443		960
89	Comp			00:14:21				Fe Ar Clear	60
90	Comp			01:16:38				Fe Ar Clear	60
91	HD 188294	19 49 13	-08 29 51	01:19:16		1:04W	1.7057		1500
92	Comp			01:46:23				Fe Ar Clear	60
93	Comp			02:03:01					60

CCD  
Spectr. Temp. ... -100.0°C...

Dome Temp./Hum. 16.9°/.78.3%

Transparency Conditions ... Cirrus about 4.....

Focus ..... 6:77.....

clouds on S. horizon

Spectr. Temp. ... 90.

Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								1			
~3050								15ci		sp. controller needed to be reset after the last move (23:55)	
1615		5.00	B9TLn	~205:1 S/W		Max Aperture 3.0K		16ci	Bln Telluric std search		16.9°
3095								17ci			
3114								18ci		CCD 3 problem: "obj fear" did not get sent to controller	
2190		6.55	B95Vn	Heremission ~275:1 S/W		Max Aperture 4.0K		19ci	Bln Telluric std search	FeNe comp source was pierced [ctrl S killed source before exposure began]	
3130								20ci			
								1			
29□								21ci			16.4°
1875		5.71	B7Vn	~250:1 S/W		Max Aperture 4.6K		22ci	Bln Telluric std search		
3246								23ci			16.1°
3369								24ci			
1344		6.49	B8V	~225:1 S/W		Max Aperture 3.0K		25ci	Bln Telluric std search	93% humidity on catwalk (01:40)	
3302								26ci			
3548								27ci			

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Emulsion Batches:

Date 1994 July 14 11.5 Observers [Bin] III / Smt / R. I.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination Air Mass	Comparison Type/Filter	Exp.
224294	Bias (4)			02:04:52					
95	HD 159139	17 27 54	28 28 47	02:06:57		4:04 W	1.5736		900
96	Comp			02:23:24				Fe Ar clear	60
97	Comp			02:30:13				Fe Ar clear	60
98	HD 208565	21 52 04	+ 11 36 05	02:33:10		0:05 W	1.1771		900
99	Comp			02:49:54				Fe Ar clear	60
300	Comp			02:54:41				Fe Ar clear	60
01	HD 209033	22 01 03	28 28 41	02:57:10		0:21 W	1.0379		900
02	Comp			03:13:09				Fe Ar clear	60
03	Bias (4)			03:07					
04	Comp			03:18:35				Fe Ar clear	60
05	HD 211297	22 11 01	+ 8 38	03:21:16		0:44 W	1.2470		1500
06	Comp			03:47:11				Fe Ar clear	60
07-26	FLATS x 20		~0° 0'			0:45 W		1/4 Ap Tung	6
<del>28</del>	Bias (4)			04:02					
28/29	Comp (Stellar Hertzsprung)							Fe Ar clear	60/60



<sup>CCD</sup>  
 Spectr. Temp.  $\sim 100.4^{\circ}\text{C}$  ..... Dome Temp./Hum.  $16.5^{\circ}/82.3\%$  Transparency Conditions *getting hazier* ..... 172  
 Focus  $6.77$  .....  
 Spectr. Temp.  $\text{gain} = 90$  ..... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	$\frac{\text{Pix.}}{\text{Mag.}}$	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								1		93.5% humidity on the catwalk (02:10)	
1813		5.62	A1V					28ci	Telluric Standard	94% humidity on catwalk (02:25)	16.40
3582		<del>5.54</del>	<del>A2V</del>					29ci			
3246								30ci			16.20
2809		5.54	A2V <sub>m</sub>	$\sim 310$	1 S/W		Max 7.9K	6ci	Bln Telluric Std Search		
3300								7ci			
								8ci			16.00
1940		5.63	B9V <sub>n</sub>	$\sim 235$	1 S/W		Max 5K ADU	9ci	Bln Telluric Std Search		15.90
3237								10ci			
								11			
1485		6.21	A1V <sub>n</sub>	$\sim 215$	1 S/W		Max ADU 3.8K	12ci	Bln Telluric Std Search	95% humidity on the catwalk (3:30)	16.00
3318								13ci			
								14ci			
								1			
3424/3511								3/4	Focus TSS		

All to Perseus & WORM



Spectr. Temp. <sup>CCD</sup> -100..... Dome Temp./Hum. 19.5/77.5% Transparency Conditions *very fast moving* 174  
 Focus *G:82*.....  
 Spectr. Temp. <sup>CCD</sup> *90*..... Dome Temp./Hum.....  
*CGAIN*

*thick clouds with holes*

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800/446	300	4298A	1			
					"	"		3/4			
		1.86	B3N	ORSS CCD	1800/446	300		5ci			
~4100								6ci			
3900								7ci		clouds	
3387								8ci			
ALL TO PERSEUS & WORM.											





CCD Spectr. Temp. .... 100°C ..... Dome Temp./Hum. 20.1°C / 64.0% Transparency Conditions clear with few high clouds <sup>176</sup>  
 Focus ..... 6.82 .....  
 Spectr. Temp. ~ gain 90. Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
				CASS CCD	1500 G = 4446	366 $\mu$ m	4 248A <i>clamber</i>	3/4		TV Guider won't	
								<del>8</del> 1		find any star in	
								5	<del>Hnd</del>	AS mode. Guarded in TV mode	
5170		3.89	B5IV	"	"	"	"	6ci	Hnd	~250:1 S/N	
9393		3.89	B5IV	"	"	"	"	7ci		~320:1 S/N	
4435								8ci			
11773		3.89	B5IV	"	"	"	"	9ci		~10.5K <del>~10.5K</del> 350:1 S/N	
10912				"	"	"	"	10ci		10K	
4512				"	"	"	"	11ci			
12019		3.89	B5IV	"	"	"	"	12ci			
12011		3.89	B5IV	"	"	"	"	13ci			
4515				"	"	"	"	14ci			
12178		3.89	B5IV	"	"	"	"	15ci			
11613		3.89	B5IV	"	"	"	"	16ci			
4587				"	"	"	"	17ci			
								18			

Date July 16/17 Observers Hm./Ri./Smt.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
<del>CC 2435</del> 14 <del>147394</del>	<del>HD 147394</del>	16° 16' 49"	46° 33' 55"	01:57:58		5 <sup>h</sup> 6 <sup>m</sup> 48 <sup>s</sup>	46° 20' 15"		300s
CC 2435 <del>14</del>	"	"	"	02:03:46		5 <sup>h</sup> 12 <sup>m</sup>	46° 20' 15"		330s
55	Comp							FeAr Clear	60s
56	Bias (4)								
57	<del>HD 886</del> Comp	00 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14° 37' 40"	02:24:38				FeAr Clear	60s
58	HD 886	00 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14° 37' 40"	02:27:50			15° 6' 6" N		60s
59	"	"	"	02:30:04		2 <sup>h</sup> 19 <sup>m</sup> E	15° 6' 3" N		90s
60	"	"	"	02:32:19		2 <sup>h</sup> 17 <sup>m</sup> E	15° 6' 3" N		90s
61	Comp			02:35:29				FeAr Clear	60s
62	HD 886	00 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14° 37' 40"	02:39:45		2 <sup>h</sup> 19 <sup>m</sup> E	15° 6' 3" N		90s
63	"	"	"	02:42:07		2 <sup>h</sup> 7 <sup>m</sup> E	15° 6' 3" N		90s
64	"	"	"	02:44:06		2 <sup>h</sup> 5 <sup>m</sup> E	15° 6' 0" N		90s
65	Comp			02:47:22				FeAr Clear	60s
68	HD 886	00 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14° 37' 40"	02:51:16		1 <sup>h</sup> 58 <sup>m</sup> E	15° 5' 54" N		80s
66	"	"	"	02:54:51		1 <sup>h</sup> 53 <sup>m</sup>	15° 5' 54" N		90s
67	"	"	"	02:57:01		1 <sup>h</sup> 51 <sup>m</sup>	"		90s



Spectr. Temp.  $-100.5$ Dome Temp./Hum.  $18.9^{\circ}/69.2$ Transparency Conditions *clear w. few high clouds* 178Focus  $6.82$ Spectr. Temp. *Gain*  $90$ 

Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion <i>lambda</i>	<del>Pf.</del>	Program	Remarks	Quality
8780		3.89	B5V	Cass CCP	1800 6=4446	300 $\mu$	4298A	18ci	Hml		
10802		3.89	B5V	"	"	"	"	19ci	"		
4628				"	"	"	"	20ci			
				"	"	"	"	1			
4502		<del>3.89</del>	B2V	"	"	"	"	21ci			
6858		2.83	B2V	"	"	"	"	22ci			
10610		2.83	B2V	"	"	"	"	23ci			
10675		2.83	B2V	"	"	"	"	24ci			
4651				"	"	"	"	25ci			
10576		2.83	B2V	"	"	"	"	26ci			
9828		"	"	"	"	"	"	27ci			
11186		"	"	"	"	"	"	28ci			
4609				"	"	"	"	29ci			
10180		2.83	B2V	"	"	"	"	30ci			
10590		"	"	"	"	"	"	5ci			
11170		"	"	"	"	"	"	6ci			

Date July 16/17 Observers Hml/Ri/Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC2436	Comp			3:01:30				FeAr Clear	60s
CC2437	BIAS(4)								
71	Comp			3:06:55				FeAr Clear	60s
72	HD886	00 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14 <sup>o</sup> 37'40"	3:11:67		1 <sup>h</sup> 40 <sup>m</sup> E	15 <sup>o</sup> 5'51"		80s
74	"	"	"	3:13:30		1 <sup>h</sup> 36 <sup>m</sup> E	15 <sup>o</sup> 5'51"		93s
73	"	"	"	3:15:38		1 <sup>h</sup> 33 <sup>m</sup> E	15 <sup>o</sup> 5'51"		90s
75	Comp			3:20:24				FeAr Clear	60s
76	HD886	00 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14 <sup>o</sup> 37'40"	3:23:05		1 <sup>h</sup> 26 <sup>m</sup> E	15 <sup>o</sup> 5'51"		90s
77	"	"	"	3:25:05		1 <sup>h</sup> 24 <sup>m</sup> E	15 <sup>o</sup> 5'51"		90s
78	"	"	"	3:27:41		1 <sup>h</sup> 22 <sup>m</sup> E	15 <sup>o</sup> 5'48"		90s
79	Comp			3:35:42				FeAr Clear	60s
80	BIAS(4)								
81	<del>HD886</del> HD886	00 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14 <sup>o</sup> 37'40"	3:39:47		1 <sup>h</sup> 9 <sup>m</sup> E	15 <sup>o</sup> 5'48"		90s
82	"	"	"	3:41:50		1 <sup>h</sup> 7 <sup>m</sup> E	15 <sup>o</sup> 5'48"		90s
83	"	"	"	3:45:06		1 <sup>h</sup> 5 <sup>m</sup> E	15 <sup>o</sup> 5'48"		120s
84	Comp			3:50:17				FeAr Clear	60s

Spectr. Temp.  $-100^{\circ}.5$  ..... Dome Temp./Hum. ....  $18.4^{\circ}C/71.9\%$  Transparency Conditions *Clear, few clouds* .....

Focus .....  $6.82$  .....

Spectr. Temp.  $-69.90$  ..... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission $\epsilon$ lambda	P.H. $\epsilon$ T	Program	Remarks	Quality
4670				Caac CCO	1800 6=4446	300um	4298A	7ci	Hml		
				"	"	"	"	1	"		
4775				"	"	"	"	8ci	"		
10600		2.83	B2IV	"	"	"	"	9ci	"		
12720		"	"	"	"	"	"	10ci	"		
12220		"	"	"	"	"	"	11ci	"		
4655		"	"	"	"	"	"	12ci	"		
11980		2.83	B2IV	"	"	"	"	13ci	"		
12530		"	"	"	"	"	"	14ci	"		
11230		"	"	"	"	"	"	15ci	"		
4681				"	"	"	"	16ci	"		
								1	"		
10190		2.83	B2IV	"	"	"	"	17ci	"		
10425		2.83	B2IV	"	"	"	"	18ci	"		
13280		"	"	"	"	"	"	19ci	"		
4527				"	"	"	"	20ci	"		





Spectr. Temp.  $-100.5$  ..... Dome Temp./Hum.  $17.5^{\circ}/76.4\%$  Transparency Conditions *clear, few clouds* .....  
 Focus  $6.82$  .....  
 Spectr. Temp. *gain 90* ..... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	<del>Exp.</del>	Program	Remarks	Quality
101120		2.83	BAT	CCD Cass	1800 G=4446	300um		21G	Hnd		
14170		"	"	"	"	"		22G	"		
16160		"	"	"	"	"		23G	"		
				"	"	"		<del>14</del>			
								24G			
All to WORM + PERSEUS											





CCD  
 Spectr. Temp.  $-104 \rightarrow -111^\circ$   
 Focus  $6.82 \rightarrow 6.77$   
 Spectr. Temp.  $9.9 \mu m$

Dome Temp./Hum.  $20.0^\circ C / 69.2\%$  Transparency Conditions *partly cloudy*  
*increasing cloud*  
 Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	F.H. ci	Program	Remarks	Quality
				CASS DIRECT	$0/18^\circ$		$8000 \text{ \AA}$			500 500 256 256 1 1	
							$3900 \text{ \AA}$				
							$8464 \text{ \AA}$				
				CASS CLD	$1800/6 = 5115$		$5303 \text{ \AA}$	1			
6885	<del>5.5</del>	<del>F7E</del>						<del>1</del>			
119	5.5	F7E						3	AsmSp/KK		
<del>119</del>								2			
								4		clouded over	
ALL TO PERSEUS & WORM.											

Pg #1  
185

Date 1994 July 18/19 Observers KK/Hlw

Emulsion Batches:

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.....  
.....

Plate No.	Object	R.A.	Declination	Starting Time	Ending Time	Hour Angle End	Declination	Comparison	
		<del>1900-2000</del>	<del>1900-2000</del>	E.S.T.	E.S.T.			Type/Filter	Exp.
cd00058-60	Jupiter			21 11					.2 s
61-63	Jupiter								.1 s
64-67	Jupiter								1 s
68*	Jupiter	1900	1900:						0.5 s
69-74	HD8890B	01 22 36	88 46 06	22 05					0.1 s
75	Bias (4)								
76	NGC 6720	18 53 36	33 03						60 <sup>s</sup>
77	"		(2000)						60 <sup>s</sup>
78	"		"						180
79	NGC 6543	17 58 36	66 37 00	23:27					60
80	"		(2000)						180
81	"		"	23 32 22					240
82	"		"	23 38 39					720
83	Cas A	23 21 12	<sup>1900</sup> 58 32	0 29 10					720
84	Cas A		"						360









Pg# 1  
189

Date July 19/20 1994 Observers Hlw / Smt / E Vys }

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce24418/9	Comp/Stellar					0:10 W	+40°	FeNe Clear	20/35
20	Bias x4								
21	Comp							FeNe Clear	20
22	HD119850	13 40 36	+15 27 00	21 00 39		2:58 W	+15°		600s
23	COMP							FeNe clear	20
24	Comp								
25	AC+66 4437	14 40 33	+66 28 51	21 27 37		2:41 W	+66°		1331
26	Comp							FeNe Clear	20
27	Bias x 4								
28	Comp							FeNe Clear	20
29	AC+62 26749	17 34 30	+61 45 00	21 59 39		0:15 W	+62°		1095
30	Comp							FeNe Clear	20
31	Comp							FeNe Clear	20
32	BD+68 946	17 36 56	+68 24 47	22 29 47		0:36 W	+68°		600
33	Comp							FeNe Clear	20



Spectr. Temp. .... Dome Temp./Hum.  $24.6^{\circ}\text{C}/54.5\%$  Transparency Conditions  $\overset{190}{\text{Some clouds on horizon}}$   
 Focus .....  $6.71$  ..... Dome Fans Off  
 Spectr. Temp. .... Dome Temp./Hum. .... 480 0 50 1024 4 1 ccd/m<sup>2</sup>

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CD	1800l/mm G=5/15	306 $\mu$	5303A	3/4			
								1			
								5			
446		8.48	M1					6	Vys Std.		
								7			
								8			
40		10.8	M0					9	Vys Pgm.	Clouds approaching from South	
								10			
								11			
80		9.95	M1e					12	Vys Pgm		
								13			
								14			
143		9.15	M5					15	Vys Pgm		
								16			



Spectr. Temp. .... Dome Temp./Hum. **23.3°/58.3%** Transparency Conditions **Thick clouds in S, <sup>192</sup> thinner in N.**  
 Focus **6.71**  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 $\lambda$ /mm G=5115	306 $\mu$	5303A	17			
54	9.83	M0						18	Vys Std.	Getting cloudier	
								19			
								1	bsum4.bat		
	6.65	M2III			Max intensities: 236,	179, 180, 222			Seeing Test	Dome W, light E wind.	
Note: Says ".06" in header, this is wrong!	6.65	M2III			Max intensities: 196,	195			Seeing Test	thin clouds, star tracked below 306 $\mu$ slit.	
0	12.0	M0						20		→ break for clouds.	
								21	Vys Pgm		
								22			
								1		Spectrograph Controller died.	
								23			
86	8.66	M2						24	Vys Std.		
								25		Totally clouded in	
								26		now.	
All to Perseus & WORMies								1			



Pg#1  
193

\* Thomas Callegari (Stepson)

Emulsion Batches:

Date 1994 Jul 20/21 Observers H/w Elys

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc24455/6	Comp/stellar Hartman Mask Posn'							FeNe Clear	20/30
57	Bias * 4								
58	Comp							FeNe Clear	20
59	BD+45 2743	18 32 26	+45 39 53	22 22 05		0:19 E	+45°		983
60	Comp							FeNe Clear	20
61	Comp							FeNe Clear	20
62	AC+3 2528-176	18 45 01	+02 58 45	22 48 09		0:07 W	+3°		1800
63	Comp							FeNe Clear	20
64	Bias * 4								
cg40330- 3	4x HD176844	18 57 03	+40 32 36						.067
cg40334/5	2x HD176844	18 57 03	+40 32 36		23 40				.133
65	Comp							FeNe Clear	20
66	AC+8 147-294	19 30 16	+08 14 48	23 52 21		0:14 W	+8°		1150
67	<del>Bias * 4</del> Comp							FeNe Clear	20
68	Bias * 4								
69-74	6x Flats							Tung 1/2	4

Spectr. Temp. .... Dome Temp./Hum. 22.1°/90.2% Transparency Conditions Hazy, foggy 194  
 Focus ..... 6.73 ..... Dome Fans ON. poor transparency.  
 Spectr. Temp. .... Dome Temp./Hum. 21.5°/92.6% 480 0 50 1024 4 1 ccdfont.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800l/mm G=5115	306 $\mu$	5303A	3/4	FocusTest		good
								1	bsum4.bat		
								5			
26		9.83	MO					6	Vys stds	Sp. Controller failed	
								7		95% Humidity on Catwalk	
								8		@ 2250	
105		10.7	MZ					9	Vys Pgm	Much sky background	
								10		( <u>must</u> subtract it.)	
		6.65	MZIII						Seeing Test	Dome W, no wind.	
Note Headers are wrong.		6.65	MZIII						Seeing Test	N fan ON	
								11			
8		10.4	MO					12	Vys Pgm		
								13			
								1			
								14			

ALL TO WORM AND  
Perseus







Tue/Wed

D0074 program failure  
Emulsion Batches:  
(no encoders & fairness calculations)

Date .. 1994... July 26/27 Observers .. [Bin] III / Hlw.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
c 24478/9	Comp Keller Hartman								60/60
80	Bias (4)			20:41					
81	Comp						FeAr clear		60
82	HD 145122	16 04 16	+72 28 16	20 58 27					678
83	Comp			21 12 28			FeAr clear		60
84	Comp			21 22 37			FeAr clear		60
85	HD 145964	16 08 36	-20 51 11	21 24 56	Note:				909
86	Comp			21 40 49	Turned off clock drive at end of comp, causing tel LST to read wrong, causing next two misidentifications		FeAr clear		60
87	Bias (4)			21:42					
88	Comp			21:49:04			FeAr clear		60
89	SAO 102013 ? 17 23 10 (1950) 15 35 32 <del>HD 157744</del> <del>17 20 3</del> <del>15 41 49</del>			21:51:36					1200
90	Comp			22:13:23			FeAr clear		60
91	Comp			22:30:21			FeAr clear		60
92	<del>HD 179547</del> <del>HD 179547</del> <del>HD 179547</del> <del>HD 179547</del> <del>18 20 3</del> <del>10 21 54</del>			22:35:26					1800
93	Comp			23:06:24			FeAr clear		60

Spectr. Temp. ... -100.0 C... Dome Temp./Hum. 18.6°/58.3% Transparency Conditions Clear  
 Focus ... 6.67... Dome fno 0.4 (Blue collimator was out of focus + collimator)  
 Spectr. Temp. ... C gain = 9.0... Dome Temp./Hum. .... \*Note new ecd fnt + focus  
 ecd fnt 432 050 1024 1

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3052/ 3071				Cass CCD	1800 8/mm G=60x05	306	6604A	3/4	Focus Test	DDO 74 encoders pgm is not working tonight, we're reading off big wheels.	
3227								1			
								5			
<del>2500</del>				6.14 ADV max ADU	7K ~ 275:1 S/N			6	3in Telluric Std Search	T=18.4°C	
								7			
								8			18.2°
932				6.41 ADV ~ 250:1 S/N	MAX ADU 5K			9	3in Telluric Std Search	NOTE: hot pixel is now located at column 23 (was at column B prior to collimator adjustments)	18.0
2259					NOTE: change in exp. meter counts			10			
								11			
2199								11			
296		7.9 <del>6.35</del>	k 5 BAV	max ADU 3K		S/N ~ 180:1		9	3in Telluric Std Search	NOTE: This is NOT SPECTRA OF B9 BUT RA + DEC SETTINGS OK (+ NOTHING ELSE ANYWHERE NEARBY IN FIELD)	17.4
2425								12			17.2
								13			
667				6.74 BAV				14	3in Telluric Std Search		
2223								15		T=17.0°C	



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Date 1994 Jul 26/27 Observers III/Hlw [Bh]

Emulsion Batches:

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.....  
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc24494	Bias (4)			23:08					
95	Comp			23:27:43				FeAr Clear	60
96	HD171623	18 30 49	+18 07 24	23 30 11					600
97	Comp			23 42 05				FeAr Clear	60
98	Comp			23 47 22				FeAr Clear	60
99	HD169578	18 20 13	+5 01 46	23 49 44					1789
500	Comp			00 20 32				FeAr Clear	60
1	Bias (4)			00:22					
2/3	Comp/Stellar	Hartman						FeAr Clear	60/60
4	Comp			00:48:22				FeAr Clear	60
5	HD 192 983	20 12 49	49 55 29	00:51:05					650
6	Comp			01:02:57				FeAr Clear	60
7	Comp			01:16:16				FeAr Clear	60
8	HD210419	22 05 09	-4 23 03	01:19:07					1000
9	Comp			01:37:21				FeAr Clear	60

Spectr. Temp. .... Dome Temp./Hum. 17.0/62.2 Transparency Conditions Clear ..... 200  
 Focus ..... 6.67 .....  
 Spectr. Temp. .... Dome Temp./Hum. .... 432 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 L G=6065	306 $\mu$ m	6604A	1	bias 4. bat	Note: hot pixel is now at column 23, so we are purposefully guiding at high column # to avoid it ← H $\alpha$ emission	
2400	5.78	A0IV	~330i	S/N				16	Bln Telluric Std Search		
								17			
								18			
								19			
2500	6.74	B9V						20	Bln Telluric Std Search		16.6°
								21			
								1			
								3/4			16.3°
								22			
2500	6.31	A2Vn						23	Bln Telluric Std Search		
								24			
								25			
2500	6.27	A1Vn						26	Bln Telluric Std Search		15.6°
								27			

201 page # 3

a Bill Hodges

Emulsion Batches:

Date . 1994. Jul. 26/27 Observers .. [B.H.] III / H.L.W.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
α 24510	Bias (4)			01:39					
11	Comp			02:00:59				FeAr Clear	60
12	Nova Cas 93	23 36 59	56 57 45	02:08:33					304
13	Comp			02:15:58				FeAr Clear	60
14	Nova Cas 1993	23 36 59	56 57 45	02:18:05					1897
15	Comp			02:50:45				FeAr Clear	60
16	Bias (4)			03:00					
17	Comp			03:14:03				FeAr Clear	60
18	HD 211211	22 10 32	42 27 28	03 16 58					283
19	Comp			03:22:54				FeAr Clear	60
20	Comp			03 29 00				FeAr Clear	60
21	HD 177724	19 00 49	43 42 53	03 30 52					34
22	Comp			03 32 42				FeAr Clear	60
23	Comp			03 40 44				FeAr Clear	60
24	HD 222847	23 39 01	-18 49 55	03:45:09					393

















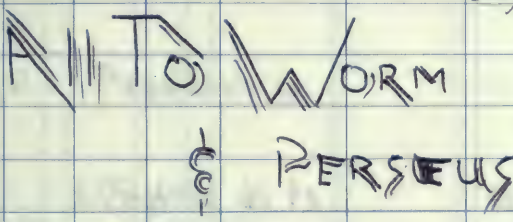


Spectr. Temp. .... Dome Temp./Hum. 20.8° / 59.9% Transparency Conditions some scattered thin clouds <sup>208</sup>  
 Focus 255 / 250  
 Spectr. Temp. .... Dome Temp./Hum. .... increasing cloud from south

Exp. Mtr.	Seeing	Mag. VMag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	300 $\lambda$ /mm 17.0	60 $\mu$ $\times 400$	6483 $\text{\AA}$	3/4	Focus Test	Requested region = 6707 $\text{\AA}$ but some very bright lines to the red caused us to centre at 6483 $\text{\AA}$ . 6707 order is well on chip though.	good
					$\times gr = .5550$		$\lambda = .225$	1			
								5			
487	3"	3.66	FOp					6	KK pgm	< 200/1 S/N @ H $\alpha$	
								5			
18		3.66	FOp					6	KK pgm	Through lots of cloud.	
								5			
								5			
1		2.99	ADU					6	Telluric Std.	Lots of cloud.	
								5			
								1			
								3			
						60 $\mu$ = 500 $\mu$ = .215				Max ADU 12.6 K	
								1			
					300 $\lambda$ /mm 19.20	60 $\mu$ $\times 400$	6300 $\text{\AA}$	3/4	Focus Test		
					$\times = 5630$		$\lambda = .225$				



CCD  
 Spectr. Temp.  $-100.0^{\circ}\text{C}$  Dome Temp./Hum.  $19.4^{\circ}\text{C}/62.5\%$  Transparency Conditions *clearish*  
 Focus  $\cdot 2.50$   
 Spectr. Temp. ..... Dome Temp./Hum. .... *Then Rapid Clouding in.*

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	300 $\mu\text{m}$ 19.20 $\kappa = 5630$	60 $\mu\text{m}$ 400 $\mu\text{m}$	6300 $\text{\AA}$	5 4			
<i>Exp meter Dark slide in</i>	2.3"	2	F					6	KK Pgm	part cloudy	
								5		$\sim 12.6\text{K max adu.}$	
								6	KK Pgm	$\sim 11\text{K max adu.}$	
										$\sim 7.7\text{K max adu}$	
						60 $\mu\text{m}$ 500 $\mu\text{m}$		1 1			
<p>  </p> <p> <b>ANTO WORM</b>  <b>PERSEUS</b> </p>											



2<sup>nd</sup> page!

Sat / Sun

## Jason's Last Night

Emulsion Batches:

Date 1994 July 30/31.....

Observers [K.H.] J.V. / H. / Smt....

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.....

Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle		Declination		Comparison	
		1900	1900	1900	1900	E.S.T.	E.S.T.	E.S.T.	E.S.T.	End		Type/Filter	Exp.		
cc07524 28	FLATS x 5										00 08 E	+46°		1.5s	
29	BIAS (4)														
30	Comp												Th Ar	2s	
31	HD 8890	01 22 36	+88 46	20 15 41						10 02 E	+89 14			185	
32	Comp													2s	
33	HD 8890			20 21 21										208	
34	Comp													2	
35	HD 8890			20 26 10										216	
36	Comp													2	
37	BIAS (4)										02 55 W	+64°	Tel Reverse		
38	Comp														
39	HD 123999	14 01 41	+64 51 14	20 47 28						03 06 W	+64°			335s	
40	COMP												Th Ar	2s	
41	HD 123999			20 55 41						03 24 W	+64°			938s	
42	COMP												Th Ar	2s	

Spectr. Temp. .... Dome Temp./Hum. +21.2°C... 74% H Transparency Conditions *part cloudy* .....

Focus ..... *250* ..... Both Fans ON, then SE turned off

Spectr. Temp. .... Dome Temp./Hum. .... *c Lambda* 0 0 256 1024 4 1 CCDfnt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulston	P.H.	Program	Remarks	Quality
<i>using 100 scale</i>				<i>Echelle</i> 19.20	<i>x 300/w/mm</i> 15630	<i>60um</i> <i>500um H</i>	<i>6300A</i>				
								<i>1ci</i>			
						<i>60um</i> <i>400um height</i>		<i>3ci</i>			
<i>185</i>	<i>2.3"</i>	<i>2</i>	<i>F</i>					<i>4ci</i>	<i>fk pgm</i>	<i>9.7K ADU max</i> <i>(Tel/kwic vel pgm)</i>	
<i>"</i>								<i>3ci</i>			
<i>200</i>								<i>4ci</i>		<i>10.4K ADU max</i>	
<i>185</i>											
								<i>1ci</i>		<i>regular vertical bars</i> <i>like a noise pattern</i>	
								<i>3ci</i>		<i>Tel East Side</i> <i>But not far from</i> <i>previous polaris posn</i>	
<i>200</i>				<i>3.65</i>	<i>A03</i>						
<i>600</i>										<i>~ max adu 7.8K</i> <i>a few saturated points for</i> <i>2 sec exp - changed.</i>	

Pg 12  
213

Emulsion Batches:

Date July 30./3.1..... Observers [L.H.] Tn./H.L.M./S.M.T.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc07343	COMP							ThAr	1s
44	HD187691	19 46 12	+10 10 00	21 31 08		01 38 E			1350s
45	COMP							ThAr	1s
46	HD187691			21 56 52		01 14 E			1341s
47	COMP							ThAr	1s
48	BIAS(u)								
49	COMP							ThAr	1s
50	HD177724	19 00 49	+13 42 53	22 28 02					400
51	Comp							ThAr	1
52	HD177724	19 00 49	+13 42 53	22 38 10		0:05 W	+14°		897
53	Comp							ThAr	1
54	COMP							ThAr	1
55	HD175492	18 50 32	+22 31 06	22 59 15		00:48 W			1500
56	Comp							ThAr	1
57	HD175492	18 50 32	+22 31 06	23 29 08		1:20 W			1710
58	COMP							ThAr	1



Spectr. Temp. <sup>CCO</sup> - 100.50 ..... Dome Temp./Hum. 20.5°C / 71.2% Transparency Conditions ... hazy .....

Focus ..... 250 .....

Spectr. Temp. .... Dome Temp./Hum. 19.7°C 80.0%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							6300A			exposure time for comp changed to 1 sec to avoid saturation	
30		5.10	F8V					6 ci	KK <sup>std vel</sup> pgm	and adm ~ 2K	
21								6 ci	KK pgm		
								3 ci			
340		2.99	A0IV					4	Telluric Std.		
								3			
700		2.99	A0IV					4	Telluric Std.		
								3			
								3			
262	1-2"	4.59	G4III+H6V					5	KK pgm	MA x 2 6506 ADCA	
								3			
267		4.59	G4 III+AGV					5	KK pgm		
								3			

259 #3

Date 1994 Jul 30/31 Observers [KK] Tn/Hlw/Smt

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce07559	Bias (4)								
60	COMP							ThAr	1s
61	HD161096	17 38 30	+04 37 00	00 05 37		250 W			600s
62	COMP					2		ThAr	<del>200s</del>
63	COMP							ThAr	1s
64	HD 8890	01 22 36	88 46	00 24 44		5 55 E	+89°		200s
65	Comp							ThAr	1s
66	HD 8890			00 29 33		5 48 E	+89°		296s
67	COMP							ThAr	1s
68	HD 8890			00 36 50		5 37 E	+89°		492s
69	COMP							ThAr	1s
70	COMP							ThAr	1s
71	HD185734	19 35 26	+29 55 22	00 56 24		2:05 W			1585
72	Comp							ThAr	1
73	HD185734	19 35 26	+29 55 22	01 24 26		2:23 W			1255
74	Comp							ThAr	1

Spectr. Temp. ....

Dome Temp./Hum. 19.3°/81.37°

Transparency Conditions . *Mag* .....

Focus ..... 250 .....

Spectr. Temp. ....

Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	300 $\lambda$ /mm 19.20 x = .5630	60 $\mu$ 400 $\mu$	6300A	1			
194		2.77	K2III							<i>bid. vel.</i>	
<del>194</del>		<del>3.87</del>	<del>K2III</del>					3			
	2 <sup>o</sup>	R	F					6	KK pgm	max ~ <del>10K</del> adu.	
								3			
213								6	KK pgm		
								3			
215								6	KK pgm	max ~ 10K adu.	
								3			
								3			
216		4.69	G8 III-IV					4	KK pgm		
								3			
166		4.69	G8 III-IV					4	KK pgm		



27pg#4

Emulsion Batches:

Date 1944 Jul 30/31 Observers [KK] T<sub>n</sub>/H/w/Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
ce07575	Bias (4)								
76	Comp							ThAr	1
77	HD196524	20 32 52	+14 15 00	01 50 19		1:45 W	+14°		880
78	Comp							ThAr	1
79	HD196524	20 32 52	+14 15 00	02 08 01		2:02 W	+14°		880
80	Comp							ThAr	1
81	Comp							ThAr	1
82	HD215182	22 38 18	+29 42 00	02 27 54		0:09 W	+30°		400
83	Comp							ThAr	1
84	HD215182	22 38 18	+29 42 00	02 36 25		0:18 W	+30°		433
85	COMP							ThAr	1
86	BIAS(4)								
87	Comp							ThAr	1
88	HD6582	01 01 36	+54 26 00	03 02 01		01:22 E			1576
89	Comp							ThAr	1

Spectr. Temp. .... Dome Temp./Hum. <sup>+18.5°/85.3%</sup> Transparency Conditions ... Hazy, Humid .....

Focus ... 0.250 .....

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

NE Dome Fan ON

Exp. Mtr.	Seeing	√ <sup>Mag.</sup>	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle 19.20	x 3002/mm = 5630	60μ 400μ	6300A	1			
		<del>3.78</del>						3			
345		3.78	F5 IV					5	KK pgm		
								3			
283	2"	3.78	F5 IV					5	KK pgm	4700 ADU max 93% Humidity on Catwalk @ 0215	
								3			
								3			
415		2.9	G8 II? - F?					6	KK pgm		
								3			
354		2.9	G8 II? - F?					6	KK pgm		
								3			
								1			
								3			
60	1.2"	5.12	G5 V <sub>p</sub>					4	KK pgm	3400 ADU max	
								3			

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Pg #5

Emulsion Batches:

Date 1994 Jul. 30/31... Observers [Art]... T. / H. / S.

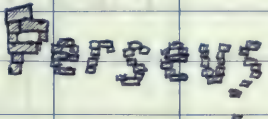
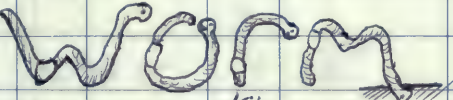
Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce07590	HD 6582	010136	+5426	03 29 36					1/2
91	Comp							ThAr	1.
92-96	5x FLAT							Tung	1.5s
97	BIAS (u)								
98/99	Inboard/Outboard		Hartman					ThAr	1/1
ce07600	Non Motion Tests of Comparison			05 03 →		-00 00 30	-33 09	ThAr	10s
To 10									
ce07621	Fast FLAT			19 07 50		"	"	TUNG	9sec
92	Non motion Test <del>Before</del> <del>Ranking Telescope</del> After Top-up			19 40 54				ThAr	10s



Spectr. Temp. .... Dome Temp./Hum.  $+18.2^{\circ}\text{C}$  87% H Transparency Conditions ... V. hazy .....

Focus ... 250 .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
42	15"					60 $\mu$ 400 $\mu$	6300A	4c	KK pgm	95% Humidity @ 0335	
						60 $\mu$ 500 $\mu$ height for flats				Dome Wet.	
						All to 	AND $\frac{1}{4}$ " 400 $\mu$ height for focus Test				
											
						336 508 72 190 1 1 CCD FMT	6300A	1c 2c 3c 4c		Dome T <sub>e</sub> 0505 = $+18.4^{\circ}\text{C}$ for Repeat NMTST.BAT 20 Dome T <sub>e</sub> 19 EST = $+21.8^{\circ}\text{C}$	
						CCD T <sub>e</sub> = $-95^{\circ}$ (starting to warm up)					



<sup>CCD</sup>  
 Spectr. Temp.  $-100^{\circ}$  ..... Dome Temp./Hum.  $21.3^{\circ}\text{C}/81.9\%$  Transparency Conditions *foggy / hazy* ..... 222  
 Focus .....  $\approx 250$  .....  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				<del>EXCELLE</del> CCD 19.20	$\times 3000/\text{mm}$ $\circ 5630$	600 width 4000 height	6300	1/2		CCD FMT 0 0 128 1024 8 1	
								1		0 0 256 1024 4 1	
								3			
270		2	F					4	KK pgm	max adu $\sim 5K$	
								3			
420	$2^{\circ}3'$	2	F					4	KK pgm	15.8 ft max	
								3			
216		2	F					4	KK pgm	max adu $\sim 12K$	
								3			
								1			
								3			
48	$2^{\circ}$	5.10	F8V					4	KK Std Vel.	1700 ADU max	
								3			
52								4	KK Std Vel.	1400 ADU max	
								3			



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p9#2

Emulsion Batches:

Date 1994 July 31 / Aug. 1. Observers [H.K.] Tn. / Sent.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CE07639	COMP							ThAr	1
40	HD137909	15 2342	+29 27	21 50 08		3 00 W			1000
41	Comp							ThAr	1
42	HD137909			22 09 40		3 24 W			1300
43	COMP							ThAr	1
44	BIAS(4)					3 27 W +29			
45-49	5x FLAT					3 30 W +29		Tung	2
ce07650	Comp							ThAr	1s
51	HD137909	15 2342	+29 27	22 57 26		4 12 W			1299
52	Comp							ThAr	1s
53	HD137909			23 21 19		4 36 W			1300
54	COMP							ThAr	1s
55	COMP							ThAr	1s
56	HD177724	19 00 49	+3 42 53	23 49 10		1 14 W			540s
57	COMP							ThAr	1s

Spectr. Temp.  $-100.5^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+21.3^{\circ}\text{C}$   $78\% \text{H}$  Transparency Conditions *very hazy* .....  
 Focus *250* .....  
 Spectr. Temp. .... Dome Temp./Hum.  $+20.5^{\circ}\text{C}$   $80\% \text{H}$

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		<input checked="" type="checkbox"/>		echelle	300 l/m	60 $\mu$ W					
				19.20	.5630	400 $\mu$ H	6300A	3c			
249	2"	366	Fop					5c	kk pgm	4 000 ADU MAX 1.225 AIRMASS	
								3c			
530								5c	KK pgm	1.289 air mass 6 000 ADU MAX	
								3c			
								1c			
								6c		max adu ~ 14K - 14.5K	
				echelle	300 l/m	60 $\mu$					
				18.9	.5650	400 $\mu$ H	6480A	7c		ONLY 300ERS Red of the 6300A previous Region Other side of Blaze from July 29/30 - OBSERVATIONS	
507	2"	366	Fop					4c	kk pgm	1.50 AIRMASS ~ 5K adu	
								6c			
290		366	Fop					4c	kk pgm	1.63 AIRMASS 5K ADU max	
								6			
								6			
524		2.99	AOV					4	Tel. Std.	1.19 AIRMASS ~ 9.5K max adu	
								6			





Spectr. Temp.  $-100.5^{\circ}\text{C}$  Dome Temp./Hum.  $20.5^{\circ}\text{C}/74.6\%$  Transparency Conditions *hazy* 226Focus  $\cdot 250$ 

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

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion ex	P.H. CI	Program	Remarks	Quality
				ECHELLE CCD 18.40	300 $\lambda/\text{mm}$ $\cdot 5550$	60 $\mu\text{W}$ 400 $\mu\text{H}$	6480 $\text{\AA}$	6			
109		5.10	F8 II					4	KK Std. Vel.	1.21 AIRMASS 3.5 K max adu.	
								6			
								1			
						60 $\mu\text{W}$ 500 $\mu\text{H}$	For FLATS.			MAX = 12.8 K ADU	
				ECHELLE 19.2	300 $\lambda/\text{mm}$ $\cdot 5630$	60 $\mu\text{W}$ 400 $\mu\text{H}$	6300 $\text{\AA}$	7			
612	3"	3.23	B95 III			"225		4	KK pgn	max = ~8 K adu	
								7			
430								4	KK pgn.		
								7c			
								3			
417		2	F					5	KK Pgn	max = ~5.3 K adu.	
								3			
775								5	KK Pgn!		
<del>775</del>								3	<del>KK Pgn</del>	max = ~14.0 K adu.	







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Tues Wed

NOTE: hot pixel in column 31  
(guiding on opp. side of central column... (as rec. w. l.t.)...)

Emulsion Batches:

Date ..1994.. August 213 Observers ... [Bln]... III... / Tn...

CS383 ~~0~~ sec out from WIN-V. time.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CL 24553 <sup>552</sup>	Comp / stellar Hartman					00 15 W	+46°		60/60
54	Bias (4)			20:4					
55	Comp			20:44:46				Fair Clear	60
55	HD 146416	16 11 05	-21 19 13	20:48:03		1:24 21 W	Air mass 26645		1482
57	Comp			21:15:06				Fair clear	60
58	Bias (4)								
59	Comp			21:22:45				Fair clear	60
60	HD 157741	17 20 03	+15 41 49	21:25:27		0 44 16 W	1.1521		872
61	Comp			21:41:36				Fair clear	
→ 62 63	FLATS x 2					00 00	+5°	TUNE Ap=1/4 Fair clear	6 sec
64	Comp			21:55:22				Fair clear	60s
65	HD 169578	18 20 13	+05 01 46	21 57 15		0:20:06 W	1.2873		1150
66	Comp			22:17:36				Fair clear	60s
67	Bias (4)			22:21				Ax	67 sec
CG 40337-40 9142	HD 176844 "	18 57 03	+10 32 36	22:27		0 0	+40°	2x	139ms

Spectr. Temp. ... 100.0°C Dome Temp./Hum. ... 19.5°C 83.6% Transparency Conditions ... H.a.f. cloudy

Focus ... 6.70 Dome fans on

Spectr. Temp. ... again 9.9 Dome Temp./Hum. ... CCD format 400 0 50 1024 1

Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCP	1800 1mm ↳ = 6065 um	300	6604A	6/7	Focus TEST		
								1			
								8		humidity 93%	
286	3	6.41	B9V	max 7K ADU	~770:1 SW			9	Bln Telluric Std Search	on catwalk at 21:00 cloudy	
								10		↔ clock drive off	
								1			
								11			
1924	~4	6.35	B9V					12	Bln Telluric Std Search	94.5% humidity on catwalk 21:35	18.7°
								13		obs. through clouds	
								14		15,276 MAX ADU 15,050 " "	
								15			
1932	3"	6.74	B9V	-240:1 SW	Max 3.1 KADU			16	Bln Telluric Std Search		
3694								17			
								1			
	2"	6.65	M2 III		(Above 306u slit)				Seeing Test	only NEFAN on Dome west no wind	

[5/4  
830/1]

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A#2

Emulsion Batches:

Date 1994 Aug 2/3... Observers ... F. Binz III ... I. T. N. / Bill Hodges

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc 24568	Comp			22:44:57				FEAR clear	60
69	HD150118	1633 51	53 07 30	22:50:15		2:50 W	Airmass 1.1460		475
* 70	HD150118	1633 51	53 07 30	23:02:35		3:01 W	1.656		403
* 71	Comp			23:11:49				FEAR clear	60
* 72	Bias (4)			23:18					
* 73	Comp			23:19:39				FEAR clear	60s
74	HD 88293	19 49 13	-08 29 16	23 22 14		0:9 W	Airmass 1.6299		764
75	Comp			23:37:15				FEAR clear	60s
76	HD 188294	19 49 13	-08 29 51	23:39:28		0:38 <del>W</del>	Airmass 1.6583		
77	Comp			00:06:18				FEAR clear	60
78-97	FLATS x 20		+9°			0:45 W		1/4 ap clear	6
98	Bias (4)			00:25:12					
99/600	Comp/Stellar Harkman		+9°			0:45 W	+9°	FEAR clear	60/60



Spectr. Temp. .... Dome Temp./Hum.  $89.4\%$  /  $18.4^\circ$  Transparency Conditions . *PART. Cloudy* ..... 232  
 Focus ....  $6.7D$  .....  
 Spectr. Temp. .... Dome Temp./Hum.  $86\%$  /  $18.5^\circ$  .....

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/16m G-6065	306u		18			
1843			6.5B	AI Vn		(guided too far over)		19	Bln Telluric Std Search	(V=5.56 + 0.9V) HD150117 stars slit	18.40
1756	$1.5''$ $2''$							20	" - "	(binning too dense to be resolved in this binning mode - ~ 1 pixel separation)	
								21			
								<del>21</del>			
								22			
1607	$1.5''$	5.71	87	Vn				23	Bln Telluric Std Search	1.628 Air mass	17.9°
								24			
1564		6.49	88	V				25	Bln Telluric Std Search		17.7°
2062								26		closed up due to	
								27		humidity - 96% on cutwath	
								1			
								28/29	Focus Test	18.4°	18.4°
Note: 2 pixel shift in complines from Focus test done at start of night											



Spectr. Temp. -1000

Dome Temp./Hum. 22.1°C/65.6%

Transparency Conditions Clear, ... few high clouds, ...  
increasing clouds base <sup>234</sup>

Focus 6.70

Spectr. Temp. gain 90

Dome Temp./Hum. 21.3°C/79.6%

CCD format 400, 0, 50, 1024, 4, 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission Lambda	P.H. Ct	Program	Remarks	Quality
				Cass CCD	1800 G=4446	306μ	4298Å	2/3			
				"	"	"	"	1			
				"	"	"	"	4ci			
10290		3.89	B5 II					5ci	Hnd		
				"	"	"	"	4ci			
7680		3.89	B5 II	"	"	"	"	6ci	Hnd pgm	MAX 7300/1 S/H	
				"	"	"	"	7ci			
6780	2"	3.89	B5 II	"	"	"	"	8ci		abs. max 15400	
				"	"	"	"	9ci			
6400		3.89	B5 II	"	"	"	"	10ci			
				"	"	"	"	11ci			
6470		3.89	B5 II	"	"	"	"	12ci			
				"	"	"	"	13ci			
6300		3.89	B5 II	"	"	"	"	14ci			
				"	"	"	"	15ci			
				"	"	"	"	16ci			



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Emulsion Batches:

Date 3/4 Aug 1999 Observers Hml / Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC 24616	COMP							FeAr Clean	60s
6167	HD160762	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>	46°03'34"	22:28:32		1 <sup>h</sup> 25 <sup>m</sup> W	46°03'34" <del>17°34'11"</del>		444s
618	COMP			22:31:08			46°03'34"	FeAr Clean	60s
619	HD160762	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>	46°03'34"	22:35:02		1 <sup>h</sup> 35 <sup>m</sup> W	46°03'34" <del>17°34'11"</del>		366s
620	COMP			22:45:28				FeAr Clean	60s
621	HD160762	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>	46°03'34"	22:47:45		1 <sup>h</sup> 47 <sup>m</sup> W	46°03'34" <del>17°34'11"</del>		357s
622	COMP			22:45:10				FeAr Clean	60s
623	HD160762	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>	46°03'34"	22:57:53		1 <sup>h</sup> 57 <sup>m</sup> W	46°03'34" <del>17°34'11"</del>		366s
624	COMP			23:07:07				FeAr Clean	60s
625	HD160762	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>	46°03'34"	23:09:07		†	46°03'34" <del>17°34'11"</del>		528
626	COMP							FeAr Clean	60s
627	HD160762	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>	46°03'34"	23:21:24		2 <sup>h</sup> 23 <sup>m</sup> W	46°03'34" <del>17°34'11"</del>		496s
628	COMP			23:30:54				FeAr Clean	60s
629	HD160762	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>	46°03'34"	23:34:01		2 <sup>h</sup> 34 <sup>m</sup> W	46°03'34" <del>17°34'11"</del>		366s
630	COMP			23:43:09				FeAr Clean	60s
631	BIAS(A)			23:45:30					

Spectr. Temp.  $-100^{\circ}$  ..... Dome Temp./Hum.  $21.3^{\circ}\text{C}/79.6\%$  Transparency Conditions *Hazy, high clouds* ..... 236

Focus .....  $6.70$  .....

Spectr. Temp. *again 90* ..... Dome Temp./Hum.  $20.9^{\circ}\text{C}/82.1\%$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion <i>Clamdale</i>	$\frac{F.H.}{C.T.}$	Program	Remarks	Quality
				<i>Cass CCD</i>	<i>1800 G=4446</i>	<i>300<math>\mu</math>m</i>	<i>4298A</i>	<i>16c1</i>			
<i>6020</i>	<i>1.2"</i>	<i>3.80</i>	<i>B3IV</i>	"	"	"	"	<i>17c1</i>		<i>13K MAX.</i>	
				"	"	"	"	<i>18c1</i>			
<i>6030</i>		<i>3.80</i>	<i>B3IV</i>	"	"	"	"	<i>19c1</i>			
				"	"	"	"	<i>20c1</i>			
<i>6100</i>		<i>3.80</i>	<i>B3II</i>	"	"	"	"	<i>21c1</i>			
				"	"	"	"	<i>22c1</i>			
<i>6100</i>		<i>3.80</i>	<i>B3II</i>	"	"	"	"	<i>23c1</i>		<i>11K ADU max</i>	
				"	"	"	"	<i>24c1</i>			
<i>6560</i>	<i>1.2"</i>	<i>3.80</i>	<i>B3II</i>	"	"	"	"	<i>25c1</i>		<i>12K ADU MAX</i>	
								<i>26c1</i>			
<i>6500</i>		<i>3.80</i>	<i>B3IV</i>	"	"	"	"	<i>27c1</i>			
				"	"	"	"	<i>28c1</i>			
<i>6500</i>		<i>3.80</i>	<i>B3IV</i>	"	"	"	"	<i>29c1</i>			
								<i>30c1</i>			
								<i>31c1</i>			

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pg#3

Date 3/4 August 199A Observers Hmk/Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CGA03A3 -46	HD1950A7	20 <sup>h</sup> 23 <sup>m</sup> 9 <sup>s</sup>	47° 35'			2 00 00	+47°	4x	67usec
CGA03A1-48	"	"	"					2x	133usec
CL2463A	<del>HD</del> PBIA(A)			00:5:05				FeAr Clean	60s
33	Comp			0:11:09				FeAr Clean	60s
34	HD 886	00 08 05	+14 37 40	00:15:20		3 <sup>h</sup> 14 <sup>m</sup> E	+15° 51"		613s
35	Comp			00:29:16				FeAr Clean	60s
36	HD 886			00:32:13		3 <sup>h</sup> 2 <sup>m</sup> E	+15° 7' 48"		393s
37	Comp			00:41:57				FeAr Clean	60s
38	HD 886			00:44:55		2 <sup>h</sup> 51 <sup>m</sup> E	+15° 7' 42"		249s
39	Comp			00:52:13				FeAr Clean	60s
40	HD 886			00:55:42		2 <sup>h</sup> 40 <sup>m</sup> E	+15° 7' 39"		223s
41	Comp			01:02:08				FeAr Clean	60s
42	HD 886			01:09:39		2 <sup>h</sup> 31 <sup>m</sup> E	+15° 7' 36"		272s
43	Comp			01:16:51				FeAr Clean	60s
44	HD 886			01:15:51		2 <sup>h</sup> 6 <sup>m</sup> E	+15° 7' 30"		888s
45	Comp			01:32:07				FeAr Clean	60s



Spectr. Temp.  $-100^{\circ}\text{C}$  Dome Temp./Hum.  $82.1\%$   $20.8^{\circ}\text{C}$  Transparency Conditions *Hazy (v.ery)* 258Focus  $6.70$ Spectr. Temp. *again 90*Dome Temp./Hum.  $86.1\%$   $20.4^{\circ}\text{C}$ *v light SSW wind*

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion <i>Clamuda</i>	P.H. <i>1/2</i>	Program	Remarks	Quality
	$<1''$ <i>nice</i>	$7.9$	G5IV	Cass CCD	1800 G=4446	30um	4298A		Tr seeing	Seeing Test	
						Above 30um slit		<del>5ci</del> 5ci	iv "	Dome West, no fans	
								5ci		increasing cloud	
6515	$1.2''$ <del>2.8</del>	2.83	B2IV					6ci	Hml pgm	11K ADU max	
								7ci			
6550		2.83	B2IV					8ci			
								9ci			
6630		2.83	B2IV					10ci			
								11ci			
6560		2.83	B2IV					12ci			
								13ci			
6500		2.83	B2IV					14ci			
								15ci			
3260		2.83	B2IV					16ci 17ci		Thick cloud again	







241

Pg#1

Emulsion Batches:

Date Aug 15 1994

Observers Ham/Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC24169/70	Focus Test Comp/Star			23:03:47					60/70
171	BIASCA)			23:43					
72	comp			23:43:40				FeAr Clean	60s
73	HD14739A	16 <sup>h</sup> 16 <sup>m</sup> 44 <sup>s</sup>	46°33'5"	23:48	23:50	4 <sup>h</sup> 13 <sup>m</sup> 40 <sup>s</sup> W			250s
74	comp			23:55		4 <sup>h</sup> 23 <sup>m</sup> W		FeAr Clean	60s
75	HD14739A	16 <sup>h</sup> 16 <sup>m</sup> 44 <sup>s</sup>	46°33'5"	00:00	<del>00:04</del>	4 <sup>h</sup> 23 <sup>m</sup> W			330s
76	comp			00:05	00:05			FeAr Clean	60s
77	BIASCA)			00:12					
78	HD160762 Comp	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>		00:14				FeAr Clean	60s
79	HD160762	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>	46°03'34"	00:18	00:23	3 <sup>h</sup> 24 <sup>m</sup> W			300s
80	comp			00:25				FeAr Clean	60s
81	HD160762	"	"	00:27:50	00:35	3 <sup>h</sup> 36 <sup>m</sup> W			400s
82	comp			00:36:10				FeAr Clean	60s
83	HD160762	"	"	00:38:30	00:45:10	3 <sup>h</sup> 34 <sup>m</sup> W			400s
84	comp			00:49:00	00:50			FeAr Clean	60s
85	HD160762	"	"	00:52:17	00:59	4 <sup>h</sup> 0 <sup>m</sup> W			400s

Spectr. Temp.  $-100.15^{\circ}$ Dome Temp./Hum.  $13.9^{\circ} / 61.5\%$ Transparency Conditions *clear, nice, g. cool.* 242Focus  $6.77$ Spectr. Temp.  $90.0^{\circ}$ Dome Temp./Hum.  $12.9^{\circ} / 68.5\%$ 

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				1800 CCD <del>6-4498</del> CCD Cass	1800 G=4446	30um	4298 Å	3/4			
								1			
								5ci			
460	3.84	B5IV		"	"	"	"	6ci	Hand.	Airmass 1.3745	
<del>8800</del>								7ci			
8800	3.84	B5IV						8ci	Hand.		
								9ci			
								1			
								10ci			
4250	3.80	B3IV		"	"	"	"	11ci	Hand	Airmass 1.2064	
								12ci			
12300	"	"		"	"	"	"	13ci	Hand	1/Kmax AB2	
								13ci			
11730	"	"		"	"	"	"	14ci	Hand		
1220		"		"	"	"	"	15ci			
1210150	"	"		"	"	"	"	16ci	Hand		

243  
Pg #2

Emulsion Batches:

Date Aug 15/94 Observers H. Hall / Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC 24685	COMP			1:00:49				FeAr Clear	60s
86	HD160762	17 <sup>h</sup> 34 <sup>m</sup> 38 <sup>s</sup>	46°03'34"	1:02	1:10	4 <sup>h</sup> 11 <sup>m</sup> W			400
87	COMP			<del>1:08:19</del>	<del>1:12</del>			FeAr Clear	60s
88	HD160762	"	"	1:14:20	1:15	4 <sup>h</sup> 25 <sup>m</sup> W			415
89	COMP							FeAr clear	60s
90	HD160762			0124 30		04 33 W			415
91	COMP							FeAr clear	60
92	BIASCA)			01:44:1m					
93	COMP			01:45:0 <sub>2</sub>				FeAr clear	60s
94	HD886	00 <sup>h</sup> 28 <sup>m</sup> 05 <sup>s</sup>	14°37'40"	01:44:06	01:53	4 <sup>h</sup> 39 <sup>m</sup> E			240s
95	COMP			02:03				FeAr Clear	240s
96	HD886	"	"	02:09	02:16	1 <sup>h</sup> 16 <sup>m</sup> E			400s
97	COMP			02:17:54				FeAr Clear	240s
98	HD886			02:24	02:32	0 <sup>h</sup> 59 <sup>m</sup> E			240s
99	COMP			02:34				FeAr Clear	240s



CD Spectr. Temp.  $-100.5$  Dome Temp./Hum.  $12.9^{\circ}\text{C}/68.5\%$  Transparency Conditions *clear* 244

Focus  $6.77$

Spectr. Temp.  $90.0^{\circ}\text{C}/0.9\%$  Dome Temp./Hum.  $12.7^{\circ}\text{C}/69.3\%$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion <i>Chemical</i>	P.H. <i>E<sub>i</sub></i>	Program	Remarks	Quality
				CCD CaASS	1800 G=4446	306u	4298	17c <sub>i</sub>	Hnd		
11650	3.80	B3V	"	"	"	"	"	18c <sub>i</sub>	Hnd	~ 11.	
								19c <sub>i</sub>			
11700	"	"	"	"	"	"	"	20c <sub>i</sub>	Hnd	~ 11.3 K max <i>adu</i>	
								21c <sub>i</sub>			
1150								22	Hnd		
<del>1150</del>								23			
								1			
								24			
11700	2.53	B2V						25	Hnd	(90 gain) Gain to 0, 4.3 max ADU	
								26			
<del>2350</del> 23500	"	"						27	Hnd	8.3 K max ADU	
								28		2.6 K max ADU	
29600					~ 330:1	S/N		29	Hnd	2.6 K max ADU	
								30		10 K max ADU	

Date Aug 5/6/194

Observers

Hrd/Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC244700	H0886	0 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14037'40"	02:42:41		00 40 E			500s
01	comp			02:55	02:59			FeAr Clear	240s
02	BIAS(4)			03:01					
03	comp			03:03				FeAr Clear	240s
04	H0886 comp			03:00	03:20	00 12 E			500s
05	<del>comp</del>			03:21				FeAr Clear	240s
06	BIAS(4)			03:27					
07	comp			03:28				FeAr Clear	60s
08	H0886			03:30	03:32	00 <sup>h</sup> 00 W			120s
09	comp			03:34				FeAr Clear	60s
10	H0886			03:36	03:38	00 <sup>h</sup> 05 W			100s
11	comp			03:38				FeAr Clear	60s
12	H0886			03:41	03:43	00 <sup>h</sup> 10 W			100s
13	comp			03:46				FeAr Clear	60s
14	H0886			03:49	03:51	00 <sup>h</sup> 19 W			100s

Spectr. Temp.  $-100.5^{\circ}\text{C}$  Dome Temp./Hum.  $12.7^{\circ}\text{C}/69.3\%$  Transparency Conditions *clear, haze on mirror* 246

Focus  $6.77$   
 Spectr. Temp.  $0$  gain/90 Dome Temp./Hum.  $12.4^{\circ}\text{C}$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
29500		2.80	B&W	Cass CCD	1800 G=4446	30um	4 298	7c 7c	Hul	<i>0 gain 0</i> 9.2K max Axon ~340 S/W	
								1		0 gain	
								89			
29000								10	Hul		
								11		0 gain	
								1		"	
								13		0 gain	
8020								14		13K maxadu	
								15		1Kx	
7000								16		11.2K maxadu	
								17			
7050								18			
								19			
6250								20			



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Page # 9.

Date Aug 5/6 / 94 Observers Anne / 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.
CC29715	Comp			03:53	03:54			Fair Clear	60s
16	HD886	0 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14° 21' 40"	03:55	03:57	0 <sup>h</sup> 26 <sup>m</sup> W			120s
17	comp			03:58	03:59			Fair Clear	60s
18	HD886			04:00	04:02	0 <sup>h</sup> 30 <sup>m</sup> W			120s
19	comp			04:04	04:05			Fair Clear	60s
20	HD886			04:06	04:08	0 <sup>h</sup> 36 <sup>m</sup> W			120s
21	comp			04:09	04:10			Fair Clear	60s
22	BIASCO			04:10		0 <sup>h</sup> 20 <sup>m</sup>			
23-32	10x Plate (22s)			04:18		0 <sup>h</sup> 0 <sup>m</sup> W +150' 10"		YAP Tung	
33-42	10x Plate (22s)			04:30		4 <sup>h</sup> W +46° W		YAP Tung	
43/44	FOCUS TEST COMP/STLAR.			04:38		4 <sup>h</sup> W +46° W		Fair clear	60/60
45-49	5x Plate (22s)					0 <sup>h</sup> 0 <sup>m</sup> W 150' 10"		<del>YAP</del> Tung	

Spectr. Temp.  $-160.5^{\circ}$  Dome Temp./Hum.  $12.2^{\circ}\text{C}/71.1\%$  Transparency Conditions .....

248

Focus  $6.77$  .....

Spectr. Temp.  $90$  again ..... Dome Temp./Hum.  $12.4^{\circ}\text{C}/71.6\%$

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Case CCD	1200 G=444L	30um	4298	21	Hand.		
7720	2.83		BLIT					22		11.6k max adu	
								23			
7850								24	Hand.	11 k max adu	
								26			
8210								27	Hand		
								28			
								1			
								29		90 again	
								30			
								3/4			
										0 again	
All to Perseus & Worm.											

P#1  
24A Sat/Sun 6/7  
Date 1.19.4 Aug

Observers [Rm]/Smt

Emulsion Batches:

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.....  
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time		Ending Time		Hour Angle End	Declination	Comparison	
				E.S.T.		E.S.T.				Type/Filter	(S) Exp.
CC24750/51	FOCUS TEST COMP/STELLAR									FedAr clear	30/33
52	BIAS(4)										
53	COMP									FedAr clear	60
54	HD214975	22 36 55	+56 18 24	01 15 30			00 20 E	+56°			1200
55	COMP									FedAr clear	60
56	BIAS(4)										
57	COMP									FedAr clear	60
58	HD180583	19 12 00	+27 45 00	02 22 44			04 02 W	+28°			630
59	COMP									FedAr clear	60
60	COMP									FedAr clear	60
61	HD180583	19 12 00	+27 45 00	03 02 01			04 44 W	+28°			700
62	COMP									FedAr clear	60
63	BIAS(4)										
64	COMP									FedAr clear	60
65	HD3712	00 40 12	+56 30 26	03 49 19			00 04 E	+56			30



CCD Spectr. Temp.  $-100.5^{\circ}\text{C}$  Dome Temp./Hum.  $16.2^{\circ}\text{C}/54.5\%$  Transparency Conditions  $\dots$  clear!  $\dots$

Focus  $\dots$  6.75  $\dots$

Spectr. Temp.  $\text{cgam} = 90$   $\dots$  Dome Temp./Hum.  $\dots$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $\mu\text{m}$ 6 = 5910	306 $\mu\text{m}$	6400 $\text{\AA}$	3/4		set a little cold.	
								1			
3404								5			
576		8.40	~G0 Ib					6	Rm PGM	~4.8K max a.d.u.	
3360								7			
								1		reset spec. controller @ 4:35	
								8		star's pos'n, size & time again. TROUBLE SHEET FILED	
3750											
2590		6.19	F6 I- Ib					9	Rm PGM	~12.5k max a.d.u.	
3935								10			
3800								11			
2231		6.19	F6 I- Ib					12	Rm PGM	ra & dec $\Delta$ 's way off (w/ 2 min)	
3840								13		~10K max a.d.u.	
								1			
								14			
7000		2.23	K5 IIIa					15	RU STD.	0 again. perhaps too bright of a star to choose.	

HARTMAN  
MASK MAY  
HAVE BEEN  
STUCK IN  
STELLAR  
POSITION.  
BUT NOT LIKELY  
DUE TO COMP  
EXP. METER SAME.



CCO Spectr. Temp. = 100 ..... Dome Temp./Hum. 14.2°C / 60.7% Transparency Conditions ... clear ..... 252

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

Spectr. Temp.  $\varphi_{\text{gas}} = 90$  ..... Dome Temp./Hum. ....

Exp. Mtr.	Secing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
9285				CASS CCD	1800 lines G-5140	30 $\mu$ m	6400A	16			
3295					G-5910			17		RESET SPEC. CONTROLLER TWICE AGAIN.	
1130		7.36	dK5					18	RV STD	~7.5K max adn	
3320								19			
								<del>20</del>			
								20		<del>max adn</del> fell from	
								<del>21</del>		~13K to 10K by the	
								21		finish of Plates.	
								3/4			

All to PARSING & WORM (two disks)

~~G should be 5910 not 5190~~  
~~CHECK DATA TO FIND OUT WHERE~~  
~~DYSLEXIA OCCURED.~~



253 # 1 Sun/Mon.

Date 1994 Aug 7/8 Observers KK/Smt / {Vys}

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 24793	Hartmann <sup>comp</sup> <del>star</del>							FeNe clear	15
24794	Hartmann stellar							"	"
24795	bias 4x								
96	COMP							FeNe clear	20
97	BD+47 2415B	16 55 06	47 30 55	21:08					
98	COMP							FeNe clear	20
99	COMP							FeNe clear	30
800	BD+47 2415B			~21 25?					900
01	COMP							FeNe clear	30
02	BD+47 2415			21 44 01		138 <sup>m</sup> W			255
03	COMP							FeNe clear	30
04	BIAS(4)								
05	COMP							FeNe clear	30
06	<sup>(Vys 880)</sup> BD +47 2411			22 07 37		02 05 W			389
07	COMP							FeNe clear	30

Spectr. Temp. ~~18.0~~ .....

Dome Temp./Hum. 19.1/66%

Transparency Conditions clear 254

Focus 16.70 .....

Spectr. Temp. -100.5°C .....

Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	Dev. C.	Program	Remarks	Quality
					1800/ 515	300	5303A			cedfnt 400 0 50 1024	41
		11.2	K8						{Vys}/Hlw Pgm	Vys 887B - test	
										cedfnt 480 0 50 1024	11
119		11.2	K8						{Vys}/Hlw Pgm	Vys 887B	
233		~8							{Vys}/Hlw Pgm	Vys 887	
								1			
								4			
255								5	{Vys}/Hlw Pgm	Vys 886	
								4			





Spectr. Temp. <sup>CCP</sup> -100.4°C Dome Temp./Hum. 15.6°C/81.5% Transparency Conditions clear 256  
 Focus 6.70  
 Spectr. Temp. 90.4g/cm<sup>3</sup> Dome Temp./Hum. ....  
 increasing cloud.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	CH	Program	Remarks	Quality
								4			
0		9.3	MSP					6	Vys. Vgm	Vys 321	
								4			
								1			
								7			
								8/9		ccdfint 4000 50 1024 4 1	
<p>           All to Perseus <del>BUT NOT</del> WORM AS OF August 8<sup>th</sup>!            (due to need to edit headers).            edited on perseus copy            put to WORM Aug 10<sup>th</sup> or so.            put to EXABYTE Aug 21<sup>st</sup> -         </p>											

Tue/Wed

Date ..1994. Aug. 9/10.

Observers ..[B.H.] III / Smt. ....

NOTE: INTENTIONALLY  
GUIDING AWAY FROM

Emulsion Batches:

-HOT PIXEL

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc 24823/24	Hartman Comp / stellar							Fe Ar clear	60/60
25	Bias (4)			1:57					
26	Comp			2:35:55				Fe Ar clear	60
27	HD 196504	203249	260650	2:40:33		3:13W	Air Mass 1.3548		775
28	Comp							Fe Ar clear	60
29	Bias (4)			2:56					
30	1 Comp			3:03:14				Fe Ar clear	60
31	HD 208565	215204	113605	3:07:49		2:20W	Air Mass 1.3857		752
32	Comp			3:21:52				Fe Ar clear	60
33	Comp			3:31:00				Fe Ar clear	60
34	HD 209833	220103	282841	3:36:05		2:39W	Air Mass 1.2186		689
35	Comp			3:49:09				Fe Ar clear	60
36	Bias (4)			3:50					
37	Comp			3:55:00				Fe Ar clear	60
38	HD 211287	221101	080308	3:57:55		2:57W	Air Mass 1.6298		1093

Spectr. Temp.  $-100.5^{\circ}$  Dome Temp./Hum.  $75.97\%/12.3^{\circ}$  Transparency Conditions CLEAR 258Focus 6.75DOME FANS ONSpectr. Temp.  $90.45^{\circ}$  Dome Temp./Hum. ....

ccd fnt 400 0 50 10 24 4 1

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion Cambera	P.H.	Program	Remarks	Quality
13300 13000				Cass CCD	1800 $\mu$ m	300 $\mu$ m	6604A	3/4			
								1			
14436								5			12.3°
15060	5.59	B9V		MAX ADU ~ 7K				6	Telluric Std ✓		12.3°
14394								7			
								1			
								8			
15050	5.54	A2Vn		MAX ADU ~ 8.1K				9	Telluric Std Search	SE DOME FAN TURNED OFF NOW	12.2°
								10			
								11			12.0°
15000	5.63	B9Vn		MAX ADU ~ 7.6 K				12	Telluric Std Search		
								13			11.9°
								<del>14</del>			
								14			
12000	6.21	A1Vn						15ci	Telluric Std Search		





<sup>CCO</sup>  
 Spectr. Temp.  $-100.4^{\circ}\text{C}$  ..... Dome Temp./Hum.  $11.7^{\circ}/79.8\%$  Transparency Conditions  $\dots$  clear .....  
 Focus  $\dots$  61.75 .....  
 Spectr. Temp.  $\dots$  again  $\approx 90$  ..... Dome Temp./Hum.  $12.5^{\circ}\text{C}/78.0\%$  by time of focus test - unfortunate.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass	1800 $\text{\AA}/\text{mm}$						
				CCD	$G=6065$	$305\mu\text{m}$	6604A	16ci			
15000	3.94	AIIn		Max AOU $\approx 8.9\text{K}$				18ci	H $\alpha$ emission	Bright star in a bright sky	11.70
14853								17ci			
14927								19ci			
								20ci		DOME FANS OFF	
								1			

ALL TO *Worm & Pingers*





CCD  
Spectr. Temp.  $-101.7^{\circ}\text{C}$

Dome Temp./Hum.  $17.7^{\circ}\text{C}/67.7\%$  Transparency Conditions *PART. Cloudy*

262

Focus  $6.75$

Spectr. Temp. *gain*  $90$

Dome Temp./Hum.  $e$  *Lambda*

*increasing cloud*

Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	C.P.H.	Program	Remarks	Quality
				CASS CCD	1800/ <i>in line</i> G=5115	306a	5303			400 0 50 1024 4 1 CCD FORMAT 440 0 160 1024 1 1	
?	3"	11.2	K8					4	KK {Vys}	East companion The fainter of pair.	16.5°C
1228								5		SB16 GUIDING.	
595								6c			
								7			
								8		SB16	
								7			
21200								9c		through some cloud. The BRIGHTER one	
								7			
								1c			
								10c			
	2"	7.52	Full						Seeing Test	MAX ADU = $13.6\text{K} - 12.4\text{K}$ except 80 = 10K no reason why DOME WEST, NE FAHON	







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FRI - SAT

Emulsion Batches:

Date Aug 13/13 RA Observers Hrb./Tn

CSS 386 7 secs ahead of W.W.V. Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC24897/98	Focus test comp/stellar			21:01		0 <sup>h</sup> 30 <sup>m</sup> W	46°	FeAr	60/70
99	comp			21:06				FeAr	60s
900	H 0160762	17 <sup>h</sup> 26 <sup>m</sup> 38 <sup>s</sup>	46° 05' 34"	21:19		0 <sup>h</sup> 53 <sup>m</sup> W		FeAr	360
901	comp			21:26				FeAr	60s
02	bina(A)			21:28		0 <sup>h</sup> 56 <sup>m</sup> W			
03	H 0160762			21:28		0 <sup>h</sup> 58 <sup>m</sup> W			610s
04	comp			21:41				FeAr	60s
05	H 0160762			21:44		01:26 W			818
06	comp								60s
07/07	Bina(A)								
CC24908 → 18	Flat (22.5) x 11			22:20		01:22 <sup>m</sup> W	45°	TUNG 11/11 Clear	22s
19 20	comp/stellar			22:35		01:22 W	+45°		60/80

CCD  
Spectr. Temp. -100.0°C  
Focus 6.75  
Spectr. Temp. 90.0 gain

Dome Temp./Hum. 12.3°C / 84.6%  
Dome Temp./Hum. +18.1°C 88%

Transparency Conditions hazy, humid, high cirrus...  
- solid cloud  
format 415, 0.50, 1024, 9, 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
				CCD Cass	G=4446 1800	3.0u	4x48	3/4			
								Sci	Hnd.	Org-y was at 440 before test	
11300	3.80	B31L						6c		2.9 K max adu	
								7c			
								1/2			
20300	2.3"	3.80	B31V					8c		≈ 5.8 K max adu	
								9c			
24,850	3.80	B31V						10c		6.9 K MAX adu	
								11		closed: humidity 75% or so at wall.	
								1/2		CCOT = -101.7°C	
								12c		≈ 11 K ADU max	
								3/4c	Focus Test,		
										Temp Back to +18.3°C	
										All to Persons & Workm	

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Emulsion Batches:

Date 1994 Aug 14/15

Sun/Mon

Observers

[H. M.]

J. n.

CSS 386 Time a 9 secs Ahead of W.U.V.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC24921 22	Comp / Stellar	HARTMAN				00 12W	+46 00	Felt Clear	60/80
23	BIAS (4)								
24	Comp							Felt Clear	60s
25	HD 160 762	17 36 38	<del>46</del> 03 34	20 44 43					116s
26	Comp								60s
27	HD 160 762			20 50 23					233
28	Comp							Felt Clear	60s
29	HD 160 762			20 57 59		00 38W			241
30	Comp							Felt Clear	60s
31	BIAS (4)								
32	Comp							Felt Clear	60s
33	HD 147 394	16 16 44	+46 33 05	21 08 40		02 09W			284
34	Comp							Felt Clear	60s
- 35 43	FLATS X 9			while on HD 147 394		02 23W	+46 20	TUNG Clear	22sec
44	Comp							Felt Clear	60s



CCD  
 Spectr. Temp.  $-100.0^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+15.3^{\circ}\text{C}$  ..... 5768 Transparency Conditions ..... Clearing Fast ..... 268  
 Focus ..... 6.78 .....  
 Spectr. Temp. Gain = 90 ..... Dome Temp./Hum. ..... 415 0 50 1024 4 1 CCD/FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $\mu\text{m}$ G=4446	306 $\mu\text{m}$	4298A	3/4			
								1ci			
								5ci			
14,900	3"	380	B3IV					6ci	Hnd pgm	MAX = 7400 ADU	
								7			
31,000	3.4"							8		MAX = 9,300 ADU	
								11ci			
31,300								13ci	Hnd pgm	MAX = 10,000 ADU	
								14ci			
								15			
19,790	3.4"	389	B5IV					16	Hnd pgm	5,700 ADU MAX Cloud coming fast	
								17			
								18		(Some 10x3 K MAX) 11.1 K ADU max	
								19			

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pg#2

Emulsion Batches:

Date 1994 Aug 14/15..... Observers [H.M.J.] J.K.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC24945	HD147394	16 16 44	+46 33 05	21 29 52		02 32 W			326
46	Comp							Felt clear	60s
47	HD147394	16 16 44	+46 33 05	21 39 10					339
48	Comp							Felt clear	60s
49	HD147394	16 16 44	+46 33 05	21 48 45		02 51 W			351
50	Comp							Felt clear	60
51	HD147394			21 58 54					395
52	Comp							Felt clear	60<
53	BIH5(A)								
<del>CG40356</del> 59	HD187120	19 43 12	+45 29	Note <sup>CG</sup> 40355 a mistake (Blank)				A x	1067s
CG40360 -61	"	"	"					2 x	133.5s
CC24954	Comp							Felt clear	60s
55	HD886	00 08 05	+14 37 40	22 30 15		04 24 E			180
56	Comp							Felt clear	60s
57	HD886			22 36 39					196
58	Comp							Felt clear	60s

Spectr. Temp. .... Dome Temp./Hum.  $7.14.0^{\circ}\text{C}$   $63\% \text{H}$  Transparency Conditions *Part Clear* .....Focus *6.78* .....

Spectr. Temp. ....

Dome Temp./Hum.  $4.13.6^{\circ}\text{C}$   $65\% \text{H}$ 

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
35,100	4"	389	B5 IV	CASS CCD	1800 1/4" $G=4446$	306u	9298A	26c	Hml ppm	10 K ADU max <i>clear here</i>	
								5c			
36,600								21c		11 K ADU max	
								5c			
36,600	3.4"							22c		10 K max ADU	
								5c			
								23			
								5c			
								1c			
	4"	$\checkmark$ 752	KO III			Above 306u slit				Seeing Test Dome West	
										" "	
								5c			
33,450	5"	280	B2 IV					24c	Hml ppm	10 K ADU max	
								7c			
								25			
								26c			



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Emulsion Batches:

Date 1994. Aug. 14/15. Observers [H.M.] J.H.

Plate No.	Object	R. A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC24959	HD 886	00 0805	+14 3740	22 1320		04 09E			305
60	Comp							Felt Clear	60s
61								TUNG Clear	225s
70	FLATS x10					04 05E	+15°		
71	BIAS(A)								
72						00 00	+1400	Felt Clear	*4 60/90
73	comp/stellar		HARTMAN						

Note I noted Aug 16 that CC24969 seems to be 50% larger than other files. i.e. ~150K bytes??

Spectr. Temp. ....

Dome Temp./Hum. ....

Transparency Conditions ... *increasing, cloud* 272Focus ..... *6.78*

Spectr. Temp. ....

Dome Temp./Hum. *\* 13.5° 66.7%*

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
38,000	5"	2.80	B2IV	CASS CCD	1800 G4446	306x	A298	27		7.2k mac, but gradient	
								28			
								29c:		MAX = 12k ADG	
<i>*x</i> ideal									30/31	focus test	Right on e <sup>Row</sup> 340
										All to worm s To Pearson. [note TO-FTP directory, this time]	

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p9#1 Mon/Tues

Date 1994 Aug. 15/16.... Observers ... Bl. / T. / S. + Bill. Hodges

Emulsion Batches:

386... Time was 10 sec ahead

Note CSS 386 Time corrected after exp. CG24955

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.			
CG24974	Comp / Stellar							FcAr Clear	60/60			
75	HURTMAN					00 19W						
76	Bias(4)							FcAr Clear	60			
77	Comp							FcAr Clear	60			
78	HD145122	16 04 16	+17 28 16	200343		1 28 W			835			
79	Comp							FcAr Clear	60sec			
80	Comp							FcAr Clear	60s.			
81*	HD 157741	17 20 03	+15 41 49	<u>20 24 53</u>		0 40.5W			1255			
82	Comp							FcAr Clear	60sec			
83	Bias(4)											
84	Comp							FcAr Clear	60sec			
85	HD186205	19 37 54	+08 59 00	<del>20</del> 59 50					3078s.			
86	Comp							FcAr Clear	60sec			
CG40362	HD187120	19 43 12	+45 29	Do not use this set				1	33 msec			
63	"	"									2 x	67 msec
66	"	"									4 x	133ms
67	"	"										
68	"	"										







CCD Spectr. Temp. -100.6°C

Dome Temp./Hum. 14.9°C 63%RH

Transparency Conditions ... Fine ... to ... Slightly hazy.

Focus . 6.74 / 6.77

Spectr. Temp. again 90

Dome Temp./Hum. ... C LHM BDA

Exp. Mtr.	Seeing	F <sub>v</sub> Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		752		CASS CCD	1800nm G=6065	306μ	6604A		Seeing Test	NE Fan on only	
	2.3								"		
								14			
203		b=9.21	B25Ib					15	BlN - He star	MAX emission H $\alpha$ 1000ADU	
2011	3"	"	"					16	BlN - He star	~7.5K max adu	
								17			
								1			
		max adu		10.3K - 9.3K				18			
								19/20			
<u>Set 6.77</u>		B <sub>25</sub>		CASS CCD	1800nm G=4565	306μ	4490A	3/4		ccd first 430 0 50 1024 4 1	
								5			
7260		B=9.21	B25Ib	~8S:1	SIN			6		max adu ~ <del>70</del> S/N = ~80:1	
								7			



Pg # 3

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Date 1994 Aug 15/16 Observers Blm./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	Exp.
CC25021	Comp							Fed Clear	60s
22	BD+26 3835	20 09 36	+26 27	00 38 59		02 41 W			3329
23	Comp							Fed Clear	60s
24	BI45 (4)								
25	COMP							Fed clear	60
26	HD 1061	00 09 50	08 16 00	01 46 05		00 44 E			1453
27	Comp							Fed clear	60s
28	Comp							"	60s
29	HD 21364	03 21 48	+09° 23	02 19 10		03 25 E			774
30	Comp							Fed clear	60s
31	BIAS(4)								
32	Comp							Fed clear	60s
33	HD 1061	00 09 50	08 16 00	02 44 49		00 13 W			1363
34	Comp							Fed clear	60s

Spectr. Temp. <sup>20</sup> - 100.6°C... Dome Temp./Hum. 13.4°C / 70.0% Transparency Conditions... clear little haze...

Focus 6.77

Spectr. Temp. <sup>9.0</sup> 9.0... Dome Temp./Hum. <sup>< lambda</sup>

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CLASS CCD	1800k/mm G=4565	306μ	* 4A90A	8		Actual central lambda	
3939	3.4"	B	86-93	B8	~1105:1	S/N		9	Bln	S/N=110:1 max adu ~ 1800 adu.	
								10			
								11			
15,670	3"	<sup>mpg</sup> 615	A9s					26c	Sp Bin Bln	S/N > 200/1 0-83 day period	
								12c			
								14c			
36100	4"	366	B8p	~375:1	S/N			15c	Sp Bin Bln	S/N ~ 350/1 9 hr ADU max	
								17			
								1c			
								21			
15,500	2.3"	<del>615</del> A9s	A9s	~215:1	S/N			22	Sp Bin Bln		
								23			





Spectr. Temp. .... Dome Temp./Hum.  $+12.4^{\circ}\text{C}$  76.4% Transparency Conditions . 1.4cr ... clouds haze.

Focus ..... 6.77 .....

Spectr. Temp. .... Dome Temp./Hum.  $+12.8^{\circ}\text{C}$  75.7%

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSS CCD	1800 G 4565	306 $\mu$	4440A	24c			
1800	3"	8.6 -9.3	B8	$\sim 20:1$	SIN			25	Sp Bin	sky OK in this direction far W !!	
								26			
								1			
								27			
17878	2"	6.15	A9s	$\sim 210:1$	SIN			28		MAX 4900 ADU	
								29		CCD T = $-101.7^{\circ}\text{C}$	
								5		max adu $\sim 12.4k \rightarrow$	
								3/4c	Focus test		
								1c			

ALL TO *NORM* & PERSEUS

Date 1994. Aug. 16/17. Observers [Bin]. III. / Sent....

Emulsion Batches:

.....  
.....

NOTES: INTENTIONALLY GUIDING AWAY FROM HOT PIXEL

TUE/WED

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc 25065/6	Hartman Comp / Stellar							FEAR clear	40/ 65
67	Bias (4)			20:49					
68	Comp			21:00:46				FEAR clear	60
69	BD +26 3835	20 09 36	+26 27 00	21:03:50		0:56 E	Air Mass 1.0680		3000
70	Comp			21:55:11				FEAR clear	60
71	Bias (4)			21:56					
72	Comp			22:07:58				FEAR clear	60
73	HD 1061	00 09 50	+08 26 00	22:11:04		4:10 E	Air Mass 2.2910		1800
74	Comp			22:43:18				FEAR clear	60
75	Bias (4)			22:44					
76/77	Hartman Comp / Stellar								
79	Comp			23:38:26				FEAR clear	60
80	HD 1061 <del>HD 10652</del>	00 09 50 <del>17 58 07</del>	+08 26 00 <del>+20 50 00</del>	23:41:45		~ 2:20 E	Air mass ~ 1.6		1300
78	Bias (4)			23:37					<del>60</del>
81	Comp			00:04:23				FEAR clear	60

Spectr. Temp. ... -1.00.0°C

Dome Temp./Hum. 18.3°/69.3%

Transparency Conditions . hazy, humid, .....

Focus ..... 61.74 .....

Spectr. Temp. c.g.r.in. = 9.2 ..

Dome Temp./Hum. ... NE fan on.

ccdfm+ 430 0 50 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CCD	1800 21mm G=4565	36um	4490 Å	3/4	Focus TEST		
								1			
								5			
4135		BB 9.6- 9.3	BB	~110:1	SIN			6	Sp Bin [Bin]	Max ADU ~1.3K	
10830								7			17.2°
								1			
		V= 5.79	AgS					8	Sp. Bin [Bin]		
9733								9		MAX ADU ~2.6K	
								10			15.9°
								1			15.8°
								11/12	Focus TEST	reset sp. controller after big telescope move to next position ~ LHA of 2.5W	
11297								13			
15000		V= 5.79	AgS <del>BB</del>	~230:1	SIN		MAX ADU 3.5K	14	Sp. Bin [Bin]	- took numerous resets of sp. controller + Jim bug reverts to get response - done getting wet, catwalk humidity over 95%.	
								1			
								15			





~~107~~ -100.5°C  
 Spectr. Temp. .... Dome Temp./Hum. .. 15.6° / 98.8% Transparency Conditions .. clear but 98% humidity <sup>284</sup>  
 Focus ..... 6074 .....  
 Spectr. Temp. .... c.gain = 9.2 Dome Temp./Hum. .... NE fan on.  
 on catwalk.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
—								1		reset sp controller again	
								16		after moving teles cope to ~3.154	
								1		max adu ~13k → 12.4k	
								3/4			
all to WORM & Pensers											

Date Aug 17/13 ..... Observers Hml./Smt. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc251067	Focused comp/stellar			20:30				FeAr	6080
08	Bras(A)			21:47		2 <sup>h</sup> 55 <sup>m</sup> W			
09	comp			21:47				FeAr	600s
10	HD 147394	16 <sup>h</sup> 16 <sup>m</sup> 44 <sup>s</sup>	46° 33' 05"	21:49	22:07	3 <sup>h</sup> 15 <sup>m</sup> W			700s
11	comp			22:09				FeAr	60s
12	HD 147394			22:11		3 <sup>h</sup> 29 <sup>m</sup> W			480s
13	comp			22:20				FeAr	60s
14	HD 147394			22:24	22:35	3 <sup>h</sup> 43 <sup>m</sup> W			630s
15	comp			22:36				FeAr	60s
16	HD 147394			22:37	22:58	4 <sup>h</sup> 6 <sup>m</sup> W			110s
17	Comp			22:59				FeAr	60s
18	Bras(A)			23:01					
19	comp			23:04		2 <sup>h</sup> 53 <sup>m</sup> W		FeAr	60s
20	HD 160762	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>	46° 03' 34"	23:07	23:13	3 <sup>h</sup> 0 <sup>m</sup> W			360s
21	comp			23:15				FeAr	60s



Spectr. Temp.  $-100.5^{\circ}\text{C}$ .....Dome Temp./Hum.  $18.9^{\circ}\text{C}/76.0\%$ Transparency Conditions *hazy, high cirrus (late)*Focus  $6.77$ .....Dome Temp./Hum.  $17.6^{\circ}\text{C}/81.2\%$ Spectr. Temp. *again*  $90$ .....

Format 415 050 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion <i>lambda</i>	F.H. C1	Program	Remarks	Quality
				Cass/cod	1800 6=4446	3064	4298A	3/4 1/2	Hm1		
26,000		3.8	B5IV		S/N ~ 280/1			5 6		max ~ 7k ADU centered on 15 <sup>th</sup> column airmass 1.176 at start	
30,200								7			
30,200					S/N ~ 300/1			8	(Centered on 19 <sup>th</sup> col)	airmass ~ 1.214 at start max ~ 7k ADU	
33								9			
34,300					S/N ~ 300/1			10	~ 10.7 k max ADU	airmass ~ 1.245 at start centered on 19 <sup>th</sup> col. centered on 21 col.	
35,200								11		10.	
35,200					S/N ~ 320/1			12	~ 11.1 k max ADU	airmass ~ 1.294 at start ~ 1.32 at end	
								13			
								14			
35,400		3.8	B5IV		S/N ~ 320/1			15		airmass 1.165 at start max ADU ~ 11k	
								16			







Date Aug. 17/3 ..... Observers Hml/Smt .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC25137	Bias(A)			2:17	-0 <sup>h</sup> 27 <sup>m</sup>				
38	comp			2:18				FeAr	60s
39	H0886	00 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14°37'40"	2:21	2:25	-0 <sup>h</sup> 18 <sup>m</sup> E			240s
40	comp			2:26				FeAr	60s
41	H0886			2:28	2:32	-0 <sup>h</sup> 12 <sup>m</sup> E			220s
42	comp			2:32				FeAr	60s
43	H0886			2:35	2:39	-0 <sup>h</sup> 5 <sup>m</sup> E			240s
44	comp			2:40				FeAr 60	60s
45	H0886			2:42	2:46	0 <sup>h</sup> 2 <sup>m</sup> W			240s
46	comp			2:47				FeAr	60s
47	Bias(A)			2:49					
48	comp			2:50				FeAr	60s
49	H0886			2:52	3:00	0 <sup>h</sup> 16 <sup>m</sup> W			480s
50	comp			3:01				FeAr	60s
51	H0886			3:03	3:10	0 <sup>h</sup> 26 <sup>m</sup> W			420s

Spectr. Temp.  $-100.9^{\circ}\text{C}$ Dome Temp./Hum.  $17.3^{\circ}\text{C} / 84\%$ Transparency Conditions *Hazy, Clouds clearing, humid*

270

Focus  $6.77$ Spectr. Temp. *again*  $10$ 

Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion/ Kamada	P.H. E <sub>1</sub>	Program	Remarks	Quality
				CCD Case	1800 G=4446	30 $\mu\text{m}$	4298A	1/2 5	Hml	clouds clearing (95% on Catwalk)	
32000	2.83	B2IV				SN $\sim$ 320/1		6 7		max 10.8 Kadu air mass $\sim$ 1.1432	
31600						SN $\sim$ 320/1		8 9		max 9 Kadu air mass $\sim$ 1.142	
33600								10 11		max 10 Kadu air mass 1.1404	
33900						SN $\sim$ 320/1		12 13		12.8 K maxadu air mass $\sim$ 1.1402	
33400						SN $\sim$ 320/1		14 15		10.3 K maxadu	
32370						SN $\sim$ 320/1		16 17		11 K maxadu 1.1465 air mass	

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Paczka

## Emulsion Batches:

Date Aug 17, 1958 Observers Hml/Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc25152	comp			3:12				FeAr	60s
53	H0886	0 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14 <sup>o</sup> 37'40"	3:19	3:22	0 <sup>h</sup> 38 <sup>m</sup> W			400s
54	comp			3:22				FeAr	60s
55	H0886			3:25	3:32	0 <sup>h</sup> 48 <sup>m</sup> W			420s
56	comp			3:34				FeAr	60s
57	Bias(4)			3:35		0 <sup>h</sup> 51 <sup>m</sup> W			
58	comp			3:36				FeAr	60s
59-68	10 flats 225 <del>H0886</del>			<del>3:39</del>		0 <sup>h</sup> 20 <sup>m</sup> W	15 <sup>o</sup> 06'N	Time/Leak	
64-78	10x flats 225					3 <sup>h</sup> 35 <sup>m</sup> W	46 <sup>o</sup> 28'N	Time/Leak	
79/80	Fourest comp/stellar			4:24		3 <sup>h</sup> 30 <sup>m</sup> W	46 <sup>o</sup> 28'N	FeAr	609/80s
81	Bias(4)			4:28		3 <sup>h</sup> 30 <sup>m</sup> W			



Spectr. Temp. .... -100.7°C

Dome Temp./Hum. 16.7°C / 86.9%

Transparency Conditions Hazy, partial clouds  
humidity is high 292

Focus ..... 6.77

Spectr. Temp. ... again 90

Dome Temp./Hum. 17.0°C / 83.7%

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Case	1800 G=44HL	30µm	Jenvalda 453A	18	Hnd		
34100	2.83	BVT						19		10.8K maxradu 330 S/W	
								20			
11970								21		max 3.7k adu	
								22			
								1 1/2			
								23			
				first flat was 12K maxradu best was 11.8K maxradu first flat was 11.2K maxradu last flat was 10.3 K maxradu				25 <del>24</del>		Clouded out at 3:40 EST Humidity 95%	
								3/4			
								1/2			
All the PERSEUS & WORM											

293 09#1 (Thur/Fri)

Date 1994 Aug 18/19 Observers [KK]/T./Smt.....

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

Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle End	Declination	Comparison	
		1900	1900	1900	1900	E.S.T.	E.S.T.	E.S.T.	E.S.T.			Type/Filter	Exp.
<del>CC 25182</del> 83	Comp 1 Stellar	HARTMAN										FeNe Clear	40/70
84	Comp			2000	2000							"	40
85	NGC 6720	18 53 36	33 03 00	22 15 35									9/60
86	'BIAS(4)												
87	NGC 6720	18 53 36	+33 03	21 45 13				0 30 W					375
88	NGC 6720	"	"	22 02 17									625
	<del>64 + 5.1</del>	<del>19 32 48</del>	<sup>1950</sup>										
89	83 + 12.1	19 43 30	+50 24 00	22 24 57				0 19 W					434
90	83 + 12.1			22 41 15				0 38 W					480
91	BIAS(4)												
92	64 + 5.1	19 32 48	+30 24 00	23 07 28				0 08 W					204
93	64 + 5.1	"	"	23 11 58				1 29 W					1150
94	64 + 5.1	"	"	20 16 59				<del>2 26 W</del>					<del>1150</del> 606
195	BIAS(4)												
196	NGC 7602	23 21 06	41 59 00	00 42 02				01 07 E					263

<sup>CCD</sup>  
 Spectr. Temp.  $-100.5^{\circ}\text{C}$  ..... Dome Temp./Hum.  $21.5^{\circ}\text{C}/63.0\%$  Transparency Conditions *slight haze, bright moon.* 294  
 Focus *G73* .....  
 Spectr. Temp. *cgam 80* ..... Dome Temp./Hum.  $+19.5^{\circ}\text{C}$  *7A?* ..... NE FAN ON  
 INCREASING HAZE

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/n G-4870	306	4940P			410 0 50 1024 41	
						Slitless setup				440 0 160 1024 11 max adu ~ 530	
	1-2"					W of PERS	1c	KK		440 0 240 1024 11 max adu ~ 460	
						E of PERS	2	KK			
						E of PERS.	1	KK		440 0 160 1024 10 guided on central "star" max adu ~ 1700	
						W of PERS.	2	KK		max adu ~ 1200	
								1R2			
						W of PERS	3	KK		short test max adu ~ 540	
						W of PERS	4	KK		" ~ 1700	
						E of "	5	KK		Very hazy	
						E of Piers	6c	kk pgm		all to WORM & PERSEUS	





Spectr. Temp. ....

Dome Temp./Hum.  $18.5^{\circ}\text{C} / 77.2\%$ Transparency Conditions *Wazy* .....

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Focus *6.7.3. → 6.7.0*

Spectr. Temp. ....

Dome Temp./Hum. ....

*at focus test*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CED	1800h/mm G=4870	Slitless Setup	4940Å	5c	KK	Tel East side	
								7c	"	Tel West side	MAX 520 Å
								8c	"		
								9c	"	Refocusal f. d. l. stop ON slitless <del>10000</del> P. act, pos'n	
										Looks Best of all.	
			2ndary	inverted focus	2699	306μ		10/11	(Right in)	410 0 50 1024 41 ccd film focus for Brightest Line)	
			"	"	2690	slitless		3c		440 0 160 1024 11 ccd film Tel West side	
								1			
								4		Tel East side	
								6		" " "	
										special seeing test	
										(Above 306μ slit)	normal seeing test
										All to WORM & Persens	Tel west side

Pg #1  
297

Date 1994 Aug 19/20... Observers [Rm]/Tn/Smt.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC 25209	BIAS(4)								
<sup>210</sup> 211	Comp / Stellar	HURTMAN				00 15W	+46 00	FeAr clear	60/70
212	COMP							FeAr clear	60
213	HD 173297	18 39 20	-20 45 00	20 27 47		00 12 E			1481
14	COMP							FeAr clear	60
<del>15</del>	<del>HD 173297</del>			<del>20 57 07</del>					
15	FLAT							Tung 1/2 Ap	4
<del>18</del>	<del>BIAS(4) COMP</del>							FeAr clear	60
18	HD 180583 <del>HD 173297</del>	19 12 00 18 39 20	+27 45 00 -20 45 00	21 17 52 20 27 47		00 03 E			1128
19	COMP							FeAr clear	60
20	COMP							FeAr clear	60
21	HD 203156	21 15 23	37 49 00	21 48 36					
22	COMP							FeAr clear	60
23-28	<del>BIAS(4)</del> FLAT x 6					01 40E	38°	Tung 1/2 Ap	7
29	BIAS(4)								
30/31	COMP/STELLAR HARTMAN					1 41 E	+38 11	FeAr clear	60/65



Spectr. Temp. .... Dome Temp./Hum.  $21.0^{\circ}\text{C}/78.3\%$  Transparency Conditions *clearing... partly cloudy... hazy*  
 Focus .....  $6.68$  .....  
 Spectr. Temp. *gain 90* ..... Dome Temp./Hum.  $19.7^{\circ}\text{C}$  .....  $430\ 0\ 50\ 1024\ 41\ \text{ccdfmt}$  DOME FANS OFF

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion <i>lambda</i>	P.H.	Program	Remarks	Quality
				CASS CCD	1800 $\lambda/\text{mm}$ $G = 5190$	306 $\mu$	<del>4100 Å</del> <del>5400 Å</del> 5407 Å	1 3/4 5			
2150		$\langle W \rangle = 7.48$	~60 Ib		> 100:1	S/N		6 7 6	Rm pgm Rm pgm	91% natural humidity	
				G setting is wrong for 6400 Å (dexerialy set)				8		15 K max adu.	
					1800 $\lambda/\text{mm}$ $G = 5910$	306 $\mu$	6400 Å	9			
7650	2"	$\langle W \rangle = 6.19$	F6I-IIb					10 11 12	Rm pgm.	~10K+max adu.	
		5.85.9	F2					13	Rm pgm	through cloud. cut short good for solar absorption & sky emission ONLY.	
All to Worm & Perseus.								14			MAX 11.5K ADU
								1 3/4			



CCD Spectr. Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+20.5^{\circ}\text{C}$   $71.9\% \text{H}$  Transparency Conditions *clearing (slowly)* ..... 300

Focus  $6.68$  .....

Spectr. Temp.  $90^{\circ}\text{C}$  *GAIN* ..... Dome Temp./Hum. ....

430 0 50 1024 41 CCDPMT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/nm G=6065	306 $\mu$	6604A	3/4c	focus Test		
								1c			
								5			
3,700	4"	6.14	AOV $\bar{u}$					6c	Telluric ppm	sky still bright at start AIR MASS = 1.68 cloud lingering through	
								7			
								8			
2200	3.5"	7.73	G8III					9	std'ed and seeing test		
		$\bar{F}$						10			
								1c			
2200		7.73	G8III			Above 306 $\mu$ slit			Seeing test	No Fens on Tonight	
									" "	Dome SW, wind NORTH	
								11			
1950	3"	8.86	B25Ib					12	Sp Bin Bln	MAX @ H $\pm$ = 5800 ADU	
								15c		MAX $\approx$ 13.3 KADU	
								<del>16</del>			



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SUN / mon

Emulsion Batches:

Date 1994 Aug. 21, 22.... Observers [Bl.] Th... III... too....

NOTE: INTENTIONALLY BLINDING AWAY FROM HOT PIXEL

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC252 <sup>65</sup> 66	Comp / Stellar	HAITMAN				2 30E	+54 28	FeAr Clear	60/60
<sup>67</sup> 68	Comp / Stellar	HAITMAN				2 25E	"		40/65
69	BIAS(4)								
70	Comp			21:55:00				FeAr Clear	60sec
71	HD 235679	21 5500	+54 01 00	21 59 09		1:16 E		FeAr Clear	3557
72	Comp			23:01:12				FeAr Clear	60s
73	Bias (4)								
74	Comp			23:09:37				FeAr Clear	60s
75	BD +26 3835	20 09.6	+26° 27'	23:10:57		1:31 W			3034
76	Comp			00:02:40				FeAr Clear	60
77	Comp			00:07:33				FeAr Clear	60
78	HD 1061	0 09 50	+8° 16'	00:10:15		1:51 E			1732
79	Comp			00:41:01				FeAr Clear	60
80	Bias (4)			00:42					
81	Comp			00:49:06				FeAr Clear	60

Spectr. Temp. .... Dome Temp./Hum. 18.1°C 74.6% Transparency Conditions P.S.T. cloudy..... 302

Focus 6.68.....

Spectr. Temp. .... Dome Temp./Hum. .... Note - we were not at 4490Å. Rattled too late

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
set 6.68				CHS CCD	1800 G-6065	306μ	660A	3/4	foc test		
6.72					1800 h/min G-465	306μ	<del>3800</del> 3800	3/4	" "		
								1			
								5			
2800	3.4"	B 9.21	B2.5 I6					6	Sp Bin Blk	SIN 50:1 <del>Air 1.0514</del>	1
								16ci			17.6°
								1ci			
<del>2800</del>		B= 9.6- 9.3	BB					17ci	Sp Bin Blk		
3000								18ci		Note: hot pixel bleeding along as well as across columns	17.3°
								19ci			
								20ci			
14300		6m5	A9s					21ci	Sp Bin Blk	S/H=90/1	17.3°
								22ci			
								1			
								23ci		sp controller needed reset after big move	17.0°

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page #3

Emulsion Batches:

Date ... 94. Aug. 21/22 Observers ... [E.B.] [T.M.] + ... III.  
Swal Mm

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 25282	HD 164852	17 58 06	+20° 50'	00 51 30	<del>01:09:30</del>	4:51 W			1089
83	Comp			01:10:40				Fe Ar clear	60s
84	Comp			01:15:48				Fe Ar clear	60s
85	HD 1061	00 09 50	+8° 16'	01 18 42		00 44 E			1685
86	Comp							Fe Ar clear	60
87	BIAS(4)								
88	Comp			01 56 04				Fe Ar clear	60s
89	BD +26 38/35	20 09 36	+26 27 00	01 58 48		4:08 W			2267
90	Comp							Fe Ar clear	60s
91-99	FLAT x 9							Jung clear	60s
CC 25300	Comp / stellar Hartman					4 15 W	+27°		40/50
2	Bias(4)								
3	Comp			03:09:02				Fe Ar clear	60s
4	HD 1061	00 09 50	8° 16'	03:11:42					1314
5	Comp			03:34:52				Fe Ar clear	60s



Spectr. Temp.  $-101.6^{\circ}\text{C}$  ..... Dome Temp./Hum.  $17.0^{\circ}/79.9\%$  Transparency Conditions *Some cloud* .....

Focus .....  $6.72$  .....

Spectr. Temp. *again = 92* .. Dome Temp./Hum. ....

*G value should be 4565*  
*Not intended C LAMBDA*

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
13475	6"	B = 5.19	B3IV	<i>Loss CCD</i>	1800 $\mu\text{m}$ $G = 4665$	306 $\mu\text{m}$	3800 <del>3800</del> $\text{\AA}$	24c	Sp Bin Bln		16.9°
								25c			
								26c			
17000	5"	6.15	A9s					27c	Sp Bin Bln	S/N 100/1	
								28c			
Exp Meter rebalanced, (It had been falling back) before balancing								Note checked that Hariman mask was Home It was. I was suspicious about discrepancy of counts vs S/N			
2575	4"	8.6 -9.3	B8					29	Sp Bin Bln		16.2°
								30c			
								31c			
6.72	stat/ok			<i>Loss CCD</i>	1800 $\mu\text{m}$ $G = 4565$	306 $\mu\text{m}$	4490 $\text{\AA}$	3/4c	Focus Test	some focusing good	16.1°
								1			
								5c			
17830	7.3"	6.15	A9s					6c	Sp Bin Bln		15.8°
								7c			

Date ... 94 Aug. 21. 1922 ... Observers ... [Blair] / T.O. ... + III

Sealman

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC 253 06	Comp			03:38:52				Fe Ar clear	60
7	HD 21364	3 21.9	+9° 23'	03:42:05		1:54 E			366
8	Comp			03:49:37				Fe Ar clear	60s
10	Comp			03:54:02				Fe Ar clear	60s
10	HD 1061	00 09 50	+8° 16'	03:56:24		1:50 W			1346
9	Bias (4)			03:51					
12	Comp			04:21:09				Fe Ar clear	60s
13	HD 1061	00 09 50	+8° 16'	04:25:49		2:17 W			1293
14	Comp			04:48:34				Fe Ar clear	60s
15 34	FLATS x 20							TUNG CLEAR	15sq
35	Bias (4)			05:05					

Spectr. Temp. ... 100.4 C ... Dome Temp./Hum. ... 15.0°/78.0% Transparency Conditions ... C/CLR

Focus ... 6.72

Spectr. Temp. ... Dome Temp./Hum. ... 15.0° 77.2%

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Caos CCD	1300x1mm G=4565	300 μm	4490 Å	8ci			
38103		B <sub>2</sub> 3.60	BBp					9ci	Sp. Bin Bln	Max ADU 12.4K	15.0°
12491								10ci			
16490	3"	6.15	A9 <sub>2</sub>					11ci			
								12ci	Sp. Bin Bln		
								1			
								13ci			15.2°
16750		6.15	A9 <sub>5</sub>					14ci	Sp. Bin Bln		
12310								15ci			
								16ci		12 K ADU MAX	
All to Perseus & WOrn											



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pp#1 Mon/Tues

Date 1994 Aug 22/23 Observers Blm./Ten + Bill Hodges

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC25336/37	Comp / Stellar					00 00	46 00		
38	BIAS (4)								
39	Comp							Felt Clear	60s
40	RD+26 3835	20 09 36	+26 27	20 09 48		01:24 E			3/69
41	Comp							Felt Clear	60s
42	BIAS (4)								
43	Comp							Felt Clear	60s
44	HD 1061	00 09 50	+8 16	21 16 25		04:42 E			1726
45	Comp							Felt Clear	60s
46	Comp							n	1
47	HD 235679	21 55 00	+54 01	22 56 36		01 29 E			2735
48	Comp							Felt Clear	60s
49	BIAS (4)								
50	Comp							Felt Clear	60s
51	HD 1061	00 09 50	+8 16	22 53 10		03:12 E			13/6
52	Comp							Felt Clear	60s

CCD  
 Spectr. Temp.  $-100^{\circ}\text{C}$  Dome Temp./Hum.  $19.2^{\circ}\text{C}$  57% Transparency Conditions *Fine* 308  
 Focus  $6.72$   
 Spectr. Temp.  $90.0\text{cg/min}$  Dome Temp./Hum.  $16.4^{\circ}\text{C}$  66% 470H  
 C.L.A. in BDA 415 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
14.29				CASS CCD	1800/1/1mm G=4558	306u	4475 <sup>#</sup>	3/4		*The exact center as Tom now wants it	
								1			
								5			
4630	2-3"	<del>8.6</del> 9.3	<del>B83</del>					6	Sp Bin Bln	DR VUL 7100/1 S/N	
								7			
								10i			
								8			
10,900	4-6"	<del>6.15</del>	A9s					9	Sp Bin Bln		
								10			
								11			
3660	2-3"	9.21	B9.5J6					12	SB Bln		
								13			
								10i			
								13.			
14,500	3"	6.15	A9s					15	Sp Bin Bln		
								16			





Spectr. Temp. .... Dome Temp./Hum. .... Transparency Conditions ... *Fine* .....Focus ... *6:7.2* .....Spectr. Temp. .... Dome Temp./Hum. ... *+14.2°C 69.3% H* .....

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	<i>2-3"</i>	<i>✓</i> <i>7.60</i>	<i>F2V</i>				<i>ABOVE 306K slit</i>		<i>Seeing Test</i>	<i>Light N wind</i>	
				<i>CASS CCD</i>	<i>1800 in/mm G=4558</i>	<i>306K</i>	<i>4475A</i>	<i>1C<sub>1</sub></i>	<i>Multiple</i>	<i>spectrograph control failures</i>	
<i>16,500</i>	<i>3"</i>	<i>B=</i> <i>6.15</i>	<i>A9s</i>					<i>17C<sub>1</sub></i>			
								<i>18C<sub>1</sub></i>	<i>SP Bin Blk</i>	<i>MAX 4400 ADU</i>	
								<i>19C<sub>1</sub></i>		<i>note the long time between stellar and last comp. Sp contr problems</i>	
								<i>20</i>		<i>MAX = 11-12K ADU.</i>	
								<i>21</i>			
<i>17000</i>	<i>2-3"</i>	<i>B</i> <i>6.15</i>	<i>A9s</i>					<i>21</i>	<i>Sp Bin Blk</i>	<i>MAX ≈ 4700 ADU</i>	
<i>4900</i>								<i>22</i>		<i>Comments noted for 60sec FeAr</i>	
								<i>1C<sub>1</sub></i>			
								<i>23</i>			
<i>3630</i>	<i>3"</i>	<i>8.6</i> <i>-9.3</i>	<i>B8</i>					<i>24</i>	<i>Sp Bin Blk</i>	<i>Lines single (narrow)</i>	
								<i>25</i>			
								<i>1C<sub>1</sub></i>			



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

Focus *6.72* .....

Spectr. Temp. .... Dome Temp./Hum. .... *LAMBDA*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	<del>2-3"</del>	615		CMS CCD	1800 $\lambda$ /mm	306 $\mu$	4475A	26			
15,500	2-3"	615	A95					27	Sp Bin Blk		
								<del>28</del>			
								28			
36 000	2-3"	3166	B8p					29	Sp Bin-Blk		
								30			
								31		Dome T = +13.5°C	
15,200	3"	615	A95					32	Sp Bin Blk	CCD T = -100.5°C	
								505			
								100			



\* MOTORIZED GRATING WHEEL DRIVER N/A \*  
 Emulsion Batches:  
 GRATING ANGLES SET BY HAND... \*

Date 1994 Aug. 23.124 Observers [Bin] III / Tn.....

Tue/Wed

NOTE: INTENTIONALLY GUIDING AWAY FROM HOT PIXEL

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
<del>CL 25396</del> 95	Hartman Comp 1 stellar					00 45W	+37°	Fear clear	60/60
97	Bias (4)			20:11					
98	Comp			20:30:15				Fear clear	60s
99	NOVA Cyg 92	20 27 43	52 17 39	20:41:14					300
400	NOVA Cyg 92	"	"	20:50:51		0:50E			3453
1	Comp			21:50:23				Fear clear	60s
2	Bias (4)								
Cy 40396/99	HD 187120	19 43 12	45 29 00	22:00					4x67ms
Cy 40400/401	"	"	"						2x133ms
3	Comp			22:12:06				Fear clear	60
4	HD 221491	23 27 29	34 24 02	22:14:13		303E	Air mass 1.2390		1364
5	Comp			22:38:51				Fear clear	60
6	Bias (4)			22:40					
7	Comp			22:45:16				Fear clear	60
8	Nova Cas 93	23 36 59	56 57 45	22 47 18		2:58 E			300

Spectr. Temp. .... Dome Temp./Hum. ... 13.0° / .54.5% Transparency Conditions ... Fine - increasing haze

Focus ... 6.70

Full moon

Spectr. Temp. ... 9.2 ... Dome Temp./Hum. ... 415 0.50 1024 41 CCD FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass CD	1800 l/m 50.2 Starts	306 mm	6503 <del>6604A</del>	6/7  1c	Focus TEST		
36	Fine	12-3 <sup>?</sup>	emo					8 9	NOVA ↓	Max ADU 0.2K test exposure → fits there	
355		12-3 <sup>?</sup>	emo					10	NOVA	Max ADU 0.5K SBK autoguide used	17.1
	←							11		mostly sky counts	
								1			
	2.2"	7.5	K0III						Seeing Test	NO Fans, Dome WNW no wind or UV light east	
	"	"	"						-"-		
								12ci			16.3°
9000		6.65	BBV					13ci	Blu Telluric Std Serial	Δra 004 Δdec 0124	15.8°
								14ci			
								1ci			
								15ci			15.7°
40	1.2"	10-11 <sup>?</sup>	emo					16ci	NOVA	1.65 Air mass test exposure - Max ADU 0.5K	

Date 94 Aug 23 124. Observers [Bin] III / T. ....  
Tue Wed

Emulsion Batches:

Guiding. and arg. from hot pix el

\* GRATING ANGLE SET MANUALLY \*

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
α 25409	Novae 93	23 36 59	56 57 45	22:53:14		2 22 E			2100
10	Comp			22:29:02				Fe Ar clear	60
11-30	FLAT x 20			<del>22:56:56</del>		2 10 E	+57 27	Fe Ar 1/4	6
31	Bias (4)			23:43:48					
<del>32/ 33</del>	<del>Hartman Comp 1 Stellar</del>					1 55 E	+57 27	Fe Ar Clear	60/60
<del>34 35</del>	<del>Hartman Comp stellar</del>							Fe Ar Clear	40/55
36	Comp			00:28:23				Fe Ar Clear	60
37	HD 1061	00 09 50	+8° 16'	00:31:05		1 25 E			159
38	Comp			01:04:14				Fe Ar Clear	60
39	Bias (4)			01:05					
40	Comp			01:24:40				Fe Ar Clear	60
41	BD + 263835	20 09 36	+26° 27'	01:27:14		7 06 W			3599
42	Comp			02:28:19				Fe Ar Clear	60
43	Bias (4)								
44	Comp			02:32:15				Fe Ar Clear	60



Spectr. Temp. .... Dome Temp./Hum. 15.7°/71.7%

Transparency Conditions Sl. hazg

Focus 6.70 + 6.74

Full moon

Spectr. Temp. again = 9.0

Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
291	2.2"			CCD	1800/1mm 30.2°	306 μm	6563A	17c	NOVA	brighter than nearby field stars	
	← mostly sky counts							18			
								19		MAX 10K ADU	
								1			
								6/7	Focus test		
					1800/1mm 42.7°	306	4475A	6/7	Focus test		
								21			15.1°
11890	2.6 6.75	6.15 6.75	A9s	MAX	3.9 K			22	Sp. Bin	obs. through some cloud	15.0
								23c	Bin after	sp controller died	
								1			14.7°
12934								24		sp controller died again after last move	
2282	2.6 4.3	8.6 9.3	B8					25	Sp Bin Blk	3x → shut off for a while	
								26			14.6°
								1			
								27			









CCD  
Spectr. Temp.  $-101.7^{\circ}\text{C}$

Dome Temp./Hum.  $21.6^{\circ}\text{C}/71.1\%$

Transparency Conditions clear

Focus  $6.66$

DOME FANS OFF

Spectr. Temp.  $29.1\text{M } 90$

Dome Temp./Hum. ....

ccdint 415 0.50 10

Exp. Mtr.	Seeing	PV Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSS CCD	1800/4mm angle = just below 55.0°	30μ	639*		focus Test	* different from usual 6400 to separate data	
								5			
7500	2"	$\langle \lambda \rangle =$ 6.19	F6I-2b					6	Rm pgm	~ 8.2K max adv 1.49 day period using star header fixed.	S/N ~ 300/1
								7			
								1			
								8c			
5250	3"	7.48	G0I6					9c	Rm pgm		S/N ~ 300/1
								10			
								11			
								11			
1870	2"	9.1 -9.8	F8 -62Ib					12	Rm pgm	S/N 170/1 (max 3000 ADV)	
								13			
1500	1-2"							14	Rm pgm	~ 2000 max adv	
								15			
								1			

Pg #2  
321

Date 1994 Aug 25/26 Observers [Rm.] Smt/Tn.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC25489	Comp							FeAr clear	60
90	HD203156	21 15 23	37 49 00	22 44 03		00 27 E			456
91	Comp							FeAr clear	60
92	Comp							"	"
93	HD24975	22 36 55	+56 18 24	23 02 31		01 01 E			2273
94	Comp							FeAr clear	60c
95	bias(4)								
96	Comp							FeAr clear	60
97	HD180583	19 12 00	27 45 00	00 00 24		02 54 W			585
98	Comp							FeAr clear	60
CG40402 -05	HD207754	21 46 12	+43 25					4 x	57ms
06 -07	"	"	"		00 20			2 x	133ms
99	Comp							FeAr clear	60
500	HD222368	23 34 48	05 05 00	00 31 26	<del>00 31 26</del>	01 05 W			129
01	<del>Comp</del> Comp							FeAr clear	60



CCP  
Spectr. Temp. -101.7°C

Dome Temp./Hum. 20.0°C / 81.3%

Transparency Conditions ... clear ... humid ... though. <sup>322</sup>

Focus 6.66

Spectr. Temp. ....

Dome Temp./Hum. ....  
CLIMBDA

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800h/mm	306u	6400A 6399A	16			
8050	1"	V= 58.59	F2					17	Run Pgm	~9.4 max adu	
								18			
								19			
4000		(V)= 8.40	~60Ib					20	Run pgm	~6.8K max adu 1st priority	
								21			
								1			
								22			
8190								23	Run pgm.	~9.3k max adu	
								24			
	1-2'	732			Above 306u slit					Seeing test Done WNW " " no wind.	
								25	RV Std.		
9050		4.13	F1V					26	↓	~11.7K max adu	
								27			

Pg #3  
323

Date 1944 Aug 25/26 Observers [Rm] Smt / Tn

Emulsion Batches:

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.....  
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc25502	bias (4)								
03	Comp							Fe Ar clear	60
04	HD 177724	19 00 49	13 42 53	00 45 10					54
05	Comp							Fe Ar clear	60
06	FLATS x 10							Tung Ap 1/4	6sec
-15							00 04W +34°	Fe Ar clear	60/65
16/17	Comp / stellar HARTMAN						" "		
18	bias (4)			01 19					





Emulsion Batches:

GRATING MOTOR... N/A

NOTE: GRATING ANGLE  
DETERMINED MANUALLY
 pg #1  
 Date Aug 20/27/94 Observers Am/Smt III  
Fri/Sat.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
225519	bias (4)			19:55					
20/21	Hartman Comp/ Stellar							FeAr Clear	
22	Comp			21:32:25				FeAr Clear	60s
23	HD 147394	16 <sup>h</sup> 16 <sup>m</sup> 44 <sup>s</sup>	46° 33' 05"	20:39:19		2 <sup>h</sup> 38 <sup>m</sup> W			900s
24	comp			20:56:01				FeAr Clear	60s
25	comp			21:17				FeAr	60s
26	HD 147394			21:22		3 <sup>h</sup> 16 <sup>m</sup> W			360s
27	Comp			21:29				FeAr	60s
28	HD 147394			21:32		3 <sup>h</sup> 24 W			380s
29	Comp			21:41				FeAr Clear	60s
30	HD 147394			21:43		3 <sup>h</sup> 33 W			370s
31	comp			21:51				FeAr Clear	60s
32	HD 147394			21:53		3 <sup>h</sup> 42 W			310s
33	comp			21:59				FeAr Clear	60s
34	Bias (4)			22:01					

Spectr. Temp. .... 190.0° Dome Temp./Hum. 21.7° / 71%  
 Focus ..... (6.66 (perfect!)) perfect ~~rock salt~~  
 Spectr. Temp. .. gain = 9.2.. Dome Temp./Hum. ....

Transparency Conditions high cirrus, .. little clouds...  
 dome pens on  
 415 0 50 1024 41 ccd fnt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	F.T.	Program	Remarks	Quality
				Cass CCD	1300.11mm 41.75°	306 μm	4290A	1	Hnd	BOTH FANS ON	
								3/4	Focus TEST	focus test.	
								5		SE FAN OFF	
30850	3.84	B5II						7		airmass at start 1.105 HAd at 2h23m airmass at end 1.1298 (cc 22+24 both at same grating angles as ccd 3)	
								9		max 9 kadu - off centre (6 motor out) - set beyond	
31750					41.7° matched to previous night.			10		max 8.1 kadu reset grating clearing up nicely airmass 1.188 at start, 1.199 at end. dim lights on filter - noisy.	
35400								11		max 8.1K adu.	
								12		guiding a little poor → spread out over a few columns. airmass 1.23	
35800								13		max 13.2 kadu	
								14		airmass at end 1.254	
								15			
35150								16		airmass at end 1.277	
								17		max 13 kadu	
								1/2		overdue bias	

All 40 WORM

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Page # 2

Date Aug 26/57

Observers Hrd./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.
cc25535	comp			22:06				FeAr Clean	60s
36	HD160762	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>	46°03'34"	22:09		2 <sup>h</sup> 37 <sup>m</sup>			245s
37	comp			22:14				FeAr	60s
38	HD160762			22:15		2 <sup>h</sup> 44 <sup>m</sup>			260s
39	comp			22:21				FeAr Clean	60s
40	HD160762			22:23		2 <sup>h</sup> 51 <sup>m</sup>			250s
41	comp			22:30				FeAr	60s
42	HD160762			22:35		3 <sup>h</sup> 03 <sup>m</sup>			260s
43	comp			22:43				FeAr Clean	60s
44	HD160762			22:46		3 <sup>h</sup> 14 <sup>m</sup>			270s
45	comp			22:52				FeAr Clean	60s
46	HD160762			22:56		3 <sup>h</sup> 25 <sup>m</sup>			260s
47	comp			23:02				FeAr Clean	60s
48	Bias (A)			23:04					
49	<del>HD160</del> comp			23:04				FeAr Clean	60s



Spectr. Temp.  $-100.0^{\circ}\text{C}$  ..... Dome Temp./Hum.  $20.3^{\circ}/79.6\%$  Transparency Conditions *clearing* .....Focus ..... *6.6k* .....Spectr. Temp. .... *again 90* .....

Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion <i>clambda</i>	P.H. Ei	Program	Remarks	Quality
				<i>Cass CCD</i>	<i>1800</i>	<i>30um</i>	<i>4248A</i>	<i>18</i>	<i>Hel</i>		
<i>36100</i>		<i>3.0</i>	<i>B3IV</i>				<i>12.2K max</i>	<i>19</i>		<i>airmass at start 1.125</i>	
								<i>20</i>			
<i>35800</i>								<i>21</i>		<i>airmass at start 1.133</i>	
								<i>22</i>		<i>12.3K max Adu.</i>	
<i>34500</i>								<i>23</i>		<i>airmass at start 1.1469</i>	
<i>B</i>								<i>24</i>		<i>11.4K max adu</i>	
<i>35500</i>						<i>12.6K max</i>	<i>adu</i>	<i>25</i>		<i>airmass at start 1.1706</i>	
								<i>26</i>		<i>humidity on catwalk 89%</i>	
<i>12000</i>								<i>27</i>		<i>airmass at start 1.194</i>	
<i>36000</i>								<i>28</i>		<i>13.1K max adu</i>	
<i>B</i>								<i>29</i>			
<i>35080</i>						<i>12.3K max</i>	<i>adu</i>	<i>29</i>		<i>airmass 1.219 at start</i>	
<i>12300</i>								<i>30</i>			
								<i>42</i>			
<i>12669</i>								<i>5</i>			

Date Aug 26/27 1994 Observers Hml/Smt

## Emulsion Batches:

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.....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CG455 50	HD160762	17 <sup>h</sup> 36 <sup>m</sup> 38 <sup>s</sup>	46°03'34"	23:08	3:37 W			<del>FeAr</del>	280
51	comp			23:16	-			FeAr Clear	60s
52	HD160762			23:18	3 <sup>h</sup> 48W				290
53	comp			23:26				FeAr Clear	60s
	<del>comp</del>								
CG404 08 <del>52-11</del>	SEEING TEST HD207754	21 46 12	43 25 00						.067s
CG404 2/13	"					00 02 E	43°50 N		.133s
54	COMP			23:57	-2 <sup>h</sup> 05W	-0 <sup>h</sup> 22 E		FeAr Clear	60s
55	HD886 comp	00 <sup>h</sup> 08 <sup>m</sup> 05 <sup>s</sup>	14°37'40"	00:00		-0 <sup>h</sup> 06 E		FeAr Clear	145s 60s
56	comp			00:05				FeAr Clear	60s
57	Brae (4)			00:09		-2 <sup>h</sup> 02E			
58-72	FLAT x 15					3 00 W	39°45 N	Tung clear	22
73	BIAS (4)			00:15					
74	Comp			00:15		-1 <sup>h</sup> 31E		FeAr	180s
75	HD886			00:50		-1 <sup>h</sup> 3E			420s
76	comp			01:07		-1 <sup>h</sup> 2E		FeAr clear	180s

Spectr. Temp. .... -100.0°C

Dome Temp./Hum. .... 19.8°C/82.8%

Transparency Conditions clear... humidity 91.9%<sup>330</sup>  
on catwalk

Focus ..... 6.66

Spectr. Temp. .... again 90

Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H. E.	Program	Remarks	Quality
35800		3.80	B3IV	CCD caes	1800 angle 41.7°	30μm	4298Å	6	Hml	airmass at start 1.250. 13.8K max adu	
12698								7			
35065								8	Hml	airmass at start 1.27 (1.246 ahead) 11.8K max adu.	
								9			
		7.32	K0III					-	seeing test	dome W, humid, light E breeze	
		"	"					-	"	clear, above 30μ slit.	
9737.								9.		spectrograph controller <del>is</del> <sup>is</sup> <del>not</del> <sup>not</sup> <del>but</del>	
35690		2.83	B3III					10	Header may be wrong	airmass at start 1.300 14.6K max adu	
								11			
								1/2		switch to gain of 0	
								12		max adu ~ 11.2k → 10.5k for last	
27635								12/13		switch gain to 0 do 12/13, then 180s comp.	
113500								16		airmass 1.183 at start max adu 9.8k.	
27543								17		humidity on catwalk ~ 94%	





Spectr. Temp.  $-100.0^{\circ}\text{C}$  ..... Dome Temp./Hum.  $18.9^{\circ}/86.1\%$  Transparency Conditions *Haze, humid, high cirrus*

Focus *6.6k* .....  
 Spectr. Temp. *again 0* ..... Dome Temp./Hum.  $18.4^{\circ}/87.2\%$  (*95% on catwalk*)

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission $\lambda$ (nm)	PH	Program	Remarks	Quality
132 000		2.83	B2II	CCD Casse	1800 41.7°	30um	4298Å	18	Hml.	airmass 1.167 at start 12.1K max adu	
<del>28793</del> <del>30292</del>								19			
134 000								20		$\sim 10.2$ max adu 1.14 airmass	
								21			
								1/2		shutters dripping: closed up	
								22		plate at Ocean	
										max adu $\sim 14K \rightarrow 10.9K$	

All to WORM & Perseus.

Pg #1  
333

Date 1994 Aug 28/29 Observers [Rm]/Smt..... III as backup

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC25596/7	FOCUS TEST COMP/STELLAR						+44°	FeAr clear	60/60
98	BIAS(4)			20 44					
99	COMP							FeAr clear	60
600	HD 173297	18 39 20	-20 45	20 55 06		1 03 W			2500
01	COMP							FeAr clear	60
02	BIAS(4)			21 40					
03	COMP							FeAr clear	60
04	HD 180583	19 12 00	+27 45	21 51 25		0 57 W			660
05	COMP							FeAr clear	60
06	COMP							FeAr clear	60
07	HD 331970	20 08 27	+32 34 16	22 28 11		1 30 W			3600
08	COMP							FeAr clear	60
09	BIAS(4)			23 33					
CG40414 -17	HD 207754	21 46 12	+43 25 00						.067
18/19	"					0 12 W	+44°		.133





Pg #2

335

Date 1994 Aug 28/29 Observers [Rm]/Smt III as backup.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc25610	COMP							FcAr clear	60
11	HD214975	22 36 55	+56 18 24	00 16 01					240x
12	COMP			00 57 32				FcAr clear	60
13	BIAS(4)			00 59					
14	Comp							FcAr clear	60
15	HD222368	23 34 48	+05 05 00	01 18 37		0 07 E			150
16	COMP							FcAr clear	60
17	COMP							FcAr clear	60
18	HD222847	23 39 01	-18 49 55	01 35 46		0 13 W			592
19	COMP							FcAr clear	60
20	BIAS(4)			01 50					
21	COMP							FcAr clear	60
22	VY Per (NO HD# yet)	02 20 19	+58 28 04	02 20		0 53 E			3600s
23	COMP							FcAr clear	60
24	BIAS(4)			03 23					

CD  
Spectr. Temp.  $-100.5^{\circ}\text{C}$ ...

Dome Temp./Hum  $13.9^{\circ}\text{C}/67.2\%$

Transparency Conditions *Crystal clear... W. wind.*

33b

Focus  $6.70$ .....

NE DOME FAN ON

Spectr. Temp. ....

Dome Temp./Hum. ....

CCDFMT 415 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H. ci	Program	Remarks	Quality
				CASS CCD	1800l/mm $\sim 55.0^{\circ}$ deg	306 $\mu$	6399 $\text{\AA}$	14			
2510 <del>1938</del>	$\langle V \rangle =$ 8.40		$\sim 60I_b$		done manually			15	Rm P6M	1st PRIORITY $\sim 3400$ max adu GUIDED WITH SB16 $\sim 200:1$ S/N.	
8844								16			13.5 $^{\circ}$
								17c:			
9700		4.13	F7I					18	RV STD	starting to get hazy $\rightarrow$ moon has rise 8.8K max adu	
								19			
								20			
10 000		5.24	B9V $_n$					21	Tell. STD	arr mass $\sim 2.14$ $\sim 7.7K$ max adu	
								22			
								1			
								23			
600	10.8 -11.66		F5-F9					24	Rm P6M	$\sim 670$ max adu $\sim 85:1$ S/N GUIDED WITH SB16 FOR $\frac{1}{2}$ OF TIME	
								25			
								1			



Pg # 3  
337

Date 1994 Aug 28/29 Observers [Rm]/Smt III as backup

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC25625	COMP							FeAr clear	60
26	HD25361	03 56 41	58 23 00	03 51 34		1 26 E			2100
27	COMP							FeAr clear	60
28	BIAS(4)			04 30					
29	COMP							FeAr clear	60
30	HD30282	04 41 05	136 32 36	04 36 39		1 37 E			1300
31	COMP							FeAr clear	60
37-51	FLAT x 20					0 00 11 E	+42°	Tung 1/4 Ap.	6 s.
52	BIAS(4)			05 42					
53/54	FOCUS TEST COMP/STELLAR	HARTMANN				0 E or W	+42°	FeAr clear	60/65

CCD Spectr. Temp.  $\dots -100.5^{\circ}\text{C}$  Dome Temp./Hum.  $13.6^{\circ}\text{C} / 66.4\%$  Transparency Conditions  $\dots$  clear  $\dots$  bright moon  $\dots$  338  
 Focus  $\dots 6.70$  NE DOME FAN ON  
 Spectr. Temp.  $\dots$  Dome Temp./Hum.  $\dots$  CCD FMT 415 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1500 Å ~55.0 deg. done manually	306 μ	6399 Å	26			
6250		7.30 - 8.07	F6Ib - G2Ib					27	Rm P6M	~8.6K max adu ~310:1 S/N!	
								28			
								1			
								29			
6000		B = 7.9-8.8	F6 - G1					30	Rm P6M	~6.8K max adu ~280:1 S/N! kind of close to moon	
								29			
								5		SPEC PROGRAM CONTROLLED RESET 9.7K - 8.8K max adu	
								1			
								3/4			
All to WORM & Perseus.											

Date ... 24 Apr. 29.130 Observers ... [Bin] III ... / Smt ...  
Tue / Wed

## Emulsion Batches:

NOTE ① Grating angle determined manually

② Purpose fully guiding away from ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc 25655	Bias (4)			19:28					
567	Hertman Comp / Stellar							FAr clear	60/160
58	BIAS (4)			20:10					
60	Comp			21:38:24 20:50:09				FAr clear	60
61	HD 145964	16 09 30	-20°51'11"	21:44:02		03 59 W	-21°		400
59	Bias (4)			21:36					
62	Comp			22:00:56				FAr clear	60
63	Comp			22:25:08 22:07:44				FAr clear	60
64	HD 210419 HD 146416	22 05 09	-04°23'03"	22:28:29		1.11 E	Air Max 1.570		900
65	Comp			22:44:37				FAr clear	60
66	Bias (4)			22:46					
67-82	FLAT x16							Tung 1/4 Ag	
83/4	Hertman Comp / Stellar							FAr clear	60/160



Spectr. Temp. <sup>2CD</sup> ..... 100.0 °C Dome Temp./Hum. 15.3°/53% Transparency Conditions ... clear!

Focus ..... 6.74 (perfect)

Spectr. Temp. ... gain = 9.0 Dome Temp./Hum. .... 415 0 50 1024 41 ccd fnt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Cass	1800/306	306	6604A*	1	8	reset sp. controller	
				CCD	56.45°	mm		3/4	Focus TEST	Telescope on E. side of pier	
								1		reset sp. controller	
								Sci		reset sp. controller	
8042								6ci	3h Telluric Std Search		11.9
610	6.41	ADV						1ci			14.4°
								7ci			
								8ci		could NOT get HD14646	13.6°
7930								9ci	3h Telluric Std Search	blocked by shirt + good view of trees	13.3°
9254								10ci			
								1			
								11ci		~ 7.2 ADV	
								3/4	Focus TEST		
										New setting begins on next page	



Spectr-Temp. .... CCD Dome Temp./Hum. 13.2°/61.5% Transparency Conditions ... clear!

Focus ... 6.50 (perfect)

Spectr-Temp. again = 9.0 ... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD	1800/1mm	300 $\mu$ m	4475A	B/14	Focus TEST	Telescope on W. side of pier now	
								1			
								15			12.8°
12956	5.79	A9s		~220: 1 S/W				16	Bln Sp. Bin	Max ~ 3K ADU	12.30 <del>12.8</del>
								17ci			
								18ci			12.3°
370	8.6 -9.3	B8		~95: 1 S/W				19ci	Bln Sp. Bin	Max ~ 0.7K ADU	
								1			11.9°
								20ci			
								1			
								20ci			11.7°
14145	5.79	A9s		~220: 1 S/W				16	Bln Sp. Bin	Max ~ 3.2K ADU	
								21			
	7.5	K5						-	SEEING TEST	clear, cold, DOME S, no wind	
	"	"						-	"	90% catwalk humidity, fans off.	



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page # 3

Date ... 94 Aug. 29/30. Observers ... [Bin] III / Smt. ....  
Tue / Wed

Emulsion Batches:

Gratings... angle determined  
manually.....  
Guiding... away from hot pixel

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc 25699	COMP			03:00:31				FcAr clear	60
700	HD 21364	03 21 48	+9° 23'	03:02:36		02 02 E			300
701	COMP			03:10:06				FcAr clear	60
702	Bias (4)			03:11					
703	COMP							FcAr clear	60
704	HD 1061	00 09 50	+08° 15' 56"	03 19 47		01 46 W			1558
05	COMP			03 46 50				FcAr clear	60
06	COMP			04 00 25				FcAr clear	60
07	HD 210459	22 05 33	32 41 00	04 03 06		04 18 W			560
8	COMP			04:13:18				FcAr clear	60
9	Bias (4)			04:14					
10	COMP			04:20:30				FcAr clear	60
11	HD 1061	00 09 50	+08° 15' 56"	04 23: 12		02 44 W			1200
12	COMP			04 44 25				FcAr clear	60
13	COMP			04 51 02				FcAr clear	60

CCD  
Spectr. Temp.  $-101.8^{\circ}\text{C}$  Dome Temp./Hum.  $10.9^{\circ}/74\%$  Transparency Conditions  $\text{Clear!!}$

Focus  $6.30$

Spectr. Temp.  $-99.1^{\circ}\text{C}$  Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD	1800 $\lambda$ /mm	306	4475A	22c			
29673	3.66	B8p		<del>Max A</del>	42.7°	22m		23c	Bln Sp. Bin	Max ADU $\sim 9.2\text{K}$	10.9°
10881								24c			
								1			
								25c			
12000	5.79	A9s						16c	Bln Sp. Bin	Dec control died - blown fuse - replaced.	
								26			
								27			10.9°
31400	4.3	F5III		<del>Max A</del>				28c	Bln A-shell	Max ADU $\sim 7\text{K}$	
								29			
								1			11.2
								30			
2300	5.79	A9s						16	Bln Sp. Bin	Max ADU $\sim 2.8\text{K}$	
								5			
								6			

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page # 4

Date 94 Aug 29 1930. Observers [Bl. J. III] / Smt

Emulsion Batches:

Grating angle determined  
manually  
Guiding away from hot pix

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
425714	HD 5394	00 56 24	60 41 00	04 53 09					37
15	Comp			04 54 35				Fear clear	60
16	Bias (4)			04 57 04					
17-36	FLAT x 20		+8° 15'			0:45W		Tung clear	15
37/38	FOCUS TEST COMP/STEWART HARTMANN					"	+8°	Fear clear	40/50



Spectr. Temp. .... Dome Temp./Hum. 11.8 / 75% Transparency Conditions ... Clear !!! / 346  
 Focus ..... 6.80 .....  
 Spectr. Temp. ... egrin = 90 Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20200		2.5	BO IV npe	Cass Ccd	1800/1mm 42.7°	306 um	4475A	7ci	8 Cass		
								8ci			
								1			11.1°
								17ci		~ 11.7 KADU	
								13/14			
All to WORM & PERSEUS											

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pg#1

Thurs/Fri

Date 1994 Sep 1/2..... Observers [kk]/Tn/Smt.....

Emulsion Batches:

CSS 386 Time Reset to W.W.V. Time @...sturt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
ce07750									
51	INBOARD/OUTBOARD								
52	BIAS(4)								
53	COMP							ThAr clear	1
54	ADS9979A	16 10 54	+34 07 00	19 47 19		2 20 W			1200
55	COMP							ThAr	<del>1200</del>
56	ADS9979B	16 10 54	+34 07 00	20 09 17		2 51 W	+33 51		1808
57	Comp							ThAr	1
58	ADS9979A			20 41 03		3 14 W			1248
59	COMP							ThAr	1
60	BIAS(4)								
61	COMP							ThAr	1
62	HD8890	01 22 36	+88 46 00	21 13 43		6 50 E			537
63	Comp							ThAr	1
64	HD8890	01 22 36	+88 46 00	21 25 17		6 42 E			360
65	COMP							ThAr	1

CCD Spectr. Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+13.8^{\circ}\text{C}$  ...  $66\% \text{RH}$  Transparency Conditions ... Fine-increasing haze 348

Focus  $\dots 240$  .....

Spectr. Temp.  $\dots 9.0 \text{ c.g. gain}$  ..... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				ECHOLLE	<del>300 Å</del> CLD 1840X = 0.580	60 μW = .27 400 μH = .225	G300A			0 0 128 1024 8 1	
								1		0 0 256 1024 4 1	
75	3.4"	5.58	* GOV	→ (This one <del>seems</del> looks to be a much earlier Sp type.)				3		(brighter & narrower) centre order max adu ~ 1000	
<del>75</del>	* Pair are well separated in guide view							3ci		KK telluric vel. pgm. (lower priority)	
42	3"	6.59	GIV					2		(dimmer & softer) centre order max adu ~ 1000	
								4ci		KK telluric vel. pgm. (lower priority)	
								2		Red order < 800 ADU MAX	
72		5.58	GOV					3ci		(brighter & narrower) centre order max adu ~ 1000	
510								2		KK telluric vel. pgm. (low priority)	
								1			
456								2		max adu 8600	
920	4"							5	KK pgm.	any adu ~ 16K! bottom 3 orders have some saturation	
399								6		exp. ctr dropped by 20% over 2 comp. 8200 max adu	
660								5	KK pgm.	max adu ~ 11K	
417								2			



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p9#2

Emulsion Batches:

Date 1994 Sep 1/2 Observers [KK]/Tm./Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
67	HD8890	01 22 36	+88 46 00	21 33 34		6 32 E			400
67	COMP							Th Ar	1
68	HD8890			21 43 05					400
69	COMP							Th Ar	1
70	BIAS(4)								
	<del>ADS14270 A</del>	<del>20 41 36</del>	<del>15 32 00</del>						
71	COMP							Th Ar	1
72	ADS14270 A	20 41 36	15 32 00	22 01 45		0 12 W			1800
73	COMP							Th Ar	1
74	ADS14270 B	20 41 36	15 32 00	22 34 57		0 46 W			1801
75	COMP							Th Ar	1
76	ADS14270 A	20 41 36	15 32 00	23 07 21		1 18 W			1800
77	Comp							Th Ar	1
78	BIAS(4)								
79	COMP							Th Ar	1

Spectr. Temp. .... Dome Temp./Hum.  $12.0^{\circ}\text{C}/69.5\%$  Transparency Conditions *clear with thin haze* <sup>350</sup>  
 Focus ..... *240* .....  
 Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion <i>CD</i>	P.H.	Program	Remarks	Quality
663				ECHELLE CCP 18.46	300 $\text{\AA}/\text{mm}$ $X = .580$	60 $\mu\text{m}$ W 400 $\mu\text{m}$ H	6300 $\text{\AA}$	5	KK pgm	max adu $\sim 12K$	
453								6		max adu $\sim 8400$	
618								5	KK pgm	central order max adu $\sim 9400$ overall " $\sim 11K$	
								2			
493		<del>7.50</del>	KO					2 <sup>3</sup>			
7		7.50	KO					3	brighter & southern KK pgm	central order max adu $\sim 450$	
506								6			
0		8.2	?					4	fainter & northern KK pgm	central order max adu $\sim 300$	
								2			
13	3"	7.50	KO					3	brighter & southern KK pgm	$\sim 300 \text{ADU max}$	
479								2			
								1			
								2			

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Pg # 3

Emulsion Batches:

Date 1994... Sep. 11/2... Observers ... [KK] / T.n. / Smt...

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

Plate No.	Object	R.A.	Declination	Starting Time	Ending Time	Hour Angle	Declination	Comparison	
		1900	1900	E.S.T.	E.S.T.	End		Type/Filter	Exp.
CE07780	ADS14279 A	20 42 00	15 46 00	23 42 43		01:34 W			664
81	Comp						ThAr		1 sec
82	ADS14279 B	20 42 00	15 46 00	23 55 35		01:57 W			1260
83	Comp						ThAr		1 sec
84	ADS14279 A			00 17 06		02 09 W			597
85	Comp						ThAr		1 s
86	ADS14279 B			00 29 46		02 30 W			1173
87	Comp						ThAr		1 s
88	ADS14279 A			00 50 38		02 44 W			756
89	Comp						ThAr		1 s
90	BIAS(4)								
91	Comp						ThAr		1 s
92	HD186791	19 41 30	+10 22 00	01 07 42		03 56 W			365
93	Comp						ThAr		1 s
94	HD186791			01 15 37		04 03 W			361
95	Comp						ThAr		1



Spectr. Temp. .... Dome Temp./Hum. 10.6°C / 77.2% Transparency Conditions clear with little bit of haze.  
 Focus ..... 240  
 Spectr. Temp. .... Dome Temp./Hum. 10.0°C / 81.3% H

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	PH	Program	Remarks	Quality
160	3-4"	4.50	K1 IV	ECHELLE CCD 18.46	300 l/mm X = .580	60µ W 400µ H	6300 Å	5	KK 1gm.	~2 K ADU max @ center	
350								2			
125	4"	5.50	F7V					6ci	KK 1gm	~1150 ADU max @ center	
220								2		11 K ADU max for comp	
164		4.50	K1 IV					5ci		~2 K ADU max @ center	
260								2		11 K max	
125	3"	5.50	F7V					6ci		~1100 ADU max @ center (ie above Backg. <sup>ground</sup> )	
515 <sup>XX</sup>								2		1.2e2 K ADU max	
170	4-6"	4.50	K1 IV					5		1.90 AIR mass @ end	
520								2			
								1			
								2			
280	4"	9.70	K3 II					3	std vel	3.6 K ADU max, center	
								2			
284								3	std vel		
								2			

353  
87944

Emulsion Batches:

Date 1999 Sep 1/2 ..... Observers [K.H.] Jm./Smt.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CEOT96	Comp							ThAr	1s
97	ADS14636A	21 02 25	+38 15	01 31 58		03 10 W			1020
98	COMP							ThAr	1
99	ADS14636B	21 02 26	+38 15	01 50 20		03 32 W			1283
800	COMP							ThAr	1
01	ADS14636A	21 02 25	+38 15	02 13 03		03 59 W			1483
02	COMP							ThAr	1
03	BIAS (4)								
04	COMP							ThAr	1
05	HD222368	23 <del>94</del> 48	05 05 00	02 43 12		01 41 W			575
06	COMP							ThAr	1
07-11	FLAT x 5					01 42 W	5° 33 <sup>m</sup>	Tung	1.7
12/13	FOCUS TEST INBOARD/OUTBOARD	HARTMANN				01 42 W	+5 33°	ThAr	1s/1s

All to Perseus &amp; WORM

Spectr. Temp. .... Dome Temp./Hum. 10.1°C / 81.3% Transparency Conditions . clear . . . → clouding in . . .

Focus . . . . . 290 . . . . .

Spectr. Temp. .... Dome Temp./Hum. 9.9°C / 82.3% - 96% catwalk @ end of exposures .

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				ECHELLE CCD 18.46	200 R/mm X tilt = .580	60 μm 400 μm H	6300 Å				
140	5.22	K5V						5	brighter & west KK pgm	east	
532								2			
65	6.04	K7V						6	fainter & east KK pgm	central order max adu ~ 1000	
530								2			
18	5.22	K5V						5	brighter KK pgm	through cloud. central order max adu ~ 465	
								2			
								1			
522								2			
24	4.13	F7V						3	RV Std.	cloudy with some holes. central order max adu ~ 450	1.39 airmass
								2			
						60 μm W 500 μm H = .215		4		DOME WET. t scale = 100 max adu ~ 11K	
	10.0°C					60 μm W 400 μm H = .225		1/2	focus test	CCDFMT 0 0 128 1024 8 1	
										Only about 2 pixels out from the "Righton" focus test at start of night.	













