



S #1 Fri / SAT

Emulsion Batches:

Date 1995 Dec 29/30... Observers D. G. T. M.

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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 378 ^{40/A1}	Inboard / outboard			18 18		0 20W	+41°	Fe Ar clear	30/45
42	Comp							"	60s
43	HD 204867	21 26 18	-06 00 40	18 29 09		03 16 W	-5 34 S		206s
44	"	"	"	18 32 52		03 20 W	-5 34 S		230
45	"	"	"	18 37 00		03 25 W	-5 34 S		245
46	Comp							"	60s
47	BIAS (4)								
48	Comp							"	60s
49	HD 222368	23 34 48	05 05 03	18 50 43		01 31 W	5 35 N		300s
50	"	"	"	18 56 06		01 36 W	5 35 N		300s
51	"	"	"	19 01 27		01 42 W	5 35 N		300s
52	Comp							"	60s
53	Comp							"	60s
54	HD 6397	00 59 49	14 24 30	19 16 18		00 42 W	14 54 N		900s
55	Comp							"	60s

Exp. Mtr. Seeing
 6039 Filter
 Spectr. Temp. ...
 Focus ... 6.98
 Spectr. Temp. ...

Exp. Mtr.	Seeing
6039 Filter	
600	
10500	
10300	
600	
1000	
10900	
10100	

Spectr. Temp. ^{CCD} - 102.0 Dome Temp./Hum. - 4.0°C 73.8% H Transparency Conditions Hazy but clearing up..... 6

Focus ... 6.98

Spectr. Temp. Dome Temp./Hum.

420 050 1024 x 1 CCD FWT

Companson Filter/ Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ar 2.8 30/45	BG 39 Filter				CASCCD	1800 μ m/12 μ m G=4475	306 μ	4300 \AA $\pm 2\text{\AA}$	3/4	focus test		MAX Ade
60s									1/2			
20s	10600		B3.74	GOIb					6	Dby/Std		3-2K
230	10500		"	"					7	"		
245	10300		"	"					8	"		
60s									9			
									1/2			
60s									10			
30s	10600		B5.04	F4V					11	Std. Vel.		
300s	10900		"	"					12	"		
300s	10900		"	"					13	"		
60s									14			
60s									15			
700s	10100		B6.09	F4II-III					16	Dby		
60s									17			

7
#2

Fri/Sat

Emulsion Batches:

Date 1995 Dec 29/30 Observers Dby./Tu

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 37856	HD 6394	00 59 49	14 24 30	19 35 40		0 59W			817s
57	Comp							Fe Ar Clear	60s
58	HD 6397	00 59 49	14 24 30	19 52 22		01 16 W	14 54 N		800s
59	Comp							"	60s
60	Bias (4)								
61	Comp.							"	60s
62	HD 216131	22 45 11	24 04 05	20 15 59		03 44 W	24 35 N		164s
63	"	"	"	20 19 12		03 47 W	24 35 N		167s
64	"	"	"	20 22 28		03 50 W	24 35 N		170s
65	Comp							"	60s
66	Comp								
67	HD 8890	1 22 34	88 46 26	20 37 51		00 16 W	89 14 N		66s
68	"	"	"	20 39 15		00 18 W	"		66s
69	"	"	"	20 40 37		00 19 W	"		65s
70	Comp							"	60s
71	Bias (4)			20 44					

 CCD
 Spectr. Temp. ...
 Focus ... 6.98
 Spectr. Temp.

Exp. Mtr. Seeing

8537 1/4

10200 2.9"

10350

10300

10400

10300

12300

12700

13000

CCD Spectr. Temp. -102.0°C Dome Temp./Hum. $-3.9, 74.12$ Transparency Conditions *Hazy* 9

Focus 6.98

Spectr. Temp. Dome Temp./Hum.

Commission Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
817s	BG 37 Filter 10200	2.9"	B6.09	F4II-III	CASS CCD	1800 $\mu\text{m}/\text{mm}$ G = 4475	306	4300Å $\pm 2\text{Å}$	18	Dby		MAX ADU 4K
60s									19			
800s	10350		B6.09	F4II-III					20	Dby		3.7K
60s									21			
									1/2			
60s									22			
164s	10300		B4.41	68III					23	Dby/Std	} deep band at 2.4300Å which deeper than for others.	
167s	10400		"	"					24	"		
170s	10300		"	"					24	"		
60s									25			
									26			
66s	12300		B2.62	F71b-IV					6	Dby		
66s	12300		"	"					6	"		7.5K
66s	12400		"	"					6	"		
60s									9			
									1/2			

9#30

Fri./Sat.

Emulsion Batches:

Date ... 1995 Dec. 29/30 Observers Dby./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.
CC37872	Comp							FeAr Clear	60s
73	HD 45947	6 25 17	73 46 22	20 54 21	3 00 E	03 00 E 73 41 N			1487s
74	Comp							"	60s
75	HD 45947	6 25 17	73 46 22	21 23 41	2 27 E	2 27 E			1948
76	Comp							"	60s
77	HD 45947	6 25 17	73 46 22	22 04 22	1 41 E	1 41 E			2230
78	Comp							"	60s
79	Bias (4)			22 44 23					
CG80 286/289	HD 35476	5 19 54	13 55					4x	67ms
CG80 290/291	"	"	"					2x	133ms
CC378 80/88	FLATS x 9					0 13 E	+44°	Tung clear	33s
CC37889	Comp							FeAr Clear	60s
90	HD 61295	7 33 30	32 14 20	00 55 56		09 59 E	+32°		2303s
91	Comp							FeAr clear	60s
92	HD 61295	07 33 30	32 14 20	01 37 50		00 47 W	+32°		1933s

 CCD
 Spectr. Temp. ...
 Focus ... 6.78
 Spectr. Temp. ...

Exp. Mtr. Seeing

56 39 Filter

160 2.2"

10K 2.3"

Exp. Mtr. UnRE

27K

2"

1000 2.3"

K-14

CCD Spectr. Temp. -102.0°C Dome Temp./Hum. $-4.6, 74.9\%$ Transparency Conditions *Hazy - some cloud* 10
 Focus 6.78 *increasing cloud*
 Spectr. Temp. Dome Temp./Hum.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality	
	60s	BG 39 Filter				CASS CCD	1800/n/mm $\epsilon = 4475$	306u	4300 Å $\pm 2\text{Å}$	10			Max Actu	
	11487	10160	$< 2''$	6.62	F2					11	Dby		4.0K	
	60s									14				
	1948	$\approx 10K$	$2.3''$	^B 6.62	F2					16	Dby	SP control failure during exp	4.4K	
	63	Exp meter unreliable at Times due to shutter problem									17		Delayed comparison	1.1K
	2870	27K		6.62	F2					18	Dby		3.2K	
	60s									19				
										1/2				
	67ms		$2''$	ALT = 87°				Above 306u slit			Seeing test	No Fans, Dome WNW		
	17ms			^v 7.48	10.0K						" "	medium west wind		
	33									2			13.2K	
	63									21			950	
	2303s	10000	$2.3''$	^B 6.52	F6 II					22	Dby	part cloudy/dribbling in-out		
	63									25				
	1557s	10144		^B 6.52	F6 II					6	Dby	cloudy		

4

Fri/Sat.

Emulsion Batches:

Date 1995 Dec. 29/30 Observers Day/Tn

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC37893	Comp							FeAr Clear	60s
94	HD 61295	07 33 30	32 14 20	02 13 16		01 12 W	32° N		1367s
95	Comp							"	60s
96	Bias (4)			02 40					
97	Comp							"	60s
98	HD 61035	07 32 11	24 35 05	02 44 36					865s
99	Comp							"	60s
CC37900/1	In board/out board					1 40W	+24°	FeAr Clear	60/90

Exp. Mtr. Seeing
 36 34 1/2
 10200
 4100 2"
 T=-55

13 pg #1 [Wed/Thu]

Date 1996 January 3/4 Observers {Vys}/Smt

Emulsion Batches:

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CCO Spectr. Temp.
 Focus 7.0
 Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC37902/3	INBOARD/OUTBOARD							FeNe clear	20/30
04	BIAS x4			17 55					—
05	COMP							"	20
06	BD+40 45	00 11 52	+40 23 33	18 08 22		0 45 W			1200
07	COMP							"	20
08	COMP							"	20
09	HD 1326	00 12 42	+43 27	18 37 58		1 09 W			915
10	COMP							"	20
11	BIAS x4			18 55					—
12	COMP							"	20
13	AL-06 2360-60	01 58 29	-05 23 23	19 09 08		0 21 W			2460
14	COMP							"	20
15	BIAS x4			19 55					—
16	COMP							"	20
17	Vys 396B	02 30 52	+06 24 57	20 02 02		0 44 W			2650
18	COMP							"	20

Exp. Mtr. Seeing

B4 39
 FILTER

STUCK IN THERE
 SLICE NEEDS
 LUBRICATION

DIDN'T LOOK
 <1000 4.5

950 4.5"

465 5"

27 4.5"

CCD Spectr. Temp. -100.5°C

Dome Temp./Hum. $-12.7^{\circ}\text{C}/52.8\%$
@ focus test

Transparency Conditions *clear, a bit of haze... avoiding near full moon.*

Focus 7.05

FANS OFF

Spectr. Temp.

Dome Temp./Hum.

420 0 50 1024 4 1 ccd/fit

Comparison Iter. Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
20/30	B6 39 FILTER				CASS CCD	1800 $\mu\text{m}/\text{mm}$ G=5160	300 μm	5305 \AA	3/4	focus test	set fool but T should drop overnight.	
-	STUCK IN THERE SLIDE NEEDS LUBRICATION											
20									5			
1200	DIDN'T LOOK! <1000	4"-5"	9.00	M0					6	Marcy Std Velocity	Vys 84	1 K
20									7			
20									8			
915	850	4"-5"	8.07	M1Ve					9	Marcy Std Velocity	Vys 85A	1.4 K
20									10			
-									11			
20									11			
2400	465	5"	11.2	M					12	{Vys} RV	Vys 385, 1st in haze,	200 above b/g
20									13			
-									14			
20									14			
2650	427	4"-5"	11.66	M					15	{Vys} RV	bright 6 ^m ko star off field at view to NW.	200 above b/g
20									16			

15
Pg # 2

Date 1996 January 3/4 Observers {V4.53}/Smt

Emulsion Batches:

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CCD
Spectr. Temp. ...
Focus 7.
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc 37919	BIAS x 4			20 50					—
20	COMP							FeNe clear	20
21	AC+55 19225	02 49 12	+55 02 32	20 59 15		1 28 W			3050
22	COMP							"	20
23	BIAS x 4			21 53					—
24	AC+55 19224	02 49 10	+55 02 14	21 54 43		2 13 W			2406
25	COMP							"	20
26	BIAS x 4			22 37					—
27	COMP							"	20
28	AC+53 2250-45	03 49 06	+53 16 23	23 22 11		2 24 W			1400
29	COMP							"	20
30	BIAS x 4			23 48					—
31-33	FLAT x 3							Tung 1/2 Ap	6
34	BIAS x 4			1 21					—
35	COMP							FeNe clear	20

Exp. Mtr. Seeing

3639
FILTER
(Smt)

435 4"

492 5"

450* 4"

CCD
Spectr. Temp. -100.2°C

Dome Temp./Hum. $-14.4^{\circ}\text{C}/53.6\%$

Transparency Conditions. *clear, nearly full moon*

Focus 7.05

FANS OFF

rising, some clouds

Spectr. Temp.

Dome Temp./Hum.

420 0 50 1024 4 1 CCD/INT.

Comparison Filter Exp.	Exp. Mtr.	Seeing	V _{mag} Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
-	BG 39 FILTER (STUCK)				CASS CCD	1800l/mm G=5160	306μm	5305 Å	1			
20									17			
3050	435	4" →5"	11.2	M0					18	{Vys} RV	Vys 410B, 2nd brightest and most-reddish of triple system.	180 above bg
20									19			
-									1			
2406	492	5"	10.5	M0					20	{Vys} RV	Vys 410A, brightest of 3	350 above bg
20									21			
-									1		failed attempt at AK+80 7 (Vys 359A)	
20									22			
1400	~150*	4"	10.5	M0					23	{Vys} RV	Vys 226 * probably lots of sky counts	~80 above bg
20									24			
-									1			
6									25		cloudy break, close.	12.8K →12.2K
-									1			
20									26			

17 #3

Date 1996 January 3/4 Observers {Vys}/Smt

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC37936	BD+27 1348	07 10 07	+27 19 08	01 29 25		1 39 W			3000
37	COMP							FeNe clear	20
38	BIASx4			02 22					-
39	COMP							"	20
40	AC+47 256-150	07 15 58	+46 16 52	02 28 39		2 31 W			3000
41	COMP							"	20
42	BIASx4			03 21					-
CG80292-5	HD87822 x4	10 02 29	+32 05 42						.067
96-97	" x2				3 31	00:01:22 W	78° Alt	1.0233 atmass	.133
CC37943	COMP							FeNe clear	20
44	HD95735	10 57 54	+36 38	03 41 43		0 30 E			6/8
45	COMP							"	20
46/47	INBOARD/OUTBOARD							FeNe clear	20/30

Seeing
 5.2

627" 5"

623 4-7

7-8

710 7"

Spectr. Temp. $-1.00 \pm 0.3^\circ\text{C}$ Dome Temp./Hum. $-17.5^\circ\text{C}/58.2\%$ Transparency Conditions *same clouds, ~~near~~ near full moon¹⁸ past meridian now.*
 Focus 7.05 FANS OFF
 Spectr. Temp. Dome Temp./Hum. $-19.0^\circ\text{C}/59.7\%$ @ end of seeing test 420 0 50 1024 4 1 cad box

Exposure	Exp. Mir. FILTER (STUCK)	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3:00	627*	5"	10.9	M0	CASS CCD	1800nm G=5160	30 μm	5305Å	27	{Vys} RV	Vys 490, close to moon.	* 230 above b/g
20									28			
-									1			
20									29			
3:00	623	4"-7"	10.5	M2					30	{Vys} RV	Vys 493, star drifted quite a bit	200 above b/g
20									31			
-									1			
0:47		7"-8"	6.60	F5	EEV CCD TV GUIDER		above 30 μm		-	seeing test	Dome SW, lite W wind. clear, full moon setting near	
0:45									-	"	bad seeing, oors, house lights	
20					CASS CCD	as before	seeing test.		5			
6:16	770	7"	7.48	M2					6	Marcy Std Velocity	Vys 594	
20									7			
21:50									3/4	focus test	T dropped 6.5°C to -19.2°C overnight.	

1999 #1

[Thu / Fri]

Emulsion Batches:

Date 1996 January 4/5 Observers Dby / 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.	Sp. Mtr.	Seeing
C CC37948/49	INBOARD/ OUTBOARD							F4 clear	40/70	Eq 39 FILTER	
50	BIAS(4)							"	-		
51	COMP							"	60		
52	HD204867	21 26 18	-06 00 40	17 59 57		3 14 W		"	388	back 3-4"	
53	COMP COMP							"	60		
54	HD204867			18 10 07		3 20 W		"	176	13K	
55	"			18 13 21		3 23 W		"	150	12K	
C 56	"			18 16 09		3 26 W		"	160	12K	
57	COMP							"	60		
C 58	COMP							"	"		
59	HD216131	22 45 11	+24 05 25	18 26 25		2 17 W		"	140	11.6K 3"	
60	"			18 29 04		2 20 W		"	140	11.1K	
61	"			18 31 41		2 23 W		"	155	2.0K	
62	COMP							"	60		
63	BIAS(4)			18 37				"	-		

CCD
Spectr. Temp. ... ~~102.3~~ 3°C
Focus ... ~~7.12~~ 7.12
Spectr. Temp. ... 100.2°C

Dome Temp./Hum. ... 13.3°C / 63.6%
@ focus test

Transparency Conditions *clear, full moon rising*
FANS ON
420 0 50 1024 4 1 credit

Companson e/Filter Exp.	Exp. Mtr.	Seeing	(B) Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4/70	BG 39 FILTER				CASS (C1)	1800R/m G=4475	306m	4300A I.5A at most	3/4	focus test	in focus, pretty much	
									1			
									5			
388	shutter stuck	3"-4"	3.74	60Ib					6	Dby 8 Std Vel	thick haze down here or just shutter problem	8K
									7			
12K	13K		3.74	60Ib					8	"	over 2 cols →	3K
150	12K		"	"					9	"	over col. →	3.4K
140	12K		"	"					8	"	over 2 cols →	2.7K
									10			
									11			
140	11.6K	3"	4.41	68III					12	Dby Sp. Std.		5K
140	11.1K		"	"					13	"		4.2K
155	12.0K		"	"					12	"		
									14			
									1			

2pg #2

Emulsion Batches:

Date 1996 January 4/5 Observers Dby / Smt

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC37964	COMP							Fair clear	60
65	HD6397	00 59 49	+14 24 30	18 42 34		0 27 W			660
66	COMP							"	60
67	HD6397			18 56 49		0 41 W			630
68	COMP							"	60
69	HD6397			19 10 09		0 54 W			629
70	COMP							"	60
71	BIAS(4)			19 23					-
72	COMP							"	60
73	HD222368	23 34 48	+05 05 03	19 28 21		2 30 W			205
74	"			19 32 04		2 34 W			235
75	"			19 36 17		2 43 W			451
76	COMP							"	60
77	Comp							"	60
78	HD8890	01 22 44	88 46 26	20 02 46		6 46 W			66

CCD
 Spectr. Temp. ...
 Focus ... 7.12
 Spectr. Temp. ...

Exp. Mtr.	Seeing
8639	3-4"
10.9K	3-4"
10.3K	
10.5K	
10.3K	3"
10.2K	
10.2K	
12K	

CCD
 Spectr. Temp. $\approx 100.3^\circ\text{C}$ Dome Temp./Hum. $\approx 13.5^\circ\text{C}/68.3\%$ Transparency Conditions *clear... full moon rising at*

Focus 7.12

FAN 5 ON

Spectr. Temp. Dome Temp./Hum.

420-0 50 1024 & 1 CCD

Comparison (Filter) Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60	BG 39 FILTER				CASS CCD	1800 l/m G=4475	30 μm	4300 \AA	15			
60	10.9K	3"-4'	6.09	F4II -III					16	Dby		4.7K
60									17			
630	10.3K	"	"	"					18	Dby		4.9K
60									19			
629	10.5K	"	"	"					20	Dby	over 2 cds	4.4K
60									21			
-									1			
60									22			
205	10.3K	3"	5.04	F7V					23	Std. Vel		3.7K
235	10.2K	"	"	"					24	"	thin cloud	3.2K
451	10.2K	"	"	"					25	"	thicker cloud	3.5K
60									26			
60									27			
66	12K		2.62	F7Ib-IV					28	Dby		

23
pg #3

Date 1996 Jan. 4/5 Observers Dby./Smt

Emulsion Batches:

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CCD
Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc37979	HD8890	01 22 34	88 46 26	20 04 08		8 30W			55
80	"	"	"	20 05 20		9 27W			50
81	Comp							FeAr Clear	60
82	Bias (4)			20 14					
83	Comp							"	60
84	HD10494	01 37 18	61 21 00	20 19 03		1 43 W			1800
85	Comp							"	60
86	HD10494 COMP							"	60
87	HD20902	3 17 11	+49 30 19	21 01 46		0 17 W			378
88	"	"	"	21 03 03		0 25 W			440
89	COMP							"	60
90	HD20902	3 17 11	+49 30 17	21 15 13		0 40 W			595
91	COMP							"	60
92	BIAS (4)								-
31993-38002	FLAT x10					0	-18°	Turn clear	33
03	Bias (4)			00 04					-

Exp. Mtr. Seeing

12000

12.9K

4970 3"

11K 3"

10.5K

12.8K

CCT Spectr. Temp. -100.3°C

Dome Temp./Hum. $-13.1/70.69$

Transparency Conditions *Clear, full moon* 24

Focus 7.12

Fans on (N only now)
→ cloud → snow

Spectr. Temp.

Dome Temp./Hum.

420 0 50 1024 4 1 contact

Comparison Filter	Exp.	Exp. Mtr.	Seeing	(B) Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	55	12000		2.62	F71b- 11V	CASS CCD	1800 μm G=4475	30 μm	4300A	29	Dby		5-5K
	50	12.9K		"	"					30	"		6-4K
	60									31			
										1/2			
	60									5			
	1800	4470	3"	8.52	F51a					6	Std. (Sp.)		1.2K
	60									7			
	60									7			
	38	11K	3"	2.27	F51b					8	Dby Sp. Std	α Per in and out of thick cloud.	
	440	10.5K		"	"					9	"	" thick cloud, most signal in last minak	
	60									10			
	85	12.8K		"	"					9	"	" mostly cloud exposure All signal in ~30s	
	10									10			
	-									1			
	33									2		dome closed snow	13.5K → 12.5K
	-									1/2			

25
pg. #4

Date 1996 Jan 4/5 Observers Dby/Smt

Emulsion Batches:

.....
.....
.....CCD
Spectr. Temp.
Focus 7.1
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
^{cc} 38004	Comp							FeAr Clear	60s
05	HD36673	05 28 19	-17 53 38	00 05 35		01 13 E			80s
06	"	"	"	00 07 11		01 14 E			70s
07	"	"	"	00 08 46		01 16 E			70s
08	Comp							"	60s
09	Comp							"	60s
10	HD54605	07 04 20	-26 14 04	00 18 56		00 09 E			55s
11	"	"	"	00 20 06		00 07 E			60s
12	"	"	"	00 21 19		00 06 E			70s
13	Comp							"	60s
14	Comp							"	60s
15	HD61035	07 32 11	24 35 05	00 31 13		00 04 W			1303s
16	Comp							"	60s
17	HD61035	07 32 11	24 35 05	00 56 49		00 19 W			1300s
18	Comp							"	60s

Exp. Mtr. Seeing

12K 4.6"

11K

11.7K

11.5K 7"

10.8K

11.8K

10.3K 5"

16.1K

CCD
Spectr. Temp. -100.3°C

Dome Temp./Hum. -13.5 / 71.7%

Transparency Conditions Clear, ^{99% in} ~~fast~~ Moon bright ²⁶

Focus 7.12

Fans on (N only)

Spectr. Temp.

Dome Temp./Hum.

420 0 50 1024 # 1 ccd find

Exp. Mtr.	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
		"		CASS CCD	1800 μ m G=4475	306 μ m	4300 Å	11		seeing ^{quality} really diminished after clouds passed through.	
12K	5-6"	2.79	FO1b					12	Day/Std		5K
11K		"	"					13	"		
11.7K		"	"					14	"		4.3K
								15			
								15			
11.5K	7"	2.52	F81a					16	Day/Std		3.9K
10.8K		"	"					17	"		2.8K
11.8K		"	"					16	"		3.0K
								19			
								21			
10.3K	5"	B 6.24	FO					22	Day		
								26			
10.1K		6.24	FO					27	Day		3.5K
								26			

27
pg#5

Date 1996 Jan 4/5 Observers Day/Smt

Emulsion Batches:

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.....
.....CCD
Spectr. Temp. ...
Focus ... 4.12
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Nr.	Seeing
CC380 19	HD 61035	07 32 11	24 35 05	01 21 49		00 45 W		⊗	1310s	10.1K	
20	Comp							FeAr Clear	60s		
21	Bias(4)			1 46					—		
22	Comp							"	60s		
23	HD 62140	07 37 24	163 04 18	01 53 02		1 11 W			1455	10.4K	
24	COMP							"	60		
25	HD 62140			02 21 22		1 37 W			1365	10.2K	5'
26	COMP							"	60		
27	HD 62140			02 47 18		2 08 W			1609	10.3K	5-6'
28	COMP							"	60		
29	BIAS(4)			03 20					—		
30	Comp							"	60		
31	HD 61295	07 33 30	132 14 20	03 20 01		2 53 W			1602	10.2K	
32	COMP							"	60		
33	HD 61295			03 56 15		3 10 W			1270	OK	

CCD
Spectr. Temp. -100.3

Dome Temp./Hum. -15.3/71.4%

Transparency Conditions Clear, Bright, ~~with~~

Focus 7.12

Fans on (N. only)

Spectr. Temp.

Dome Temp./Hum.

420 0 50 1020 4 /ccdfit

Exp. Mtr.	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1310s	10.1K	6.24	FO	CAS CCD	1800 μ m G=4475	3091	4300A	22	Dby		
60s								21			
-								1			
60s								26			
1455	10.4 K	6.75	FO _p SrEu					27	Dby		3.7K
60								28			
365	10.2K	5"	"	"				29	Dby		
60								30			
1609	10.3K	5"-6"	"	"				31	Dby		
60								32			
-								1/2			
60								5			
1602	10.2K	6" 6.52	FGII					6	Dby		
60								7			
127	10K							8	Dby		

pg. #6

Date 1996 Jan. 4/5 Observers Dby/Smt

Emulsion Batches:

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Spectr. Temp. - 1
 Focus 7.12
 Spectr. Temp. ..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC38034	Comp							FeAr Clear	60s
35	HD61295	07 33 30	+32 14 20	04 21 09		3 50 W			1740s
36	Comp							"	60
37	Bias(4)			4 52					
38	Comp							"	60
39	HD60335	07 28 54	+43 15 03	04 57 32		4 17 W			900s
40	Comp							"	60
41/42	INBOARD/OUTBOARD					0	+40°	"	40/70

Exp. Mtr. Seeing

10.2K

2400 8"

3pg #1 [Fri / Sat]

Date 1996. January 5/6. Observers Dby / 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.
CC38043/44	INBOARD/OUTBOARD					0	+45°	Fed clear	40/20
45	BIAS (4)			17 43					—
46	COMP							"	60
47	HD204867	21 26 .18	+6 00 40	17 56 49		3 10 W			180
48	"			18 00 12		3 14 W			180
49	"			18 03 33		3 18 W			208
50	COMP							"	60
51	Comp							"	"
52	HD216131	22 45 11	24 04 25	18 14 18		2 10 W			240s
53	"	"	"	18 18 34		2 14 W			230s
54	"	"	"	18 22 38		2 18 W			210s
55	Comp							"	60s
56	Comp							"	60s
57	HD222368	23 34 48	+05 05 03	18 38 23		1 46 W			300
58	"			18 43 56		1 51 W			270
59	"			18 48 55		1 56 W			300

Exp. Mtr. Seeing
Spectr. Temp. ...
Focus 7.1
Spectr. Temp. ...

Exp. Mtr. Seeing

10.3K
11.0K
11.4K

10.5K 7"

11.0K 7.8"

11.4K

10.4K 8"

10.7K 7"

10.5K 6"

10.5K 6"

10.5K 5"

10.0K 6"

CCD
 Spectr. Temp. ... -100.2°C Dome Temp./Hum. = 15.3°C / 55.8% Transparency Conditions . clear . . full moon . just rising ³²
 Focus 7.12 FANS OFF
 Spectr. Temp. Dome Temp./Hum. 4200 50 1024 4 1 CCD/fit

Comparison Date	Exp.	Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
✓	40/20	B61 39 FILTER				CASS CCD	1800 2/m G=4481	3den	4300 Å ±.5 Å at very west	3/4 1	Focus test		
	60									5		spec. controller failed before this exp.	
	180	10.5K	7"	3.74	GOIB					6	Sp. Std & Std Vel		2.2K
	180	11.0K	>8"							7	"		2.2K
	209	11.4K								8	"		2.0K
	60									8			
	"									9			
	240s	10.4K	8"	4.41	68III					10	Sp. Std.		
	230s	10.7K	7"	"	"					11	"		2K
	265	10.5K	6"	"	"					10	"		2.9K
	60s									12			
	60s									13			
	300	10.5K	6"	5.04	F7II					14	Std. Vel		
	270	10.5K	5"							15	"		
	300	10.0K	6"							14	"		

33
Pg #2

Date 1996 January 5/6... Observers D. by / Smt.....

Emulsion Batches:

.....
.....
.....CCD
Temp. ...
Focus 7.
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison		Exp. Mr.	Seeing
								Type/Filter	Exp.		
CC38060	COMP							FeAr clear	60	10-31	FILTER
61	BIAS(4)			18 56					-		
62	COMP							"	60		
63	HD6397	0 59 49	+14 24 30	19 06 38		1 00 W			1000s	10-3K	
64	Comp							"	60s		
65	HD6397	"	"	19 27 19		1 20 W			910s	10-3K	
66	Comp							"	60s		
67	HD6397	"	"	19 46 44		1 39 W			900s	10-4K	
68	Comp							"	60s		
69	Bias(4)			20 04					-		
70	Comp							"	60		
71	HD10494	01 37 18	61 21 00	20 16 49		1 45 W			1800s	11-2	
72	Comp							"	60s		
73	HD10494	"	"	20 50 55		2 25 W			2120	4115	
74	COMP					2 59 W		"	60		
75	HD10494	"	"	21 29 08		↓			1875	4300	

CCD Spectra Temp. ... -100.3°C ... Dome Temp./Hum. ... -17.3°C / 58.1% Transparency Conditions . clear, full moon rising 34

Focus ... 7.12

FANS OFF

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

420 0 50 1024 4 1 ccd/ft

Comparison Iter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60		BG 39 FILTER				CASS CCD	1800 lln G=4481	30 μ m	4300 Å	16			
										1			
60										17			
1000s		10.3K		6.09	F4II-III					18	Dby		
60s										19			
910s		10.3K		"	"					20	Dby		
60s										21			
900s		10.4K		"	"					22	"		
60s										23			
										1			
60										24			
1020s		3912		8.52	FSIa					25	Sp. Std.		
60s										26			
420		4115		"	"					27	"		720 avg 1/9
60										28			
1875		4300		"	"					29	"		

3pg 3

Date 1996. January 5/6 Observers Dby / 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.
cc38076	COMP							F2Ar clear	60
77	BIAS(4)			22 03					-
78	COMP							"	60
79	HD29237	04 35 57	-24 40 40	22 12 02		0 41 W			1600
80	COMP							"	60
81	HD29737	"	"	22 41 53		1 10 W			3470
82	Comp							"	60
83	Bias (4)			23 09					-
84	Comp							"	60
85	HD36673	05 28 19	-17 53 38	23 14 43		0 26 W			64
86	"			23 16 14		0 27.5W			60
87	"			23 17 47		0 29 W			60
88	COMP							"	60
89	COMP							"	"
90	HD54605	07 04 20	-26 14 04	23 26 17		0 58 E			60

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

Exp. Mtr. Seeing

10.1K 5"

10.1K

11.0K 5"

12.1K

11.9K

12.5K 5"

CCD Spectr. Temp. = 100.4°C Dome Temp./Hum. = 17.3°C / 63.5% Transparency Conditions . clear . full moon rising still

Focus 7.12

FANS OFF

Spectr. Temp. Dome Temp./Hum.

420 0 50 1024 4 1 ccd int.

Comparison / Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ar	60					CASS	1800 l/mm	30µm	4300 Å	30			
						CCD	G=4481			1			
	60									31			
	60	10.1K	5-6"	6.50	G6III					30 6	Sp. Std.		
	60									8			
	470	10.1K		"	"					7	Sp. Std.		
	60									9			
										1			
	60									12			
	64	11.0K	5-6"	2.79	F8Ib					14	Sp. Std.		
	60	12.1K								15	"		
	60	11.9K								18	"		6.9K
	60									16			
										17			
	60	12.5K	5"	2.52	F8Ia					20	Sp. Std.		

37
Pg # 4

Date 1996. January 5/6. Observers Dby / 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.
cc38091	HD54605	07 04 20	-26 14 04	23 27 41		0 56 E			60
92	"			23 29 10		0 55 E			75
93	COMP							FcAr clear	60
94	Comp							"	"
95	HD20902	03 17 11	+49 30 19	23 44 12		3 04 W			60
96	"			23 45 36		3 05 W			30
97	"			23 46 40		3 06 W			30
98	COMP							"	60
99	Comp							"	"
cc38100	HD60335	07 28 54	+43 15 03	01 00 39		0 33 E			1150
01	Comp							"	60
02	HD60335			00 22 40		0 08 E			1051
03	Comp							"	60
04	HD60335	"	"	00 46 38		0 11 W			1020
05	Comp							"	60
06	Ziao(4)			01 10					-

CCD
Spectr. Temp. ...

Focus 7.1?

Spectr. Temp. ...

Exp. Nr. Seeing

11.9K

13.3K

12.4

18K

16K

10.2K

13K

10.3K

CCD
 Spectr. Temp. ... -102.0°C ... Dome Temp./Hum. ... -17.7°C / 64.3% Transparency Conditions ... clear, full moon approaching meridian. 38

Focus ... 7.12

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

420 0 50 1024 4 1 ccdflat

Comparison Filter	Exp.	Exp. Mtr.	Seeing	B Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60		11.9K	6"	2.52	F81a	CASS CCD	1800 R/mm G=4481	30µm	4300 Å	22	Sp. Std		
75		13.3K								25	"		
60										23			
1										24			
60		12.4		2.27	F516					27	Sp. Std		
30		18K								29	"		
30		16K								27	"		10.7K
60										28			
"										30			
1150		10.2K	5"	6.33	F0					6	Dby F-star ppm		
60										8			
60		10.3K		"	"					7	"	(Spect. Chlor failed after readout.)	
60										9			
60		10.3K		"	"					10	"		
60										12			
-										1			

39
pg #5

Date 1996 January 5/6 Observers Dby / 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 ⁹	Comparison Type/Filter	Exp.
CC38107	Comp							FeAr Clear	60s
08	HD61295	07 33 30	32 14 20	01 14 15		00 35 W			1060
09	Comp							"	60
10	HD61295	"	"	01 35 30		00 56 W			1070
11	Comp							"	60
12	HD61295	"	"	01 56 37		01 17 W			1020
13	Comp							"	60
14	Bias (4)			02 17					—
15	Comp							"	60
16	HD61035	07 32 11	+24 35 05	02 25 06		01 51 W			1215
17	COMP							"	60
18	HD61035	"	"	02 48 05		02 15 W			1260
19	Comp							"	60
20	HD61035	"	"	03 11 50		2 39 W			1200
21	Comp							"	60
22	Bias (4)			3 35					

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

Exp. Mtr. Seeing

36 39
Filter

10-3K

11-1K

10-3K

10-2K 5"

10-2K

10-5K

CCD Spectr. Temp. -100.1°C

Dome Temp./Hum. $-18.2^{\circ}\text{C}, 64.3\%$ Transparency Conditions Clear, full moon past... meridial now

Focus 7.12

FANS OFF 40

Spectr. Temp. Dome Temp./Hum.

420 0 50 1024 4 1 ccd bit

Exp. Mtr.	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion C. Lambda	P.H.	Program	Remarks	Quality
BG 39 Filter				CASS CCD	1800 $\text{\AA}/\text{mm}$ $G = 4481$	306 μ	4300 \AA	13			
10.3K		6.52	F6II					14	Dby	close to full moon	
								16			
1070 11.1K		"	"					15	Dby		
								16			
1024 10.3K		"	"					17	Dby	Spect. Controller died after accident.	
								19			
								1			
								19			
1245 10.2K	5"	6.24	F0					20	Dby	very close to full moon.	
								21			
1260 10.2K		"	"					22	"		3.7K
								23			
1280 10.5K		"	"					20	"		
								21			
								1			

4 pg # 6

Date 1996... January 5/6 Observers Dby / Smt

Emulsion Batches:

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.....
.....CCD
Spectr. Temp. ...
Focus 7!
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing
cc38123	COMP							Fetr clear	60	B6 39 FILTER	
24	HD89025	10 11 08	+23 54 57	3 43 49		0 12 W			90	11.7K	3.4"
25	"			3 45 49		0 14 W			90	11.5K	
26	"			3 47 49		0 16 W			90	11.1K	
27	COMP							"	60		
28	Comp							"	"		
29	HD83808	9 39 49	+10 20 50	3 57 55		1 02 W			100	10.7K	
30	"			4 00 09		1 04 W			110	11.0K	
31	"			4 02 34		1 07 W			110	11.0K	4"
32	COMP							"	60		
33	Comp							"	60		
34	HD77601	8 58 30	+48 55 40	4 13 20		2 01 W			580	10.6K	
35	COMP							"	60		
36	HD77601			4 25 41		2 15 W			640	10.2K	
37	COMP							"	60		
38	HD77601			4 39 23		2 28 W			600	10.3K	

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. $-18.2^{\circ}\text{C}/66.7\%$ Transparency Conditions *clear, full moon setting...*
 Focus 7.12 FANS OFF
 Spectr. Temp. Dome Temp./Hum. 420 0 50 1024 4 1 ccd/hnt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60 BG 39 FILTER				CASS CCD	1800 μm G=4481	30 μm	4300 \AA	23			
90 11.7K	3"-4"	3.75	F0 III					25	Sp. Std.		
90 11.5K	"	"	"					26	"		
70 11.1K	"	"	"					25	"		5.2K
60								28			
"								30			
100 10.7K		4.01	F6 II + AIX					6	Dby		
100 11.0K		"	"					7	"		
110 11.0K	4"	"	"					10	"		
60								8			
60								9			
580 10.6K		6.40	F6 II - III					11	Dby	SB, too.	
60								12			
640 10.2K	"	"	"					14	Dby		
60								13			
600 10.3K		"	"					15	"		

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Date 1996 January 5/6 Observers Dby / Smt

Emulsion Batches:

.....
.....
.....CCD
Spectr. Temp. ...
Focus 7
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing
CC38139	COMP							FeAr Clear	60		
40	BIAS(4)			4 48					—		
CG80298-301	HD103095 x4	11 47 13	+38 26 10						.067s		4"
302/03	" x2				05 05	0 04 E	84° Alt	1.0058 airmass	.133s		3-4"
CC38141	COMP							FeAr Clear	60		
42	HD103095	11 47 13	+38 26 10	05 10 02	00 16	00 16 W			901	6-9K	3-4"
43	Comp							"	60		
44	Comp							"	60		
45	HD101107	11 33 01	44 10 48		← 05 32 42	0 47 W			510	10-2K	3"
46	COMP							"	60		
47	HD101107	"	"	5 44 15		0 58 W			500	8-2K	
48	COMP							"	60		
49	HD101107	"	"	5 55 55		1 10 W			500	10-2K	
50	Comp							"	60		
51	Bias(4)			~ 6					—		
52	Comp							"	60		

CCD Spectr. Temp. -120.5°C ... Dome Temp./Hum. $-18.1^{\circ}\text{C}/68.3\%$ Transparency Conditions *clear, full moon 4^h W* 44
 Focus 7.12 ... FANS OFF
 Spectr. Temp. ... Dome Temp./Hum. $-18.3^{\circ}\text{C}/68.3\%$
 @ seeing test. 420 0 50 1024 4 1 CCD

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60				CASS CCD	1800 ℓ m 6=4481	30 μ m	4300 \AA	16			
067s	4"	\checkmark 7.20	G8Vp	EEV CCD TV GUIDER				-	SEEING TEST	Dome SW, no wind, full moon 4 ^h W,	
133s	3.4"			"				-	"	clear!, cold for 3 days.	
60				CASS CCD	as before			19.			
901	3-4"	\checkmark 7.20	G8Vp					20	Std. Vel	well known IAU.	
60								21			
60								23			
510	3"	\checkmark 5.92	F2II-III					25	Dby		
60								28			
500	10.2K	"	"					29	Dby		
60								30			
500	10.2K	"	"					6	"		
60								5			
60								1			
60								8			

43
Pg. #18

Date 1996 January 5/6 Observers Dby/Smt

Emulsion Batches:

.....
.....
.....CCD
Spectr. Temp. ...
Focus ... 7.12
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing
CC381 53	HD96707	11 03 19	67 45 09	06 12 36		2 00W			800	10.2K	
54	Comp							FeAr Clear	60		
55	HD96707	"	"	06 29 53		2 17W			827	10.2K	
56	Comp							"	60		
57	HD96707	"	"	06 47 22		2 36 W			860	10.2K	3"
58	Comp							"	60		
59	COMP							"	60		
60	HD8890	1 22 34	+88 46 26	6 10 19		11 33 W			35	13.0K	3"
61	"			6 11 22		11 34 W			35	13K	"
62	"			6 12 26		11 35 W			36	12K	
63	COMP							"	60		
64	BIAS(4)								-		
65-74	FLAT x 10					0	+41°	FeAr clear	33		
75/76	INBOARD/OUTBOARD					"	"	FeAr clear	40/70		

47
pg#1

Sun / Mon

Date . 1996. JAN. 7/8. . . . Observers [R.W.] / T.O. / S.M.T.

Emulsion Batches:

.....

cc17
 Spectr. Temp.
 Focus 7.00
 Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc 381 ^{77/78}	Inboard / outboard			-		0 0	+44	FeAr clear	60/60
79	BIAS(4)			17 42					
80	Comp							"	60
81	HD 180583	19 11 59	127 44 59	18 05 31		5 53 W			776
82	Comp							"	60
83	COMP							"	"
84	HD 203156	21 15 23	+37 48 55	18 26 01		4 07 W			602
85	COMP							"	60
86	BIAS(4)			18 39					-
87	COMP							"	60
88	HD 187691	19 46 14	+10 09 55	18 47 33		5 55 W			505
89	COMP							"	60
90	COMP							"	"
91	HD 222368	23 34 48	+05 05 03	19 04 33		2 20 W			300
92	COMP							"	60

Exp. Mtr. Seeing

Bo 34 (BLUE)

7.7L W
(STUCK)

2100

>8"

3130

>6"

820

5.7K

5.7K

5"

Spectr. Temp. ^{CCD} -100 °C Dome Temp./Hum. -12.5°C 600% H Transparency Conditions thin cloud 48

Focus 7.00

FANS OFF

Spectr. Temp. Dome Temp./Hum. ^{CD}

420 0 50 1024 4 1 CCD

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B6 39 (BLUE) FILTER IN (STUCK)				CASS CCD	1800 l/mm G=3945	306 μ	A6400A $\pm 5\text{\AA}$	3/4 1/2	Focus test	not quite 6400 \AA at this time.	
								5		Grating coated head in retest Telescope East side of piers	1.8K
2100	>8"	\checkmark 6.19	F6I- ID					6	Rm Cepheid	V473 Lyr, ^{ran out of time to do it on W side of piers.}	3K
								7			
								8			
3930	>6"	\checkmark 5.8-5.9	F2					9	Rm Cepheid	still on E side of piers V1334 Cyg	4.7K
								10			
								11			
820	stupid.	\checkmark 5.11	F8V					12	Std Vel	looks like it was trailed only 10" alt, \rightarrow 7.3 on E side still	1.1K
								13			
								14			
6.7K	5"	\checkmark 4.13	F7V					15	Std Vel	on E side still	7.5K
								16			

49 pg #2

Date .1996. Jan. 7/8... Observers [Rm.] / J.W. / Smit.....

Emulsion Batches:

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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Nr.	Seeing
CC38193	Comp							Fehr Clear	60s	CC500 Nov 11	
94	HD 214975	22 3654	+561900	19 21 41		4 10 W			2300	700	8"
95	Comp							"	60		
96	BIAS(4)			20 03					—		
97	Comp			20 07 40				"	60		
98	HD 215159	22 3815	+5323 08	20 07 40		4 21 W			335	3270	5"
99	Comp							"	60		
CC38200	Comp							"	60		
01	VY Per Brighter star 2' NNW of VY Per	02 20 19	+58 28 06	20 22 29		1 0 W			836	850	4"
02	Comp							"	60		
03	BIAS(4) VY Per	02 20 19	+58 28 06	20 40 01		1 54 W			3000	570	4.6"
04	Comp							"	60		
05	BIAS(4)			21 32					—		
06	COMP							"	60		
07	HD 25361	03 56 42	+58 23	21 42 51		0 48 W			1149	2900	4.6"
08	Comp							"	60		

Spectr. Temp. Dome Temp./Hum. = 14.1°C / 62.0%. Transparency Conditions . thin cloud → clear . ☽

Focus 7.00

Spectr. Temp. Dome Temp./Hum. = 13.2°C / 59.0% H

420 0 50 1024 4 1 credit.

Comparison Date Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
63	06560 now in				C455 CCD	1800 l/mm G = 5945	306a	6400A	17		Telescope still east side	
7300	2200	8"	8.40	G016					18	Rm Cepheid	2 lac	2K
60									19			
-									1			
60									20			
335	3270	5"	6.19	K2					21	Std for 2 lac (7300/1 S/N)		5.5K
60									22			
60									23			
836	850	4"	10.8 -11.66	F5 MG F9					24	Rm cepheid	Brighter nearby field star	
60									25			
3500	570	4-6"	10.8 -11.66	F5 -F9					26	Rm cepheid	out of guide	400 above 1/2
60									27			
-									1			
60									28			
1149	2900	4-6"	7.3 -8.07	F615 -G216					29	Rm Cepheid.		4.7K
60									30			1.5K

51
P9#3

Sun / Mon

Emulsion Batches:

Date 1996 JAN. 7/8 Observers [Rex] / T.A. / Sent.....

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Exp. Mtr. Seeing
Spectr. Temp. ...
Focus 7.00
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing
CG80 304/307	HD 29587	4 34 30	+15 57 00			0 26 W		4x	67m	16560	4.4"
308/09	v1							2x	133m	5.11m	3.4"
CC38209	Comp							FeA claa	60		
10	HD 29587	4 34 30	+15 57 00	22 21 00		0 44 W			823	3000	5"
11	Comp							"	69		
12	BIAS(A)			22 37							
13	Comp							"	60		
14	HD 30282	4 41 06	+36 37 00	22 44 21		1 00 W			745	3200	4.6"
15	Comp							"	60		
16	Comp							"	60		
17	HD 44990	6 19 49	+7 08 25	23 08 24		0 20 E			362	3600	5.7"
18	Comp							"	60		
19	Comp							"	60		
20	IRIS	4 01 53	+20 01 36	23 25 06		2 43 W			1710	2160	5" 8
21	Comp							"	60		
22 → 31	FLAT x 16					2 50 W	+20°	Two K1A	7		

1996 (from Megastar)

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. -13.4°C 59.2% Transparency Conditions O.K. clear 5h

Focus 7.00

Spectr. Temp. Dome Temp./Hum.

Pearson Airport wind N 24 km @ 22 BT

Companion e/Filter Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4x 67	96560 Filter	Relatively OK now			CCD EEM CCD	1800 l/mm G=5945	306u NCOUE	6400A	—	Seeing test	ALT=86° Pomo East	
2 177		3-4"?	7.29	dG2	TUGAN DER			exactly	—	" "	Telegraph Eastside	
4 193					CASS CCD		306u		5			
823	3000	5"	7.29	dG2					6	Std Vel		4.3K
60									7			
									1/2			
									8			
75	3200	4-6" ^{B=}	7.9-8.8	F6-G1					9	Rm Cepheid	AW Per	5K
60									10			
60									11			
312	3600	5-7" ^{B=}	6.5-8.0	F7Iab - K1Iab					12	Rm Cepheid	T Mon	
60									13			
60									14			
170	2160	5"	8.1	G2					15	Std Vel	minor planet 4.5K	3.1K
60									16			
147									2		end of Rm pgm tonight	10.3K → 16K

c Lamberla

阿#4

Emulsion Batches:

Date 1996 January 7/8 Observers [Bin]/Tn/Smt

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.....
.....

60
Spectr. Temp. ...
Focus 7.0
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc 38 232 33	INBOARD/ OUTBOARD							F ₀ Av clear	40/20
34	Comp							"	60
35	HD 37017	5 30 25	-04 33 36	01 10 34 22 21 00		2 56 W			1800
36	Comp							"	60s
37	BIAS(4)			1 44					—
38	Comp BIAS(4)			1 49					—
39	COMP							"	60
40	HD 37468 AB	5 33 44	-02 39 22	01 54 43		3 15 W			460
41	COMP							"	60
42	COMP							"	"
43	HD 34759	5 14 44	+1 42 17	02 13 16		3 59 W			962
44	Comp							"	60
45/53	FLATS x 9			02 37		5 40 E	83°	Tung clear	27s
54	BIAS(4)			2 44					
55	Comp							F ₀ Av clear	60

Exp. Mr. Seeing
36 39
FILTER

700 6"

22K 78"

22K 6"

Telescope

CCD Spectr. Temp. -101.2°C Dome Temp./Hum. -14.0°C 5978/H Transparency Conditions .. clean..... 54

Focus 7.08

FANS OFF

Spectr. Temp. Dome Temp./Hum.

420 0 50 1024 4 1ccdbnt

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	4/20	B ₂ 39 FILTER				CASS CCD	1800 l/m G=4570	306m	4464A	3/4	focus test	in focus, now, T seems stable	
	60									5		re-done	
	1800	7000	6" 8" 6A2	B2V _p		centred on cols 29-30!			(on hot!)	6	He Rich Blk	late because expose 2K wasn't ever hit the first time, too many cooks I guess.	
	60									7		grainy blg	
										1		grainy	
										1		not grainy - fine.	
	60									8			
	4/20	22K	>8"	^B 3.57	095V					9	Blk	seeing is horrendous. D is on slit, too but very faint 7K	
	60									10		∴ not worth trying to get it alone	
	"									11			
	9/2	22K	6"	^V 5.09	B5V					12	Blk pgrm	(350/1 S/N)	708K
	60									13			
	27s	Telescope $\hat{=}$ mid way between E x W side config. IF Relevant.								2		(350/1 S/N)	13K
										1/2			
	60									1+		Now Tel Westside officers	

SS
Pg 45

Sun / Mon

Date 1996 Jan 7/8

Observers

[Bl.] / [In.] / [Smt.]

Emulsion Batches:

.....
.....
.....CD
Spectr. Temp. ...
Focus ... 7.08
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Nr.	Seeing
CC38256	HD 120315	1347.36	+49 49	02 51 A		4 03 E			83	8639	33.600
57	Comp							FeAr check	60		
58	Comp							"	60		
59	HD 154528	17 0054	+77 48 00	03 00 28		6 15 E			2997	13000	6-10"
60	Comp							"	60		
61	Comp							"	60		
62	HD 116842	13 21 13	+55 30 32	04 00 22		2 30 E			215	12000	
63	Comp							"	60		
64	BIAS (+)			04 07							
65	Comp							"	60		
66	HD 84441	09 40 11	+24 14 05	04 17 36		1 26 W			162	20000	
67	Comp							"	60		
68/69	IN BOARD / OUT BOARD					0	+33°	"	40/70		

CCD Spectr. Temp. -100.0°C Dome Temp./Hum. -15.0°C 59.7%RH Transparency Conditions .. Fine .. ~~5K~~ ..

Focus ... 7.08 but wind getting high from North

Spectr. Temp. Dome Temp./Hum. 425 03 1024 4 1 CCD FWHM

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B		BG 39 33,600		V 1.86	B3V	CASS CCD	1800 λ/mm G=4598	306 μ	446A8	15		2400/1 S/N	10K
B										16			
B										17			1.3K
2997		13008	6-10"	V 6.66	A0					18	Blk pgrm		
B										19			
B										20			
245		12000		B 4.17	A5V					21	Alcor -	(It seemed bright to me) 5 was on the way down	5K
B										22			
										1/2			
B										23			
162		20000		V 2.98	G1 II					24	std vel		
B										25			
170										34	focus test	wind picked up - saw blowing in through slit.	

57
Pg #1

[Mon/Tue]

Date 1996.. January 8/9.. Observers [B.in.] / T.n. / Smt.....

Emulsion Batches:

.....
.....
.....100
Spectr. Temp. ...

Focus 7.

100
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC38270/71	INBOARD/ OUTBOARD					0 20 W	+ 41 ish	FeAr clear	40/70
72	BIAS (4)			17 48					-
73	COMP							"	60
74	HD192518	20 10 08	+28 23 30	17 51 08		4 49 W			1105
75	COMP							"	60
76	COMP							"	"
77	HD 210459	22 05 33	+32 41 15	18 16 42		3 07 W			360
78	COMP							"	60
79	Comp							"	60
80	HD214975?	22 36 42	+44 29	18 29 45		3 33 W			3000
81	COMP	(HD214946 Hopefully in Head of Tn Jan 11)						"	60
82	BIAS (4)			19 23					-
83	COMP							"	60
84	HD222368	23 34 48	+05 05 03	19 30 18		2 51 W			360
85	COMP							"	60

Exp. Mtr. Seeing

B9 39

FILTER

20.3K 3-4'

21.1K 3-4'

1.9K 3'

7.3K 3-4'

CCD Spectr. Temp. ... 100.0°C

Dome Temp./Hum. ... 7.2°C/69.1%

Transparency Conditions . partly cloudy, warmer SB tonight.

Focus 7.00

@ focus test

FANS ON → clear

CCD Spectr. Temp. ... 101.9°C for W

Dome Temp./Hum.

420 0 50 1024 4 1 ccd bit

Companson Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	70/78	BG 39 FILTER				CASS CCD	1800 l/mm λ = 4590	30μm	4464 ⁹	3/4	focus test	a bit cool if anything	
	-								±.5Å at most	1			
	60									5			
	1105	20.3K	3"-4"	5.36	A7IV _n					6	Bln A-shell*		8.8K
	60									7			
	"									8			
	360	21.1K	3"-4"	4.75	F5III					9	Bln A-shell*	SN ~ 340:1	12.4K
	60									10			
	60									11			
	3000	14.9K	3"	7.26	A5		SN ~ 300:1			12 ⁹	Bln SB2	written in wrong cache - most edit header accordingly DONE	7.0K
	60									10			
	-									1			
	65									11			
	300	17.3K	3"-4"	4.13 ^v	FTV					12 ⁹	std vel	wrong cache AGAIN.	7.8K
	60									13			

59
pg #2

Date 1996 January 8/9 Observers [Bin]/Tn/Smt

Emulsion Batches:

.....
.....
.....100
Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc 38286	COMP							FeAr clear	60
87	HD37468 AB	05 33 44	-02 39 28	19 44 20		2 56E			250
88	Comp							"	60
89	HD54241 D	"	"	19 51 21		2 23E			179
90	Comp							"	60
91	HD37468 AB	"	"	20 25 03		2 14E			312
92	Comp							"	60
93	BIASCA			20 33					
94	Comp							"	60
95	HD 37017	5 30 25	-04 33 36	20 38 19		1 30 E			1965
96	COMP							"	60
297 → 305	FLAT x 9					0 01 W	-4° 30'	Tung clear	22

Exp. Mr. Seeing

26.39
FILTER

15,000 4.5"

7000 5.8"

15,300 7.16"

10.8K 5.7"

CCD Spectr. Temp. -1.00°C Dome Temp./Hum. $-8.0^{\circ}\text{C} / 72.2\%$ Transparency Conditions .. *partly cloudy... again...*
 Focus 7.00 * FANS ON, ie now only NEFAN Letter
 Spectr. Temp. Dome Temp./Hum. 420 0 50 1024 4 1 ccd/ft

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60	BG 39 FILTER				CASS CCD	1800 ltm G=4590	30 μ m	4464 Å	14			
250	15,000	4-5"	3.57	09.5V					15	Bln		6.9K
60									16			
178	7000	5-8"	6.3	B2V					17	Bln pgn	Hard To keep AB off (speckled) Some cloud	
60									18			
32	16,300	7-10"	3.57	09.5V					19	Bln pgn	seeing terrible	
60									20			1.2K
60									1/2			
60									21			
145	10.8K	5-7"	6.42	B2Vp					22	He Rich Bln	cloud @ end - cut short	4.4K
60									23		Solid cloud all over.	
22									24		dome closed.	1.23K → 11.8K
											snow later.	

61
P9E1

Wed / Thurs

Date 1996 Jan 10/11 Observers [Blm.] / J. T. n.

Emulsion Batches:

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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC383 ^{06/07}	Inboard / Outboard HARTMANN					0 0	+44°	FeAr clear	40/70
08	BIAS (4)								
09	Comp							FeAr clear	60s
10	HD 214946	22 36 42	+44 29 00	17 45 56		2 56 W			2967
11	Comp							"	60
12	BIAS (A)			18 40					
13	Comp							"	60s
14	HD 154528	17 00 54	+77 48 00	18 48 49		9 40 W			2710
15	Comp							"	60s
16	Comp							"	60s
17	HD 34759	5 14 44	+41 42 17	19 46 00		2 21 E			775
18	Comp							"	60
19	BIAS (A)			20 02					
20	Comp							"	60
21	HD 222368	23 34 48	+5 05 03	20 10 08		3 42 W			582
22	Comp							"	60

COP
Spectr. Temp. ...
Focus 7-
Spectr. Temp. ...

Exp. Mtr. Seeing

8639

Filter

8000

4.5"

10/100

5.6"

15 800

4.6"

2000

6"

CCD Spectr. Temp. -102.1°C Dome Temp./Hum. -9.0°C 67% Transparency Conditions *Fine* 62

Focus 7.00

90 cgain

Spectr. Temp.

Dome Temp./Hum. -10.9°C 71%
CD

420 0 50 1024 4 1 CCD EMT MAX ADU

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/70		BG 39 Filter				CASS CCD	1800 lines/mm G = 4590	308 μ	4A64A	3/4	focus test	set for expected cooler temp	
						G. value untouched From previous night.				1/2			
60s										5			1.2K
240		8000	4.5"	7.26	A5					6	Blk SB	P = 3.04 days	3.3K
60										7			1.1K
										1/2			
60s										8			1K
270		10,100	5.6"	6.66 ^V	A0					9	SB2 Blk	P = 4.90 days	5.1K
10s										10			1K
60										11			1.1K
775		15,800	4.6"	5.09 ^V	B5V					12	Blk pgn		7K
60										13			
										1/2			
60										14			1.3K
592		12000	6"	4.13 ^V	F7V					15	Std Vel		3.7K
60										16			1.3K

63
P4 #2 Wed 1 Thurs

Date 1996 JAN 10/11..... Observers [B.L.]/T.A.....

Emulsion Batches:

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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC38323	COMP							Fair clear	65
24	HD 37017	5 30 25	+04 33 36	20 32 26		1 22 E			2340
25	comp							"	60s
26	BIASCA)			21 14					
27	Comp							"	60s
28	HD 29587	4 34 30	+41 57	21 20 05		0 04 E			918
29	comp							"	60s
CG803 ^{10/13}	HD 29587	"	"	21 38				4x	67ms
CG803 ^{14/15}	"	"	"			0 03 W		2x	133ms
CC38330	Comp							Fair clear	60s
31	HD 37468 AB	5 33 44	+2 39 28	21 50 07		0 42 E			256
32	Comp							"	60
33	AD 54241 D	"	"	21 57 20		0 05 E			2077
34	Comp							"	60s
35	HD 37468 AB	"	"	22 35 31		0 03 W			222
36	Comp							"	60s

C.D.
Spectr. Temp. ...
Focus 7.00
Spectr. Temp. ...

Exp. Mr. Secing

7.600 5-8"

2000 5-6"

15,800 4-6"

8,250 4"

16000

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. -11.3°C 71% H Transparency Conditions . slight haze only 64

Focus 7.00

(Atm PRESS 102.34 kps and steady)

Spectr. Temp. Dome Temp./Hum.

(ONLY NE FAN ON ROW) MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 μm G=4590	306 μ	4467A	16			1.2K
9,600	5"-8"	6.42	B2V					25	Blu pgr		4K
								26			
								1/2			
								27			
2000	5"-6"	7.29	dG2					28	Std vel	for seeing test too	900
								29			
		7.29	dG2		ABOVE	306 μ	slit			seeing test Dome west	
				ALT =	88 $^{\circ}$			wind	WNW	11 Km/hr airport	
								5ci			
15,800	4"-6"	3.57	09.5V					6	Blu pgr		6K
								7			
8,250	4"	6.3	R2V					8		good separation quick with AB offset	
								10			
16000		3.57	09.5V					11			
								13			

65 pg #3 Wed/Thurs

Emulsion Batches:

Date 1996 Jan 10/11..... Observers [Bl.] / 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.
cc38337	BIAS(4)			22 42					
38	ADS 4241 D	5 3344	-2 3928	22 46 04		0 40 W			1703
39	Comp							FeAr clear	60s
40	Comp							"	60
41	HD 120315	13 4336	+49 4845	23 2723		7 15 E			
42	Comp							"	60s
43/51	FLAT X 9			23 34		1 40 E	+22°	TUNG Ap clear	20s
52	BIAS(4)								
53/54	Inboard / out board HARTMANN			00 00		0	+31°	FeAr clear	40/70

ccp
Spectr. Temp. ...

Focus 7.00

Spectr. Temp. ...

Exp. Mtr. Seeing

8639

F/4

7,600

4"

21,300

Note

Re

On

1/10 we

CCD Spectr. Temp. - 100.3°C ... Dome Temp./Hum. -12.4°C 74.78% Transparency Conditions ... Fine ... 66

Focus ... 7.00

Spectr. Temp. ... Dome Temp./Hum. -12.3°C 76.78%

Comparison Date Exp.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				CASS CCD	1800 μ m	30 μ m	4464A	1/2			
7,600	4"	6.3	B2V					12ci	Bth pgm	Offset guide experiment repeat, using SBIG with AD5 4241 E as guide star.	3.3K
								13			
								13			1.3K
21,300		1.86	B3V					14		Offset guide exp. R=20,100g Exp = 0.2 sec good for 6 things AD34241 E # 2 3 + MAX move Corr speeds - 1 1 1 1 3.0	9K
								16			

Note After flats, Spectrocontrol failed again and on

Reset, Indication was that NORMAN mask was going home, forever.

On checking, I found mask in "Comp", south pass.

It may have ?? been there all night. Exposure strength compared with previous night should tell the tale

I cannot say for sure if "M" in menu said "Home" during the night.

No We must be OK. Some max of comparison noted both nights. Tn

Track Contr Min move 200ms
Dead Time 50 ms
Averaging 2

67
Pg #1 [Fri/Sat]

Date 1996 January 12/13 Observers [Blm]/Smt

Emulsion Batches: -

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

Exp. Mtr. ...
Spectr. Temp. ...
Focus
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC38355/ 56	INBOARD/ OUTBOARD					0 ^h	+46°	FeAr clear	20/40
57	BIAS(4)			17 54					—
58	COMP							FeAr clear	20
59	HD226868	19 54 36	+34 56	18 04 07		5 43 W			1600
60	COMP							"	20
61	COMP							"	"
62	HD222368	23 34 48	+05 05 03	18 39 51		2 13 W			170
63	COMP							"	20
64	BIAS(4)			18 46					—
65	COMP							"	20
66	HD218915	23 06 42	+52 31	18 59 35		3 14 W			940
67	COMP							"	20
68	COMP							"	"
69	HD108	00 00 54	+63 07	19 24 49		2 49 W			1200
70	COMP							"	20

Exp. Mtr. Seeing

39
FILTER

600 2.3"

6000 3"

3300 3"

2780 3.4"

CCD Spectr. Temp. ... 1.02 ... Dome Temp./Hum. ... 6.6°C / 72.3% Transparency Conditions . Clear, some cloud to S. ⁶⁸ ~~thunder~~

Focus ... ~~7.10~~ 7.10 ... @ focus test FANS ON

Spectr. Temp. ... Dome Temp./Hum. ... 455 0 50 1024 4 1 ccd fast

Comparison / Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	20/40	Ba 39 FILTER				CASS CCD	600 600/mm(c)	25um	4298Å ± 1Å	3/4 1	focus test	in focus	
	20						homed & put back when reset, exactly			5		spec. controller reset	
	140	600	2"-3"	^B 9.74	09.7 Iab				4298Å ± 1Å	6	Bln O*/SB	Cyg X-1, sky still out of focus, bright overexposed, whopping sky line!	800 above 6g
	20									7			
	"									8			
	170	6000	3"	^V 4.13	F7V					9	std vel		14.5K
	20									10			
	—									1			
	20									11			
	940	3300	3"	^B 7.20	09.5 Iab					12	Bln O-*		8.7K
	20									13			
	"									14			
	1200	2780	3'-4'	^B 7.58	06:f?pe					15	Bln O-*	s/w ~ 270:1	
	20									16			

64
pg #2

Date 1996 January 12/13 Observers [Bin]/Smt

Emulsion Batches:

.....
.....
.....C10
Spectr. Temp. ...
Focus
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC38371	BIAS(4)			19 49					
72	COMP							FeA clear	20
73	HD5005 A?	00 47 00	+56 05	19 51 55		2 44 W			2110
74	COMP							"	20
75	HD5005 B?	00 47 00	+56 05	20 30 01		3 09 W			1280
76	COMP							"	20
77	BIAS(4)			20 54					-
78	COMP							"	20
79	HD3712	00 34 50	+55 59 20	20 59 51		3 31 W			60
80	COMP							"	20
81	COMP							"	"
82	HD15137	02 21 12	+52 06	21 09 13		2 22 W			1800
83	COMP							"	20
84	BIAS(4)			21 48					-
85	COMP							"	20

Exp. Mtr. Seeing

8439
FILTER

2200 2"

1830 3"

12.8K* 2"

35K 2"

CCD Spectr. Temp. -101.3°C Dome Temp./Hum. $-8.3^{\circ}\text{C}/73.8\%$ Transparency Conditions *clear, hazy* 10

Focus *7.10*

ONLY N FAN ON

Spectr. Temp. Dome Temp./Hum.

455 0 50 1024 4 1 ccd/mt

Comparison / Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		BG 39 FILTER				CASS CCD	600 μm G=2683	25 μm	4298A	1			
	20									17			
	2110	2200	2"	B 7.35	06.5V			S/N ~ 260:1		18	Bln 0-*	brightest of 3 close Northern-most of 3, too,	4.5K
	20									19			
	1280	1030	3"	B 8.9	0					20	Bln 0-*	med bright of 3, closest (SW) to brightest.	
	20									21			
										1			
	20									22			
	60	12.8K*	2"	V 2.23	K0-IIIa					23	std vel	*trailed across slit.	
	20									24			
	"									25			
	1800	3.5K	2"	B 7.72	09.5V-III(w)					26	Bln 0-*	SBIG ST-4 autoguided. S/N ~ 305:1	10.1K
	20									27			
										1			
	20									28			

71
pg #3

Date 1996 January 12/13 Observers [Bin] / 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.
cc38386	HD14633	02 16 42	+41 02	21 50 23		2 55 W			1020
87	COMP							FeAr clear	20
88	COMP							"	"
89	HD17505	02 43 24	+60 01	22 13 30		3 02 W			1750
90	COMP							"	20
91	BIAS(4)			22 49					-
92	COMP							"	20
93	HD34656	05 14 00	+37 20	22 50 59		0 51 W			615
94	COMP							"	20
95	COMP							"	"
96	HD37043	05 30 32	-05 58 32	23 10 48		0 47 W			40
97	COMP							"	20
98	COMP							"	20
99	HD37022 C	05 30 22	-05 27 20	23 16 49		0 57 W			300
cc38400	COMP							"	20

ccD
Spectr. Temp. ...
Focus 7.1
Spectr. Temp. ...

Exp. Mtr.
Filter

3.5K 2"

3.7K 2.3"
→4"

3.8K 2.4"

7.5K 3"

4.5K 3"

CCD Spectr. Temp. -1.01:3.0°C

Dome Temp./Hum. -8.4°C/73.8%

Transparency Conditions . clear with some haze .. R.

Focus 7.10

N FAN ON

Spectr. Temp.

Dome Temp./Hum.

455 0 50 1024 4 1 ccd/mt

Com. Filter	Exp.	36 39 Exp. Mtr. FILTER	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1020		3.5K	2"	7.26	ON8V	CASS CCD	600 2/mm C G=2683	250μ	4298 Å	29	Blu - 0*	S/N ~ 325:1	10K
	20									30			
	"									31			
1750		3.7K	2-3" →4"	7.46	06.5V(f)					32	Blu - 0*	faint companion due E, on slit 6.8K ~ 2" separation, some scattered light from Spier in slit view	
	20									33			
	-									1			
	20									5			
615		3.880	2-4"	6.81	07II(f)					6	Blu - 0*		10.0K
	20									7			
	"									8			
40		7.5K	3"	2.93	09III					9	Blu - 0*	trailed	9.0K
	20									10			
	20									11			
300		4.5K	3"	5.15	06ep(?)					12	Blu - 0*	brightest of trapezium (6' on) bright emission nebula background.	10.9K
	20									13			

73
Pg # 4

Date 1996 January 12/13 Observers [Blr]/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.
CC38401	COMP							FeAr clear	20
02	HD37023 D	05 30 23	-05 27 14	23 27 53		1 19 W			950
03	COMP							FeAr clear	20
04	HD37023 D			23 47 15		1 52 W			1800
05	COMP							"	20
06	BIAS(4)			0 20					-
07	COMP							"	20
08	HD37742	05 35 43	+01 59 43	0 24 06		1 55 W			30
09	"			0 25 46		1 58 W			60
10	COMP							"	20
11	COMP							"	"
12	HD47839	06 35 28	+09 59 18	00 36 10		1 10 W			240
13	COMP							"	20
14	COMP							"	20
15	HD47432	06 33 27	+01 42 03	00 45 18		1 21 W			205
16	COMP							"	20

100
Spectr. Temp. ...

Focus 7.1

Spectr. Temp. ...

Exp. Mtr. Seeing

875 3"

1530 3"

3.5K 5"

7.5K

5.0K 4.5"

99 5-6"

CCD Spectr. Temp. ... -100.3°C

Dome Temp./Hum. ... -8.3°C / 76.5%

Transparency Conditions ... clear, with some haze ... 74

Focus ... 7.10

N FAN ON → quickly mostly cloudy

Spectr. Temp.

Dome Temp./Hum.

455 0 50 1024 4 1 CCD flat

Expansion Filter Exp.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20				CASS CCD	600ℓ/m(C) G=2683	250μ	4298Å	14			
950	875	3"	6.78*	09.5I				15	Bin-0*	* seems fainter - much so cut short to check star pos'n (10)	1.8K
20								16			
1800	1530	3"	6.78*	09.5I				17	Bin-0*	* star is fainter than 7 th mag → 8 th at best!	
20								19			
-								1			
20								22			
30	3.5K	5"	1.54 ^B	09.5Ib				23	Bin-0*	trailed.	3.9K
60	7.5K							23	"	trailed, helped by cloud	9.9K
20								24			
"								25			
240	5.0K	4"-5"	4.40	09.7I(f)				26	Bin-0*	clouds coming clear here for now	11.7K
20								27			
20								28			
25	99	5"-6"	6.36	09.7Ib				29	Bin-0*	mostly cloudy now mostly sky lines.	3K big
20								30			

pg #5

Date 1996 January 12/13 Observers [Bin]/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 38417 → 25	FLAT x 9					1 30 W	+1°	Tung clear	6
26	BIAS (4)			0 58					—
27/28	INBOARD/OUTBOARD					0	+41°	Felt clear	20/40

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

Exp. Mr. Seeing

77
pg #1

Sun/Mon

Date 1996 JAN 14/15

Observers [Bl.] / Th / 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 384 ^{29/30}	T ₂ bound/outbound	HeATimum				0	43°	FEA clear	20/40
31	BIAS(4)								—
32	Comp							"	20
33	HD 37366	05 33 00	+30 50	23 16 47		1 36 W			2435
34	COMP							"	20
35	BIAS(4)								
36	COMP							"	20s
37	HD 42088	06 03 42	+20 31	00 05 14		1 57 W			2560
38	COMP							"	20s
39	BIAS(4)			00 54					
40	Comp							"	20s
41	HD 46223	6 27 00	+04 53 00	00 57 14		2 23 W			2358
42	Comp							"	20s
43	Comp							"	20s
44	HD 89449	10 14 18	+19 58 42	01 49 19		0 59 E			760
45	Comp							"	20s

Spectr. Temp. ...

Focus ... 7.10

Spectr. Temp. ...

Exp. Mtr. Seeing

Ba 39
FILTER1280 @
1500 sec mark
Min. spectral
field, 8"

2350 7"

8000 6.8"

2300 8.5"

Spectr. Temp. ^{CCD} -10.5°C Dome Temp./Hum. -6.5°C / 59.8% Transparency Conditions just cleared B.
 Focus 7.10 N FAN ON
 Spectr. Temp. Dome Temp./Hum. -11.0°C / 60.0% H STRONG NNW wind 20 knts/hr
 455 0 1024 4 1 CCD fnt

Comparison Filter Exp.	Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Max Quality
20s	B6 39 FILTER				CASS CCD	600 2/mm @ G=2683	250μ	4295A	3/4	focus test		
—									1/2			
20									5			
20s	1250 @ 1500 sec mark then spec control failed.	8"	7.58	09.5V					6	Bln - 0*	seeing is settling down, 5°C drop so far @ 23:30 since opening up.	2.6K
20									7			
									1/2			
20s									8			
20s	2350	7"	7.61	06.5V					9	Bln - 0*		2.6K
20s									10			580
									1/2			
20s									11			510
2354	2000	6-8"	7.47	04V (CF)					12	Bln - 0*	(2000/1 STN) cloud @ end	2K
20									13		HARTMAN mask definitely gone	600
20s									14			580
760	2300	8-12"	4.79	F6IV					15	Std Vel	cloudy party	
20s									16			

81 #1
PJ

Mon/Tues

Date 1996 January 15/16

Observers [KK] / Tn / Smt

Emulsion Batches:

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.....
.....

Exp. Spectr. Temp. ...

Focus 2.3

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE10633/34	INBOARD/ OUTBOARD							ThAr	10/6
35	BIAS(4)								
36	COMP							ThAr	10
37	HD215182	22 38 19	+29 41 53	18 07 23					400
38	COMP							ThAr	10
39	BIAS(4)								-
40	COMP							"	10
41	HD34029	05 09 18	+45 53 41	20 26 58		1 25 E			90
42	COMP "			20 29 24		1 15 E			601
43	COMP							"	10
44	HD34029			20 41 16		1 03 E			620
45	COMP							"	10
46	COMP							"	"
47	HD215182	22 38 19	+29 41 53	21 01 31		6 16 W			2154
48	COMP							"	10
49	BIAS(4)			21 40					

Exp. Mir. Seeing

6.18

FILTER

320V

level

6.5K

50K

53K

6810

4"

CCD Spectr. Temp. -100.0°C Dome Temp./Hum. $-11.6^{\circ}\text{C}/48.3\%$ Transparency Conditions .. *clear* \rightarrow *clouding in 82*
 Focus 232 @ focus test \rightarrow *partial clearing theory.*
 Spectr. Temp. Dome Temp./Hum. -13.0°C 54%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	max Quality
10/6 86 18 FILTER				ECHELLE 17.85	.4455 1200 l/mm	69 μ W 40 μ H	3960 Å	1/2	focus test	0 0 128 1024 8 i cod key right in focus.	720
1320 V And Rebalanced								1			
								3			
		B 3.8	G2II -III + FOIV					4	KK H&K	was clear, clouding in test VERY WEAK.	
								3		closed up.	
								1		opened up.	
								3			
90 6.5K		0.08	G5IIIe + G0III					5	KK H&K	thin cloud on thick base. test exposure.	max. 750.
101 50K		"	"					5	"		3.7K
								3			
620 53K		"	"					5	"		5.0K
								3			
								3		telescope on E side	
215 6,8 10	4"	B 3.8	G2II III + FO IV					4	KK H&K		
								3			
10								1/2			

832 P4#2 man/Tars

Emulsion Batches:

Date 1996 JAN 15/16... Observers [K.K.] / Tr / Sant.....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
ce 10650	Comp							ThAr	10
51	HD 11636	14907	+20 19 09	21 45 05		3 34 W			1290
52	Comp							"	10
53	BIAS (4)			22 11					-
54	COMP							"	10
55	HD 40183	05 52 12	+44 56 15	22 21 16		6 01 W			900
56	COMP							"	10
57-65	FLAT x 9					3 ^h 0 ^m W	3^h 0^m W ↑ +16°	Tung	200
66	FLAT							Tung	100
67	FLAT							"	"
68	FLAT							Tung CuSO ₄	"
69-71	biases (singles)								
72-73	flats with green LED in box near camera mirror								
74	flat with green LED etc								1/2 sec

funny! I have had copies of the images!!

Not written I guess

Spectr. Temp.
 Focus 23
 Spectr. Temp.
 Exp. Mtr. Seeing

Spectr. Temp. Dome Temp./Hum. \uparrow 13.1°C / 55.4% Transparency Conditions . increasing . cloud

Focus 232 @ 1st bias (4)

Spectr. Temp. Dome Temp./Hum. @ 0 256 1024 4 1 CCD

Com. de/Filtre	Exp	Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	10					e.kelle CCD 17.85	1200 l/mm • 44.55	60u 400u H 400u H z. 225	3960A ^o	3			MAV 9.7K
	10	2730	3.4"	2.78	A5V					5	KK H&K	in cloud → very thick @ end	1500 ADU sun at 1/2 hr
	10									3			
	10									1			
	10									3			
	900	280		B 1.93	A2V					2	KK H&K		
	10									3			
	200							80u 600u H	for F/4.5 = .205	6		closed up again.	8K or so →
	100							60x 400					
	"							60x 500					
	"							60x 500					
	1/2 sec											full frame format	

pg 185

SAT/SUN

Emulsion Batches:

Date Jun 20/21 1996 Observers And/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.
ce 106 #76	Inboard/out board							ThAr	1/1
77	BHS(4)			18:02					
78	comp							ThAr	1
79	HD 24357	3 ^h 47 27	19 ^o 01 46	18:10:03		1 32 E			1300
80	comp							ThAr	1
81	HD 24357	"	"	18:42:01		2 17 E			700
82	comp							ThAr	1
83	BHS(4)								
84	comp							ThAr	1
85	HD 25102	3 ^h 54 12	10 ^o 02 45	19:01:30		102 E			400
86	comp							ThAr	1
87	comp							ThAr	1
88	HD 26345	4 ^h 04 54	18 ^o 00	19:27:27		051 E			600
89	comp							ThAr	15
90	HD 26345	"	"	19:40:46		0 18 E		1806	1800
91	comp							ThAr	15

Spectr. Temp. ...

Focus

Spectr. Temp. ...

Exp. No.

Seeing

no filter

8 25 3"

4 59 25"

3 35 23"

6 5

Spectr. Temp. -100.5°Dome Temp./Hum. $-6.8^{\circ}/50.6$Transparency Conditions *high level cirrus*.....86

Focus.....0.218.....

Spectr. Temp.

Dome Temp./Hum.

Comparison Filter	Exp.	Exp. Mfr	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		1320V				echelle	18.13	600 400 nH	6520A	1/2	Amv.	CCDFMT for Focus 0 0 128 1024 8 1	
		no filter				18.13	200/3625			1/2		CCDFMT 0 0 256 1024 4 1	
		8 1058	3-4"	5.97	F4V					3i			
		4 89	2-3"	"	"					4i		VB6 SIN 7170 → broadened - rapid rotation $v_{sin} = 59$	
										3i		terminated (VB6 rapid rotation)	
										5			
										1/2			
										3i			
		335	2-3"	6.37	F5V					3i		VB8 - also broad. - rapid rotation 59 km/s	
										3			
						6.62				3i		VB36	
						6.62				3i		VB36	
										3			
		615	"	"	"					5i		VB36 SIN 7150	
										3			

878*2

SAT/SUN

Date Jan 20/21/96 Observers Hal/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.
ce 10691	Brae(A)			20:13					
92	HD 26345	4 ⁿ 0454	18 100	20:13 20:13:41		00 05 W			18/5
93	Comp							ThAr	15
94	HD 26345	"	"	20 45 22		00 46 W			1800
95	Comp							ThAr	15
96	HD 26345	"	"	21 16 22		01 06 W			1118
97	Comp					1		ThAr	15
98	BIAS(A)			21 36					
99-T08	FLATS x 10					3 06 W +10°		Tung	1.7 15

Spectr. Temp. ...

Focus 0

Spectr. Temp. ...

Spectr. Temp. ...

Exp. No. ...

Seeing ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

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Filter ...

Filter ...

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Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Filter ...

Spectr. Temp. -100.15.....

Dome Temp./Hum. -7.7/53.9%

Transparency Conditions .. 5.0% H₂O cloud..... ☸

Focus 0.218.....

cloud from south

Spectr. Temp. -100.3°C.....

Dome Temp./Hum. -7.2°C 60% H

Exp. Mtr	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320V no filter				Echelle 610 18.13	X 5685 300/mm	60uW 400 nH	6520R	1/2	Aml		
556	3"	6.62	F6V					2c:		(7130/1 S/N)	
342	3"	"	"					4		(7110/1 S/N)	
121	3"	"	"					5c:		S/N ~ 6 getting cloudy	
								3			
								1/2			
								1	14.2 max	(Header say 175, should be 1.7) (we used 100 to scale)	

pgl 89 Sun/Mon

Date Sept 21/22 1992

Observers Hnd/Th

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 10704.	Bias (4)			22:00 :39					
710	comp							ThAr	1s
711	HD 26345	4 ^h 04 54	18° 10 00	23:45 :29		2 ^h 50 45 W			1800
712	comp							ThAr	1s
713	HD 26345	"	"	23:16:36		3 ^h 22 00 W			1800
714	Comp							ThAr	1s
715	Bias (4)			23:48:45					
716	HD 26345	"	"	23:48 : 23:49:30		3 ^h 55 W			1800s
717	Comp							ThAr	1s
718	HD 26345	"	"	00:21:20		4 ^h 26 59 W			1800
719	Comp							ThAr	1s
720	Bias (4)			00 53					
721	HD 26345	"	"	00:53:47		0 ^h 49 W			1200s
722	comp							ThAr	1s
723	comp							ThAr	1s
724	HD 102870	11 ^h 45 29	02° 19 42	01:21:13		2 23 E			200s

Spectr. Temp. ...

Focus ... 0.2

Spectr. Temp. ...

Seeing

Exhd to be ...

609 43"

555

399 3"

312

82 3-4"

3700 4"

Spectr. Temp. ... -100.5 Dome Temp./Hum. ... 3.8/66.8% Transparency Conditions *circus, haze*: 90.

Focus ... 0.218

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1 CCD PMT

Comparison Filtered Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	1320V <i>no filter</i>				Echelle 18.13	5085 300/mm	60 μW 400 μA	6520A = .225	1/2	Anal.		MAX
									3			
1900	609	< 3"	6.62	F01					2		J836. S/N ~ 140/1	
1800	555	"	"	"					4		S/N > 100/1	
1800									3		CCD -151.4°C Dewar T	
1800	399	3"	"	"					5		S/N ~ 140/1	
1800	312	"	"	"					6		S/N ~ 140/1	
1200	182	3-4"							2		S/N ~ 100/1	
1800									3		"	
1800	3760	4"	3.61	F01V					4		S/N > 100/1	10K

alg #2

Sun / mon

Date 1996 JAN. 21/22. Observers ... Hml. / Tn.

Emulsion Batches:

.....

Spectr. Temp. ...

Focus ... 0.2

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce10725	comp							ThAr	1s
726	HD102870	11 ^h 45 ^m 29	02°19'42"	1 46 28		1 58 E			1200s
727	Comp							ThAr	1s
728	Bias(4)			2:12:10					
729	comp							ThAr	1s
730	HD126660	14 ^h 21 ^m 48	52°18'47"	2:15:38		4 09 E			860
731	Comp							ThAr	1s
732	HD126660	"	"	2 31 05		3 51 E			1000s
733	Comp							ThAr	1s
734	HD126660	"	"	2:51:06		3 18 E			1800s
735	Comp							ThAr	1s
736	Bias(4)			3:24:00					
737-746	FLATS x 10					2 37 W	+8°	Tung	17s
747/48	Inboard / out			3 48		"	"	ThAr	1/1

Exp. Mir.

Seeing

10 5/16

2/1320

3535 34"

3740 3"

3550 23"

2665 23"

100 scale

Spectr. Temp. Dome Temp./Hum. -4.8°C 72.3% Transparency Conditions ... 5/19.1.16... 1.9.24... 02
 Focus 0.218
 Spectr. Temp. Dome Temp./Hum. c 2 m x

Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ x Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
	15	no filter But 1320V				echelle CCD 18113	300/3685	60uW 400H	6520A	3	Hnd		
	1200	3535	3.4"	3.6	F9V					5		S/N 7400	10K
	15									3			
	15									1/2			
	15									3			
	580	3740	3"	4.05	F7V					6		S/N > 350/1	6.7K
	15									3			
	1000	3550	2.3"	4	"					2		S/N 2540/1	
	15									3			
	1800	2665	2.3"	"	"					4		S/N 7280/1	
	15									3			
	15									1/2			
	175	using 100 f scale						60u 600H	for flats	1	η	(1.7e flats)	14.5K
	111							400H		7/8		00 128 1024 85 1	

9399 #1

Date 1996. January 24/25 Observers Dby./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 38458/59	INBOARD/OUTBOARD	HARTMANN						FeAr clear	46/70
60	BIAS(4)			19 58					-
61	COMP							"	60
62	HD20902	03 17 11	+49 30 19	20 06 00		~ 30 ^m W			60
63	COMP							"	60
64	COMP							"	"
65	HD29737	04 35 57	-24 40 40	20 28 18		0 17 W			1800
66	COMP							"	60
67	BIAS(4)			21 02					-
68	COMP							"	60
69	HD29737	04 35 57	-24 40 40	21 05 32		0 54 W			1800
70	Comp						accident →	FeAr 16 Ap	60
71	Comp							"	60
72	HD36673	05 29 19	-17 53 38	21 48 58		0 15 W			60
73	"	"	"	21 51 08		0 18 W			120
74	"	"	"	21 54 01		0 23 W			240

Exp. Mtr. Seeing
Spectr. Temp. : /
Focus... / 95...
Spectr. Temp. ...

Exp. Mtr. Seeing

set back
to 100039
FILTER0-^N
5"

5"

5"

CCD
Spectr. Temp. -100°C

Dome Temp./Hum. $-1.5^{\circ}\text{C} / 55.2\%$
@ focus test

Transparency Conditions clouding. i.m. \rightarrow partly cloudy
very windy

Focus... 6.95.....

Spectr. Temp.

Dome Temp./Hum.

N FAN ON

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
HV set back to 1000V				CASS CCD	1800 μm G=4476	30 μm	4300A $\pm 1\text{\AA}$	3/4 1	focus test	415 0 50 1024 4 1 ccd test in focus	
B6 39 FILTER								5		425 0 50 1024 4 1 ccd test.	
not counting	5"	B 2.27	F5Ib					6	Sp. Std.	α Per, trailed.	
								7			
not working at all	5"	B 6.50	G6III					8			
								9	Sp Std	S BIG, ST-4 AUTOGUIDED, sky lines	sl wk
								10			
								11		spec. controller reset	
not working	5"	B 6.50	G6IV					12	Sp Std.	some clouds (very bright) Spect. Chnlr. failed delayed comp. (Heavy clouds in view)	
								13			
								14			
"		B 2.79	F0Ib					15	Sp. Std.		
"		"	"					"	"		
"		"	"					"	"		

95) #2

Date 1996 January 24/25 Observers Dby./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.
CC38475	Comp							FeAr Clear	60s
76	BIAS(4)			22 01					—
77	COMP							"	60
78	HD60335	07 28 54	+43 15 03	22 11 09		0 57 E			1800
79	COMP							"	60
80	HD60335	07 28 54	+43 15 03	22 45 06		0 23 E			1800
81	COMP							"	60
82	HD60335	"	"	23 18 10		0 10 W			1810
83	COMP							"	60
84	BIAS(4)			00 04					—
CG80316-19	HD64958 x4	07 51 15	+44 14 40						.067
2d21 19	" x2				00 04	0 03 W	89° Alt		.133
CC38485	COMP							FeAr Clear	60
86	HD62140	07 37 24	+63 04 18	00 15 53		0 57 W			1800
87	COMP							"	60
88	HD62140	"	"	00 52 35		1 37 W			1870

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

Exp. Mir. Seeing

5"

5"

4.5"

6"

5"

4"

CCD
Spectr. Temp. ... -1.01... 3... °C

Dome Temp./Hum. ... -6.5°C / 52.3%

Transparency Conditions partly or mostly cloudy... glo.

Focus ... 6.95

@ top & page

N FAN ON → clear

Spectr. Temp.

Dome Temp./Hum. ... -7.6°C / 54.4%

@ mid page

425 0 50 1024 4 1 ccdfont

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60s not working				CASS CCD	1800 l/m G=4476	30µm	4300 Å ±1 Å	16 1			
1800	5"	B 6.33	F0					17 18	Dby F star	cloud on and off.	3K
1800	4-5"	"	"					19 20	"	thin cloud.	
1810	6"	"	"					21 22	"	clear but windier, wind died.	
0.067	5"	V 6.39	K0 III	EEU CCD TV GUIDER		above 30µm		—	Seeing test	Done W, med W wind clear now, -7.9°C / 52.2%	
0.173								—	"	should show some, snowing at T's nose	
1800	4"	B 6.75	F0p SAEW	CASS CCD again				25 6	Dby F star	no clouds at all - wind lying down. seeing improving	
1870	"	"	"					7 6	"		

97pg 3.

Date 1996 Jan 24/25 Observers Dky/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.
CC38489	Comp							FeAr Clear	60
90	HD62140	07 37 24	63 04 18	01 27 33		02 09 W			1810
91	Comp							"	60
92	Bias(4)								-
93	Comp							"	60
94	HD77601	08 58 30	48 55 40	02 16 10		1 39 W			1800
95	Comp							"	60
96	HD77601	"	"	02 49 22		2 12 W			1800
97	COMP							"	60
98	HD77601	"	"	03 23 55		2 47 W			1800
99	COMP							"	60
CC38500	BIAS(4)			03 57					-
01	COMP							"	60
02	HD8890	1 22 34	+88 46 26	04 17 20		9 58 W			120
03	"			04 20 15		10 00 W			120
04	"			04 23 13		10 04 W			180

CCD Spectr. Temp. ...

Focus.....

Spectr. Temp. ...

Exp. Mr. Seeing

CCD Spectr. Temp. -101.4 Dome Temp./Hum. $= 8.8^{\circ}\text{C} / 57.5\%$ Transparency Conditions ~~clear~~ clear 98

Focus 6.95

Spectr. Temp. Dome Temp./Hum. $-11.0^{\circ}\text{C} / 62.3\%$ @ mid-page.

N FAN STILL ON

425 6 50 10 24 4 1 00 FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Cambeta Emulsion	P.H.	Program	Remarks	Quality
60				CASS CCD	1800E/m G=4476	306 μ	4300 \AA 51 \AA	7			
1810		B 6.75	F0p Sr ₆					6	Dby F-Star		
60								7			
-								1			
60								8			
1800	—	5"-6" B 6.40	F6I-III					9	Dby F-Star		4.5K
60								10			
1800	—	5"	"					11	x1		3.8K?
60								8		spec. controller reset.	
1800	—	4"-5"	"					9	"		3.1K
60								10			
-								1			
60								13			
120		8" B 2.62	F7Ib -IIv					14	Dby F-star	tel on E side, sort of.	7K
120		"	"					15	"		7K
180		"	"					14	"		10.8K

99 pg #4

Date . 1996. January 24/25 Observers Dby / 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.
cc38505	COMP							Felr clear	60
06	COMP							"	"
07	HD45947	06 25 17	+73 46 22	04 35 23		6 28 W	40° Alt. @ end.		1835
08	COMP							"	60
09	HD45947	"	"	05 09 12		7 01 W	38° Alt @ end		1800
10	COMP							"	60
11	HD45947	"	"	05 43 00		7 34 W			1800
12	COMP							"	60
13	BIAS (4)			06 15					—
14	COMP							"	60
15	HD101107	11 33 01	+44 10 48	06 49 59		3 32 W			1200
16	COMP							"	60
17	BIAS (4)								—
18-27	FLAT x 10					+44°	3 34 W	Tung clear	33
28/29	INBOARD/ OUTBOARD					"	"	Felr clear	40/70

CCD
Spectr. Temp. ...
Focus... (1.25)
Spectr. Temp. ...

Exp. Mtr. Seeing

Not
working

— 5"

— 5"

— 5"

— 5"

CCD Spectr. Temp. -99.7°C Dome Temp./Hum. $-12.1^{\circ}\text{C}/62.9\%$ Transparency Conditions .. clear 100
 Focus 6.95
 Spectr. Temp. Dome Temp./Hum. $-13.6^{\circ}\text{C}/63.9\%$ @ focus test N FAN ON
 425 0 50 1024 4 1 ccd test

Comp. / Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	60	not working				CASS CCD	1800 μm G=4476	30 μm	4300 \AA	16			
	"									17			
1835		—	5" 6"	B 6.62	F2					18	Dby F star	tel on E side still	2.6K
60										19			
1822		—	5"	"	"					20	"		2.5K
60										21			
1810		—	5"	"	"					18	"		
60										19			
										1		CCD TEMP = -95°C TOP UP LW ₂ AFTER BIAS(4)	
60										23			
1200		—	5"	B 5.92	F2 II -III					24	Dby F star	Hartmann mask in rebound pos'n for 500s! DAWN.	
60										25			
										1			
33										2			> 11K
4070										3/4	focus test	T dropped 13° from start. probably horrible now.	

101
pg #1

Sun/Mon

Emulsion Batches:

Date 1996 January 28/29 Observers [Bin]/Tn/Smt.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc38530/ 31	INBOARD/ OUTBOARD							FeAr Clear	40/70
32	BIAS(4)			19 43					
33	Comp							FeAr Clear	60s
34	HD 214946	22 36 42	+4 29 00	19 47 10		5 54 W			2083 2083
35	Comp							n	60s
36	BIAS(4)			26 25					—
37	Comp							FeAr Clear	60s
38	HD 37017	5 30 25	-4 33 36	20 37 55		0 13 E			1860
39	Comp							"	60
40	COMP							"	60
41	ADS 4241 D HD 37468 D	5 33 42	-2 39 12	21 18 49		0 24 W			1800
42	COMP							"	60
43	BIAS(4)			21 51					—
44	ADS 4241 AB HD 37468 AB	5 33 44	-2 39 28	21 56 48		6 36 W			270
45	Comp								

CCD
Spectr. Temp. ...

Focus 7.04

Spectr. Temp. ...

Exp. Nr. Seeing

66 39
FILTERnot functioning
0 3not functioning
Fe. 4"to back
in house

5"

4"

CCD
 Spectr. Temp. ... -100°C Dome Temp./Hum. ... -5.0°C / 58.2% Transparency Conditions . just cleared @ 19:30... 102
 Focus 7.04 FANS ON, Then JUST NE FAN
 Spectr. Temp. Dome Temp./Hum. 425 0 50 1024 4 1 ccd/inst

Comparison / Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	4070	BG 39 FILTER				CASS CCD	1800blm G=4585	30μm	4462Å	3/4			
										1/2			
	60s									5			
	2083	not functioning : 0	3"	7.26	A5					6	S ₂ Bln		2.6K
	60s									7			
										1/2			
	60s									8			
	1860	not working so. due to buck imbalance.	4"	6.42	B2Vp					9	He-rich Bln	hot pixel on strongest column.	4.3K
	60s									10			
	60s									11			
	1860		5"	6.48	B2V					12	Bln Dbl star	seeing is deteriorating strongest col is 38	4.0K
	60s									13			
										1			
	270		4"	3.57	O9.5V					14	Bln Dbl star	D on slit, too. Not noticeable	6.4K
										15			

103
Pg #2

Date 1996. January 28/29 Observers [Blm]/Th/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.
cc38546	COMP							FeAr clear	60
47	HD 34759	5 14 44	+41 42 17	22 10 46		1 30 W			1653
48	COMP							"	60
49	COMP							"	60
50	HD 84441	9 40 11	+24 14 05	22 50 17		2 39 E			171
51	COMP							"	60
52	BIAS(4)			22 58					
CG80322/25	HD 57263	17 15 24	+39 11 05	23 17				4 x	67ms
CG80326/27	"					0 10 W		2 x	133ms
cc38553	COMP							FeAr clear	60
54	HD 120315	13 43 36	+49 48 45	23 40 17		5 51 E			62
55	COMP							"	60
56	COMP							"	"
57	HD 154528	17 00 54	+77 48	23 38 05 23 56 37		7 54 E 8 16 E			600
58	COMP							"	60
59	f								

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

Exp. Mtr. Seeing

B6 39
FILTER

not
3-4'

0

3-4'

3-4'
had to
tell.

CCD Spectr. Temp. $-1.00 \dots 7.00 \dots$ Dome Temp./Hum. $-7.3^\circ\text{C} / 63.6\%$ Transparency Conditions \dots Cirrus cloud \rightarrow clear to 104
 Focus $\dots 7.04 \dots$ N FAN ON thick cloud @ 020
 Spectr. Temp. \dots Dome Temp./Hum. $-7.9^\circ\text{C} / 65.2\%$ after seeing test
 425 0 50 1024 4 1 CCD.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B6 39 FILTER but not working	3"-4"	5.09	B5V	CASS CCD	1800 λ/mm G=4585	30 μm	4462A	16			MAX
								17	Bln	increasing cloud	5.5K
								18			1K
								19			
0		2.98	G1II					20	std vel		5.3K
								21			1.1K
								1/2			
	3"-4"	6.39	K0III	ALT=85° CCD CCD TUGUI DER		above 30 μm		-	Seeing test	no wind Dome West.	
								22			
	3"-4" hard to tell.	1.86	B3V					23	Bln		
								24			
								25			
		6.66	A0					26	Bln SBZ	ARGH! LOST 1st EXPOSURE STUPIDLY BY REMOVING CHIP TWICE! cloudy now useless exposure - all Snd's fault.	bias.
								27			

107

Tues/Wed

Emulsion Batches:

Date 1996 JAN 30/31..... Observers Vys. p.m.; 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.
CC38571/72	Inboard / out board								
73	BIAS(4)								
74	Comp							Fe4r clear	60s
75	AC+1120403	02 3856	+10 3207	183234		0 20W			615
76	Comp							"	60s
77	Comp							"	60s
78	HD 36395	5 2618	-03 4100	18 5648		2 01 E			774
79	Comp							"	60s
80	BIAS (4)								
81/89	FLATS x 9					1 44E	-1 44	TUNG Hp 1/4	9s
90	(BIAS(4))								
91	Comp							Fe4r clear	60s
92	Vys 25	9 0556	+27 39	00 1720		0 14E			945
93	Comp							Fe4r clear	60s

1950 + 50gr Pr motion
~~2350~~

Exp. Mtr

Seeing

Spectr. Temp. ...

Spectr. Temp. ...

no filter

T = -10.0°C

34"

540 34"

100 44"

CCD Spectr. Temp. -100.2°C Dome Temp./Hum. -9.3°C 55.0%
 Focus 6.95 Transparency Conditions *Part cloudy* 108
 Spectr. Temp. Dome Temp./Hum. -11.3°C 65%
between mostly cloudy
 475 0 50 1024 4 1 CCD/FMT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1800/4mm (2-6022)	306	6500	3/4	focus test	set for slightly cooled	MAX ADU
		F=6.95							That	Hot pixel Row 194 Right on major computer line	15K
	3-4"	10.98	M0					6	Vys pgm	(Hx em 170 mag above bias)	
								7			
								8			
540	3-4"	7.97	M1					9	Vys 9 marcy silver	thin cloud	256 above bias
								10			
								11/2			
								11			12K
								11/2			
400	4"	9.15	M (and looks it too)					14	Vys pgm	(not the brightest of a close pair) Field drawn 70/1 S/N	500 above bias
								15		Brighter star looks much more blue	1.5K
									Thon snow		

109
Pg#1

Wed/Thurs

Date 1996 JAN 31 / FEB 1. Observers Ody / Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 385 ⁹⁴ / ₉₅	inboard/outboard			20 27		0 03E	+10 12	REA check	40/70
96	Bias(4)								
97	COMP							REA clean	68
98	HD 36673	05 28 19	-17 53 38	20:38:50	00 26 E	00 26 E			108s
99	"	"	"	20:41:29		00 23 E			113s
CC 38600	"	"	"	20:43:41		00 22 E			101
01	Comp							"	60s
02	Comp							"	60s
03	HD 45947	6 25 17	+73 46 22	21 08 19		0 41 E			1400
04	Comp							"	60s
05	HD 45947	"	"	21 34 49		0 19 E			1400
06	COMP							"	60s
07	HD 45947	"	"	22 01 10		0 12 W			1460
08	Comp							"	60s
09	Bias(4)			22 25					
10	Comp							"	60s

CCD
Spectr. Temp. ...

Focus ... 7.14

Spectr. Temp. ...

Exp. Mtr. Seeing

8639
F149

2100

2400

18200

9770 3"

9390 2.5"

9500 "

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. -12.2°C $54\% \text{RH}$ Transparency Conditions .. mostly clear now... 110

Focus $f.14$ 90cm of course

Spectr. Temp. Dome Temp./Hum. 425 050 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				CASS CCD	1800 μm G=4480	306 μ	4300A ²		Focus test	set cooler for repeat big Temp drop	MAX N/A
								1/2			
								5			
12100		B2.7	FO1b					6	Oby Std.	(Hot pixel was the 9th max) = 3 8 K	
12400		"	"					6	"	= 3 1 K	
12200		"	"					6	"	s/7 200/1 S/N	3.2K
								7			1.1K
								8			.8K
9,270	3"	6.62	F2					9	Oby pgm	> 200/1 S/N	3.2K
								10			.78K
9,330	2.5"	6.62	F2					11	"		
								12			
9,500	"	"	"					13	"		
								14			
								1/2			
								14			

pg. 2 Wed/Thurs.
1/1

Emulsion Batches:

Date 1996 Jan 31 / Feb 1 Observers Dby / Tn

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CCD
Spectr. Temp. ...
Focus ... 7.4 ...
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc38611	HD65301	07 52 58	59 19 08	22 32 54		00 46 E			1000s
12	Comp							FeAr Clear	60
13	HD65301	07 52 58	59 19 08	22 53 01		00 25 E			1000s
14	Comp							"	60s
15	HD65301	07 52 58	59 19 08	23 13 02		00 02 E			1000s
16	Comp							"	60s
17	Bias (4)			23 32					
18	Comp							"	60s
19	HD77601	08 58 30	48 55 40	23 37 39		00 48 E			800s
20	Comp							"	60s
21	HD77601	08 58 30	48 55 40	23 54 27		0 34 E			700s
22	Comp							"	60s
23	HD77601	8 58 30	+48 55 40	00 09 08		00 16 E			700s
24	Comp							"	60s
25	Bias (4)			00 28					
26	Comp			X				"	60

Exp. Mir. Seeing
102.00
67.00
106.00
102.00
103.00
300 3

CCD Spectr. Temp. ... -10.2°C ... Dome Temp./Hum. ... -13.9°C 61.3% H Transparency Conditions . Thin cloud only 112

Focus ... 7.14

Spectr. Temp. Dome Temp./Hum. ... -14.6°C 62.5% H

C lambda

425 0 50 1024 4 1 ccd fnt MAX

Comparison Wavelength Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000s 60	10200		B 6.16	F2V	CHSS CCD	1800 lines/mm G=4480	306 μ	4300A	15	Dby Pgm		
1000s 60s	10700		B 6.16	F2V					17	Dby Pgm	> 200/1 S/N	
1000s 60s	10600		B 6.16	F2V					18		?	
									19	Dby Pgm		
									20			
									1/2			
									20			
800s 60s	> 10200		B 6.40	F6II-III					21	Dby Pgm		
	Exposure mtr off for short time. (Balanced now)								22			
700s 60s	10300	2.3"	B 6.40	F6II-III					23	Dby Pgm		
									24			800nm
700s 60s	10300	3	G.40	F6II-III					25	"		
									26			
									1/2			
									26			

pg. 3 Wed/Thurs.

113

Date 1996 Jan 31 / Feb 1 ... Observers Dby./Tn

Emulsion Batches:

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CCD Spectr. Temp. ...
 Focus ... 7:14.
 Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC38627	HD61035	07 32 11	24 35 05	00 32 44		1 43 W			1400s
28	Comp							FAr Clear	60s
29	HD61035	07 32 11	24 35 05	00 59 26		2 10 W			1400s
30	Comp						"	"	"
31	HD61035	07 32 11	24 35 05	01 26 33		2 37 W			1400s
32	Comp						"		60s
33	Bias (4)			01 50					
34	Comp						"		60s
35	HD61295	07 33 30	32 14 20	02 01 47		3 10 W			1300s
36	Comp						"		60s
37	HD61295	07 33 30	32 14 20	02 26 39		3 35 W			1300s
38	Comp						"		60s
39	HD61295	07 33 30	32 14 20	02 51 56		4 00 W			1300s
40	Comp						"		60s
41	Bias (4)			03 20					
42	Comp						"		60s

Exp. Mtr. Seeing
 B639P
 10300 2-3"

1150

1100

2800

1500

100

CCD Spectr. Temp. ... -10.1: 3°C ... Dome Temp./Hum. -14.8°C / 63.6% Transparency Conditions Clear 114

Focus ... F: 1.4

Spectr. Temp. Dome Temp./Hum. -15.5 / 66.9%

425 0 50 1024 4 1 ccd-fmt

Max. Adv.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter 10300	2-3"	B 6.24	F0	CASS CCD	1800 Lyman G=4480	306μ	4300Å C lambda	27	Dby Pgm	bright Moon overhead	3.6K
								28			
11150		B 6.24	F0					29	"		
								8			
11100		B 6.24	F0					9	"		
								10			
								1/2			
								10			
2800		B 6.52	F6II					11	"		
								12			
11500		B 6.52	F6II					13	"		
								14			
9900		B 6.52	F6II					15	"	clouds moving in.	
								16			
								1/2			
								16			

pg. 4 Wed/Thurs
115

Date 1996 Jan 31 / Feb 1 Observers Dby / Tn

Emulsion Batches:

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CCD
Spectr. Temp. ...
Focus ... 7.14 ...
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC38643	HD 83808	09 35 49	10 20 50	03 22 18		2 10 W			2005
44	"	"	"	03 26 06					"
45	"	"	"	03 30 08		2 19 W			"
46	Comp							Felt clear	60s
47	Comp							"	"
48	HD 96707	11 03 19	+67 46 09	03 44 46		1 18 W			1013
49	Comp							"	60s
50	HD 96707	"	"	04 05 06		1 39 W			1056
51	Comp							"	60s
52	HD 96707	"	"	04 26 56		2 2 W			1078
53	Comp							"	60s
54	Bias (4)			~04 45					
55	Comp							"	60s
56	HD 101107 HD 101107	11 33 01	44 10 48	04 56 17		01 54 W			6005
57	Comp							"	60s

Exp. Mtr. Seeing

1100 1100

1400

14700

11,008 253

1100 3'

11200

10900

CCD Spectr. Temp. ... -102.0°C ... Dome Temp./Hum. -15.6°C ... 67.5% / Transparency Conditions .Cloudy. p.497.1g.....166..

Focus ... 7.14

Spectr. Temp. Dome Temp./Hum. 425 0 50 1024 4 1 ccdfrnt MAX

Com. Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion c lambda	P.H.	Program	Remarks	Quality
	200s	BG39 11000		B 4.01	F6II+AIIV	CASS CCD	1800 2/mm G=4480	306μ	4300A	17	Dby Pgm		
	"	14000		"	"					19	"		
	"	14700		"	"					21	"		5A
	60s									22			
	100s	11,008	2-3"	B 6.28	FOP Sr					23	Dby Pgm		
	60s									24			970
	100s	11100	3"	"	"					25	Dby Pgm		
	60s									26			
	100s	11200		"	"					27	Dby Pgm		
	60s									28			
	60s									1/2			
	60s									28			
	60s	10900		B 5.92	F2II-III					9	Dby Pgm		
	60s									10			

pg. 5 Wed/Thurs.

117 Date 1996 Jan 31 / Feb. 1 Observers Dby./Tn

Emulsion Batches:

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CCD
 Spectr. Temp. ...
 Focus ... 7.14
 Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc 38658	HD101107	44 10 48	11 33 01	05 09 23		2 08 W			600s
59	Comp							FeAr Clear	60s
60	HD 101107	"	"	05 24 26		2 22 W			600s
61	Comp							"	60s
62	Comp							"	60s
63	HD89025	10 11 08	+23 54 57	05 41 42		3 54 W			120s
64	HD 89025	"	"	05 44 14		3 56 W			120s
65	"	"	"	05 46 49		3 59 W			160
66	Comp							"	60s
67	Bias(4)								
68	Comp							"	60s
69	HD 111812	12 46 50	28 05 06	05 57 20		1 39 W			400s
70	"	"	"	06 04 31		1 46 W			400s
71	"	"	"	06 11 42		1 53 W			400
72	Comp							"	60s
73	Comp							"	"

Exp. Mtr. Seeing

8634

10700

0100

1200

2400

12400

600

1200

200

CCD
 Spectr. Temp. Dome Temp./Hum. $-15.4^{\circ}\text{C}/67.5\%$ Transparency Conditions *Partly Cloudy*

Focus 7.14

118

Spectr. Temp. Dome Temp./Hum. 425 0 50 1024 4 1 ccdfnt MAX

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		BG39 10700		B 5.92	F2II-III	CASS CCD	1800 ℓ /mm G=4480	306 μ	C. Lambda 4300 \AA	11	Dby Pgm		
	60s									12			
	60s	10100		"	"					13	"		
	60s									14			
	60s									14			
	120s	12200		3.75	F0III					15	Dby std		
	120s	12400		"	"					"	"		
	160	12400		"	"					"	"		
	60s									16			
										1/2			
	60s									16			
	400s	10600		B 4.61	G0III					17	Dby Std		
	160s	10600		"	"					"	"		
	60	11200		"	"					"	"		
	60s									18			
	"									18			

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pg #6

Wed / Thurs

Date 1996 JAN 31 / Feb 1.... Observers Dby / Jn.....

Emulsion Batches:

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Spectr. Temp. ...

Focus 7/1

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 38674	HD 8890	1 22 34	+88 46 26	6 37 30		11 29 E			50s
75	"	"	"	6 38 56					60
76	"	"	"	6 40 22		11 26 E			50s
77	Comp							FeAr Clear	60s
78	Bias (4)								
CG 80 328/31	HD 144579	16 01 30	+39 29 00	6 55				4 x 67ms	
32/33	"					0 40 E		2 x 133ms	
CC 38679/80	in board/out board		HART			0 35 E	+39°		40/70
CC 38681/90	FLATS x 10					"	"	TUNG Clear	33s

Exp. Mtr.

Seeing

R900

13200

13200

AL

3'

Spectr. Temp. Dome Temp./Hum. = -15.7°C. 67%⁸ Transparency Conditions 120
 Focus 7.14
 Spectr. Temp. ^{CCD} -10.7°C Dome Temp./Hum. -15.6°C

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50s	13900		262	FT16-II	^{e455CCD}	1800 l/m G=4480	306u	4300A	19	Phy pgm		
60	13200								19			
50s	13200								19			
60s												
67ms			ALT = 80°		Above		306u slit				See in test sky coming on <u>bright</u>	
2x 13s			3° 6.66	G8V							"	
33s									30/31	focus		
									2			134K

pg #1 February 1/2
 12 Date 1996 ~~January~~ Observers {Vys} / Smt

Emulsion Batches:

(C)
 Spectr. Temp. ...
 Focus 7.0
 Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc38691/92	INBOARD/ OUTBOARD							F ₄₅₀ clear	20/30
93	BIAS x4 x4			18 57				"	—
94	COMP							"	20
95	HD1326	0 12 42	+43 27	18 59 15		3 21 W			700
96	COMP							"	20
97	COMP							"	"
98	AC-4 2410-76	03 02 34	-04 21 13	19 20 36		1 18 W			2100
99	COMP							"	"
cc38700	BIAS x4			19 58					—
01	COMP							"	20
02	AC+11 20-183	02 38 56	+10 32 07	20 05 52		2 41 W			3000
03	COMP							"	20
04	BIAS x4			20 58					—
05	COMP							"	20
06	AC+17 449-111	03 38 05	+16 21 12	21 04 20		2 25 W			2100
07	COMP							"	20

Exp. Mtr. Seeing

No filter

3810 2"

1100 2"

215 2.5"

142 1.5"

CCD
Spectr. Temp. -100.0°C

Dome Temp./Hum. $-10.7^{\circ}\text{C}/56.1\%$
@ focus test

Transparency Conditions a few scattered clouds.....
bright moon rising: 100

Focus 7.03.....

Spectr. Temp.

Dome Temp./Hum.

422 0 50 1024 4 1 ccdint

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Max Quality
no filter				CASS CCD	1800 l/mm G=515A	30 μ m	5302A $\pm 1\text{\AA}$	3/4 1	focus test	spec. controller resets forgot to unwrap 2 nd mag mirror blat.	
3810	2"	V 8.07	M1Ve					6	Marcy Std Vel {Vys} RV	Vys 85A	3.9K
1100	2"	V 10.5	MO					9	{Vys} RV	Vys 413, never observed by	~300 above blg
1215	2"-3"	V 10.98	MO					12	{Vys} RV	Vys 401A, never observed by	B is very faint to see (~20 arc sec) 500 above blg
1262	2"-3"	V* 11.1	MO					15	{Vys} RV	Vys 428B *seems brighter ~10", A seems brighter, too	A is much brighter to see no published RV, 500 above blg

123
Pg #2

Date 1996 February 1/2 Observers {Vys}/Smt.....

Emulsion Batches:

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Spectr. Temp. ...

Focus.....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc38708	BD+16 502	03 38 12	+16 21 30	21 44 01		2 57 W			1630
09	COMP							Fene clear	20
10	BIASx4			22 14					—
11	COMP							"	20
12	HD36395	05 26 18	-03 41	22 21 02		1 35 W			975
13	COMP							"	20
14	COMP							"	20
15	BD+02 1729	07 34 11	+02 24 52	22 48 27		0 0			1300
16	COMP							"	20
17	BIASx4			23 12					—
18	COMP							"	20
19	AC+36 28826	08 22 03	+35 21	23 24 23		0 01 E			2000
20	COMP							"	20
21	BIASx4			0 02					—
22-26	FLAT x 5					0 09 W	+35°	Tung KAP	6
27/28	INBOARD/OUTBOARD			~ 0 54		"	"	Fene clear	20/30

Exp. Mtr. Seeing

560 2.3"

290 3"

580 2.3"

400 2"

to not

to not

Spectr. Temp. -100.4°C Dome Temp./Hum. $-12.9^{\circ}\text{C}/61.3\%$ Transparency Conditions .. clear... enough, fullish. moon right overhead. 124
 Focus 7:03
 Spectr. Temp. Dome Temp./Hum. $-12.8^{\circ}\text{C}/59.7\%$ @ flats. 422 0 50 1024 4 1 ccd flat.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1630		1560	2-3"	V* 10.3	MO	CASS C/D	1800 ℓ/mm G=5158	3den	5302 Å $\pm 1 \text{ Å}$	17	{Vys} RV	no pub RV, Vys 428A, *seems about V=9" B seems ~1" brighter as well	700 above 6" ℓ/mm
20										18			
-										1			
20										19			
975		4290	3"	V 7.97	M1					20	Many stars {Vys} RV	Vys 9	2.6K
20										21			
20										22			
1300		1580	2-3"	V 9.6	MO					23	{Vys} RV	Vys 503, near bright moon.	800 above 6" ℓ/mm
20										24			
-										1			
20										25			
2000		1400	2"	V 10.7	MO					26	{Vys} RV	Vys 253AB near moon, some thin cloud canopy lots of solar	<300 above 6" ℓ/mm
20		rest of target to rec'd until 260s had passed.								27			
-										1			
20										28		flats show dust on slit.	1.8K \rightarrow 11.3K
213										24/30	focus test	cloud too thick then clear later \rightarrow	

125
pg #3

Date 1996 February 1/2 Observers {Vys3/Smt}.....

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC38729	COMP							Fene clear	20
30	BD -08 2689	09 23 57	-08 49 46	1 28 41		1 03 W			2005
31	COMP							"	20
32	BIAS x 4			2 07					—
33	COMP							"	20
34	BD +01 2447	10 23 49	+01 21 36	2 08 35		0 24 W			900
35	COMP							"	20
36	COMP							"	"
37	BD -01 322	10 06 59	-02 10 56	2 30 22		1 18 W			1800
38	COMP							"	20
39	BIAS x 4			3 12					—
CG80334 → 37	HD 103095 x 4	11 47 13	+38 26 10						.067
38/39	" x 2				3 09	0 13 E	Alt 83°		.133

Exp. Mtr. Seeing

1200 2"

100 2.3"

1000 3"

2"

CCD Spectr. Temp. = 100.4°C.....

Dome Temp./Hum. = 13.0°C/58.9%

Transparency Conditions pretty clear...hazy, moon...126

Focus 7.03.....

setting now.

Spectr. Temp.

Dome Temp./Hum. = 13.1°C/59.0%
@ seeing test.

FANS OFF

422 0 50 1024 4 1 ccd fast.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/m G=5158	30µm	5302 Å	5			
1200	2" → 4"	10.52	M0					6	{Vys} RV	Vys 268, hazy here	360 above vlg
								7			
								8			
1100	2-3"	9.65	M2					9	Marcy-Benitez {Vys} RV Std.	Vys 127, hazy (slightly)	370 above vlg
								10			
								11			
1080	3"	10.6	M0					12	{Vys} RV	Vys 568, hazy.	250 above vlg
								13			
								1			
	2"	6.45	G8Vp	EEV CCD N GUIDER		above 30µm		-	seeing test	Dome SW, medium SW wind, a few clouds, moon setting now, very good for winter.	
	"	"	"					-	"		

pg #1

Date 1996 Feb 23 Observers Ddy/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.
CC38740/41	INBOARD/ OUTBOARD			18:11	18:15	0 ^h	~+40°	FedAr clear	40/70
42/43	"					0 ^h	+43°	"	"
44	BIAS(4)			02 27					—
45	COMP							"	60
46	HD83808	9 35 49	+10 20 50	02 38 16		1 34 W			200
47	"	"	"	02 42 01		1 38 W		+	200
48	"	"	"	02 45 36		1 42 W			200
49	Comp							"	60
50	COMP							"	60
51	HD77601	8 58 30	+48 55 40	02 58 36		2 42 W			900
52	COMP							"	60
53	HD77601			03 16 52		3 02 W			924
54	COMP							"	60
55	HD77601			03 35 01		3 17 W			800
56	COMP							"	60
57	BIAS(4)								—

Exp. Mir. Seeing

Spectr. Temp. ...

Focus 7.1

Spectr. Temp. ...

Exp. Mir. Seeing

Bg. 39

FILTER

11.7K 8"

1.9K "

12.9K "

10.4K 7"

1.3K 6.5"

1.1K 4.5"

CCD
Spectr. Temp. -100.4°C

Dome Temp./Hum. -17.5°C/55.4%
@ 2nd focus test

Transparency Conditions just cleared, hazy... 128.

Focus 7.14

FANS ON (2 o'clock clear)

Spectr. Temp.

Dome Temp./Hum.

422 0 50 1024 4 1 ccd/fit.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 λ m G=4479	30 μ m	4300 \AA $\pm 1\text{\AA}$	3/4	focus test	T=-12.2°C, F=7.10 set just a bit cool, dome closed	
"								3/4	"	in focus, dome open for a bit.	
								1			
								5			
11.7K	8"	B 4.01	F6II +A1V					6	Dby F star	S/N ~ 200:1	3.2K
11.9K	"	"	"					7	"	"	3.2K
12.9K	"	"	"					6	"	S/N ~ 210:1	3.5K
								8			
								9		S FAN OFF NOW	
10.4K	7"	B 6.40	F6II -III					10	Dby F star	S/N ~ 195:1	3.2K
								11			
12.3K	6"-5"	"	"					12	"	S/N ~ 195 215:1	4.0K
								13			
11.1K	4"-5"	"	"					12 13	"	readout on wrong code S/N=195: led dit time-outs	3.8K
								13	"		
								1			

129
Pg #2

Date 1996 February 2/3

Observers Dby / Smt

Emulsion Batches:

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Spectr. Temp. ...

Focus 7

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
" 38758	COMP							Felt Clear	60s
59	HD96707	11 03 19 67 45 09	67 45 09	03 58 39		1 45 W			1300s
60	Comp							"	60s
61	HD96707	"	"	04 24 14		2 10 W			1300s
62	Comp							"	60s
63	HD96707	"	"	04 49 24		2 36 W			1300
64	Comp							"	60s
65	Bias (4)			5 14					—
66	COMP							"	60
67	HD101107	11 33 01	+44 10 48	05 21 37		2 33 W			900
68	COMP							"	60
69	HD101107			05 39 17		2 51 W			965
70	COMP							"	60
71	HD101107			05 58 13		3 10 W			965
72	COMP							"	60
73	Bias (4)			6 20					

Exp. Mir.

Seeing

1.2K

1.5K

0.7K

1.3K 5.6"

1.2K

1.1K 5"

Spectr. Temp. -100.5°C

Dome Temp./Hum. $-18.0^{\circ}\text{C} / 56.9\%$

Transparency Conditions *clear. \rightarrow hazy., moon over*

Focus 7.14

N FAN ON *way down*

Spectr. Temp.

Dome Temp./Hum. $-18.4^{\circ}\text{C} / 58.4\%$
@ 1st bias (4)

422 0 50 1024 4 1 *ccd fast*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 lines G=4479	30 μm	4300 \AA	14			
12K		B 6.28	F0pSr					15	Dby Fstar		
								16			
11.5K		"	"					17	"		
								18			
10.7K	6"	"	"					19	"		3.9K
								20			
								1			
								21			
11.3K	5-6"	B 5.92	F2 II - III					22	Dby Fstar		3.5K
								23			
11.2K	6"	"	"					24	"		3.2K
								25			
11.1K	5"	"	"					26	"		3.4K
								27			
								1			

13th #3

Date 1946 February 2/3 Observers Dby / Smt

Emulsion Batches:

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CCO
 Spectr. Temp. ...
 Focus 7.1
 Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CG 80340-43	HP 128718 x 4	14 33 24	+48 39			0			.067
44/45	" x 2				6 24	0 21 W	Alt 84°		1133
CC 38774	COMP							Fear clear	60
75	HD 89025	10 11 08	+23 54 57	06 36 40		4 57 W			180
76	"			06 40 13		5 01 W			180
77	"			06 43 31		5 04 W			180
78	COMP							"	60
79	COMP							"	"
80	HD 111812	12 46 50	+28 05 06	06 52 33		2 43 W			430
81	COMP							"	60
82-91	FLAT x 10					2 47 W	+28°	Tung clear	33
92/93	INBOARD/OUTBOARD					0 0	"	Fear clear	40/70

Exp. Mtr. Seeing
 5"
 4.5"
 4"
 11.9K
 12.4K
 12.4K
 10.3K
 4"

CCD Spectr. Temp. -102.0°C ... Dome Temp./Hum. $-19.8^{\circ}\text{C}/62.3\%$ Transparency Conditions *hazy, moon behind trees. but sun coming Pd*
 Focus 7.14 ... @ seeing test end.
 Spectr. Temp. ... Dome Temp./Hum. $-20.1^{\circ}\text{C}/63.5\%$ @ ~~focus~~ *focus* 4220 50 1024 4 1 codfnt.

Com. Filter	Exp.	Exp. Mir.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	1133		5"	V 6.7	F2	CCD EAV CCD		above 30 μm	-	-	seeing test	Done WNW, no wind, hazy, cold snap! Bad seeing	
	60	BG 39 FILTER	4-5"			TV GUIDER					"	N FAN ON but improving blg probably high	
	180		4"	B 3.75	F0III	CASS CCD	1800 μm G=4479	30 μm	4300 \AA	28			
	180	12.4K	4-5"	"	"					29	Dby Sp. Std		3.7K
	180	12.4K	4"	"	"					30	"		3.5K
	180	11.9K	"	"	"					29	"		
	60									31			
	"									5			
	430	10.3K	4"	B 4.61	G0III					6	Dby Sp Std	sky getting bright.	3.0K
	60									8			
	73									2			12.5K →12.2K
	40/12									3/4	focus test	end of night, didn't check	

133#1

Date 1996 February 3/4 Observers Dby/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 38794/95	INBOARD/ OUTBOARD							Fed clear	40/70
96	BIAS(4)			19 02					—
97	COMP							"	60
98	HD 216131	22 45 11	+24 04 25	19 18 58		5° 15 W (PLATFORM)			564s
99	Comp							"	60s
CC 38800-809	Comp FLAT x 10					(PLATFORM) 0	-34°	Tung clear	33
10	BIAS(4)			20 16					—
11	COMP							Fed clear	60
12	HD 29737	04 35 57	-24 40 40	20 19 28		0 49 W			2000
13	COMP							"	60
14	BIAS(4)			21 00					—
15	COMP							"	60
16	HD 20902	3 17 11	+49 30 19	21 03 57		2 18 W			60
17	"			21 05 24		2 19 W			60
18	"			21 06 54		2 20 W			60
19	COMP							"	"

Spectr. Temp. ...

Focus

Spectr. Temp. ...

Exp. Mtr. Seeing

3K 3"

FLAT

7K 4"

1K 5"

3K 3"

K

2K

CCD Spectr. Temp. -100.5°C

Dome Temp./Hum. $-14.4^{\circ}\text{C}/62.0^{\circ}\text{C}$

Transparency Conditions $1/4$ thin cloud, was snowing. 134

Focus 7.14

@ focus test

FANS OFF \rightarrow clear \rightarrow cloud \rightarrow clear
full moon

Spectr. Temp.

Dome Temp./Hum.

422 0 50 1024 4 1 CCD/fit

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 λ / G=4479	30 μm	4300 λ	3/4	focus test	set a bit cool but dropping to record low overnight	
								1			
								5			
7K	4"	B 4.41	G8III					6	Dby Sp Std	getting close to platform clouded out.	
								7			
								8			13.9k \rightarrow
								1		SNOW, dome closed clear again, opened up	
								9			
10.1K	5"	B 6.50	G6III					10	Dby Sp Std	heavy refraction.	
								11			
								1			
								12			
23K	3"	B 2.27	F5Ib					13	Dby Sp Std		10.6K
24K	\downarrow	\downarrow	\downarrow					14	"		
27K	\downarrow	\downarrow	\downarrow					15	"		
								16			

135
Pg #2

Date 1996 February 3/4 Observers D. by / 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.
CC38820	COMP							FeAr clear	60
21	HD45947	06 25 17	+73 46 22	21 15 28		0 19E			1600s
22	COMP							"	60
23	HD45947	"	"	21 45 29		0 11 W			1605s
24	COMP							"	60
25	HD45947	"	"	22 15 42		0 42 W			1600s
26	Comp							"	60s
27	Bias(4)			22 45					
28	Comp							"	60s
29	HD8890	01 22 34	+88 46 26	22 58 11		5 19 W			90
30	"			23 00 16		5 21 W			90
31	"			23 02 17		5 23 W			90
32	COMP							"	60
33	Comp							"	60s
34	HD62140	7 37 24	63 04 18	23 14 26		0 31 W			1600s
35	Comp							"	60s

Exp. Mtr. Seeing
Spectr. Temp. ...
Focus 7.11
Spectr. Temp. ...

Exp. Mtr. Seeing

8639
FILTER

0.3K 3-4"

0.9K

1.1K

0.75K 3-4"

0.7K

0.7K

1K

CLD Spectr. Temp. -100.4°C Dome Temp./Hum. $-16.5^{\circ}\text{C}/58.9\%$ Transparency Conditions *clear, full moon* 136..

Focus 7.14

FANS OFF

Spectr. Temp. Dome Temp./Hum.

422 0 50 1024 4 1 ccd/mnt.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	60	B6 39 FILTER				CASS CCD	1800 λ mm G=4479	306 μ m	4300 \AA	17			
	1675	10.3K	3"-4"	^B 6.62	F2					18	Dby F star		
	60									19			
	1605	10.9K		"	"					19	"		
	60									20			
	1602	11.1K		"	"					21	"		
	60									22			
										1			
	60									23			
	90	27.5K	3"-4"	^B 2.62	F7Ib-IV					24	Dby F star	telescope reversed, sent of.	
	90	27.7K	"	"	"					25	"		
	90	27.3K	"	"	"					26	"		12.7K
	60									27			
	60									28			
	1600	10.1K		^B 6.75	FOpSrEu					29	Dby F Star		
	60									30			

Date 1996 Feb. 3/4... Observers Dby./Smt.....

Emulsion Batches:

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

Focus 7.14

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 38836	HD 62140	7 37 24	63 04 18	23 44 37		1 03W			1600S
37	Comp					1 03W	Fe Ar Clear	60s	
38	HD 62140	"	"	00 15 46		1 34W			1600S
39	Comp						"	60s	
40	Bias (4)			00 45					
41	Comp						"	60s	
42	HD 61295	7 33 30	32 14 20	00 57 05		2 18W			1400S
43	Comp						"	60s	
44	HD 61295	"	"	01 23 35		2 44W			1400S
45	Comp						"	60s	
46	HD 61295	"	"	01 50 04		3 12W			1400
47	Comp						"	60	
48	Bias (4)			2 16					
49	COMP						"	60	
50	HD 61035	07 32 11	424 35 05	2 22 01		3 52 W			1800

Exp. Mtr.

Seeing

BE 34
Filter
10-1K

10-2K

10-4K

10-1K

0.3K 5"

10-4K 1-1"

CCD Spectr. Temp. -102.5°C

Dome Temp./Hum. -17.9°C/.62%

Transparency Conditions clear, full moon 135

Focus 7.14

Fans off

Spectr. Temp.

Dome Temp./Hum.

422 0 50 1024 4 1 ecdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter 10.1K		F0pSr ^B 6.75		CASS CCD	1800 l/mm G=4479	306μ	4300Å	5	Dby Pzom		
								7			
10.2K		^B 6.75	F0pSrEu					8	"		
								9			
								1			
								11			
10.4K		^B 6.52	F6II					13	Dby F Star		
								12			
10.1K		"	"					14	"		
								16			
10.3K	5"	"	"					15	"		3.0K
								16			
								1			
								17			
10.4K	4'-7"	^B 6.24	F0					18	Dby F star	variable seeing	

139
Pg #4

Date 1996 February 3/4 Observers Dby. / 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.
CC38851	COMP							Fear clear	60
52	HD61035	07 32 "	+24 35 05	02 55 31		4 25W			1800s
53	COMP							"	60
54	HD61035	"	"	03 28 35		5 06 W			2250
55	COMP							"	60
56	Bias(4)			~ 04 10					
57	Comp							"	60s
58	HD 83808	09 35 49	+10 20 50	04 16 27		3 16 W			150
59	"			04 19 30		3 19 W			150
60	"			04 22 21		3 22 W			150
61	COMP							"	60
62	COMP							"	"
63	HD77601	08 58 30	+48 55 40	04 33 22		4 19 W			800
64	COMP							"	60
65	HD77601			04 50 06		4 37W			840s
66	Comp							"	60

CCD
Spectr. Temp. ...

Focus?

Spectr. Temp. ...

Exp. Mtr. Seeing

36.39
FILTER

0.1K 4"

0.00K 4"

10.9K 4"

11.7K "

10.8K "

1.2K 4"

0.3K

CCD Spectr. Temp. -101.9°C Dome Temp./Hum. $-18.9^{\circ}\text{C}/62.0\%$ Transparency Conditions *clear, full moon setting now*
 Focus 7.14 FANS OFF 140
 Spectr. Temp. Dome Temp./Hum. $422\ 0\ 50\ 1024\ 4\ 1\ \text{ccd}\ \text{bit}$

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60	BG 39 FILTER				CASS CCD	1800 λ/mm G=4479	30 μm	4300 \AA	19			
1800s	10.1K	4-6"	B 6.24	F0					20	Dby F star		
60									22			
2250	10.00K	5-6"	"	"					21	"		
60									23			
									1			
60s									27			
150	10.9K	4"	B 4.01	F6 II + A1 V					24	Dby F star		
150	11.7K	"	"	"					25	"		
150	10.8K	"	"	"					26	"		3.2K
60									28			
"									7			
800	10.2K	4"	B 6.40	F6 II - III					8	Dby F star		3.2K
60									9			
840	10.3K	"	"	"					10	"		
60									11			

pg. 5
141

Date 1996 Feb. 3/4 Observers Dby./Smt.

Emulsion Batches:

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.....
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CCD
Spectr. Temp. ...
Focus ... 7:14
Spectr. Temp. ...

Plate No.	Object	R.A. 1900		Declination 1900		Starting Time E.S.T.		Ending Time E.S.T.		Hour Angle End		Declination		Comparison Type/Filter Exp.	
CC 38867	HD77601	08	58	30	48	55	40	05	07	28					870s
68	Comp													Fe Ar Clear	60s
69	Bias(4)							5	25						—
70	Comp													"	60s
71	HD89025	10	11	08	+23	54	57	05	30	19					120
72	"							05	32	50					130
73	"							05	35	35					140
74	COMP													"	60
75	COMP													"	"
76	HD111812	12	46	50	+28	05	06	05	52	20					430
77	COMP													"	60
78	HD111812				"			06	02	21					430
79	Comp													"	60
80	HD111812				"			06	12	24					430
81	Comp													"	60
82	Bias(4)							06	23						

Exp. Mtr. Seeing

10.4K

10.8K

10.6K

10.9K

0.1K 5"

0.7K

2K

CCD Spectr. Temp. Dome Temp./Hum. - 18.8°C / 61.2% Transparency Conditions Clear., moon almost down..

Focus ... 7.14

Fans Off

142

Spectr. Temp. Dome Temp./Hum.

422 0 50 1024 4 1 ccdfmt

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion Clankata	P.H.	Program	Remarks	Quality
870s		10.4K		B 6.40	F6 II -III	CASS CCD	1800L/mm	306u	4300Å	12	Dby F Star		
60s										13			
-										1			
60s										14			
120		10.8K		B 3.75	F0 III					15	Dby Sp Std		
130		10.6K		"	"					16	"		
140		10.9K		"	"					17	"		
60										18			
"										19			
450		10.1K	5"	B 4.61	G0 III					20	Dby Sp Std		
60										21			
430		10.7K		"	"					22	"		
60										23			
450		10.2K		"	"					24	"		
60										25			
										1			

143
pg #6

Date 1996 February 3/4 Observers Dby / 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.
CG80346 → 49	HD 135891 x 4	15 12 30	+37 26						.067
50/51	" x 2				06 31	0 07 E	83° Alt		.133
CC38883	COMP							Fed clear	60
84	HD 101107	11 33 01	+44 10 48	06 41 37		3 54 W			730
85	COMP							"	60
86	HD 101107	"	"	06 57 23		4 08 W			450
87	Comp							"	60
88	BIAS (4)			07 10					-
89/90	INBOARD/OUTBOARD					0 05 E	+38°	"	40/70

CG
Spectr. Temp. ...

Focus 7

Spectr. Temp. ...

Exp. Mtr. Seeing

86.39
FILTER

10.3K 4.5"

10.3K 4"

CCD
 Spectr. Temp. ... -102.0°C ... Dome Temp./Hum. ... -18.8°C / 61.5% Transparency Conditions ... clear, full moon behind trees, twilight beginning soon. 144
 Focus ... 7.14 ... @ seeing test FANS OFF
 Spectr. Temp. ... Dome Temp./Hum. ... -18.5°C / 62.0% @ focus test (cass) 422 0 50 1024 4 1 ccd test.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	4"			EEV CCD TV		above		-	seeing test	Done SW, very very light SE wind, clear, full moon set behind trees, twilight starting soon.	
	4"			GUIDER		30µm		-	"		
BG 39 FILTER				CASS CCD	1800 lines G = 4476	30µm	4300 Å	27			
10.3K	4"-5"	B 5.92	F2II -III					28	Dby F star		2.9K
								30			
10.3K	4"	"	"					29	"	getting a bit of sky background now.	
								6			
								1			
								3/4	focus test		

145
p9#1

Sun / Mon

Date ..1996.. Feb. 4 / 5..... Observers [Rm.] / Tu. / Sant.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc 3889 1/2	Inboard / outboard HURT MITH					0 0	= 35°	FoAr Clear	14/60
93	BIAS (4)			18 25					
94	Comp							FoAr Clear	FoAr 14/60s
95	HD 203156	21 1523	+37 49	18 3219		6 02 W			500
96	Comp							"	60s
97	Comp							"	"
98	HD 214975	22 3654	+56 19	18 51 22		5 30 W			2309
99	Comp							"	60s
cc 38900	BIAS (4)			19 33					—
01	COMP							"	60
02	HD 215159	22 38 15	+53 23 08	19 4200		5 45 W			277
03	COMP							"	60
04	COMP							"	60
05	HD 214975	22 3654	+56 19 00	19 54 32		6 22 W			1649
06	COMP							"	60

CO
Spectr. Temp. ...

Focus ... 7.06 ...

Spectr. Temp. ...

Exp. Mtr. Seeing

CG 500
Filter

4.9K 3"

3740 3"

4200 3.4"

4510 4"

Spectr. Temp. ... ^{CCP} 1.005 ... °C ... Dome Temp./Hum. ... -13.7°C / 55.2% ... Transparency Conditions . P.A.T. Cloudy ... → clear ... 146

Focus ... 7.06 ...

N FAN ON

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

7 22 0 50 1024 4 1 CCD Fm T MAX

Exp. Mtr.	Seeing	Plg/ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06560 Filter				CASCCD	1800 l/mm G=5945	306μ	6400Å	3/4	Focus test	FORGOT TO REMOVE HARTMANN MASK, IT WAS IN BOXED UNTIL LINE BELOW.	
								1/2			
								5			
4.9K	3.4"	5.8 -5.9	F2					6	Rm pgrm	N133K 250/1 SIN Telescope east side of Pier	5K
								7			
								8			
3740	3"	<v> 8.40	~G0Ib					9	Rm pgrm	Z Lac	
								10		HARTMANN MASK IN COM/INBOARD	
								11		HARTMANN MASK HOMED	
								12	Rm	≈ 29th column Z Lac velocity comparison	5.5K
								13			1.5K
								14			1.5K
2510	4"	8.40	~G0Ib					15	Rm pgrm	centered ≈ 30th column	5.0K
								16			

147p4#2

sun/moon

Emulsion Batches:

Date 1996 Feb 4/5..... Observers [R.M.] / T.A. / 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.
CC38907	COMP							FeAr clear	60
08	VY PER	02 20 19	+58 28 06	20 36 50		3 41 W			3000
09	COMP							"	60
10	BIAS (4)			21 30					—
11	COMP							"	60
12	HD25361	03 56 42	+58 23	21 35 20		2 32 W			1270
13	COMP							"	60
14	COMP							"	60
15	HD30282	04 41 06	+36 32 00	22 04 21		2 18 W			1276
16	COMP							"	60
17	COMP							"	60
18	HD44990	06 19 49	+07 08 25	22 34 32		0 58 W			457
19	COMP							"	60
20	BIAS (4)			22 45					—
21	COMP							"	60
22	IRIS	04 20 44	19 27 29	22 54 19		3 50 W			2090

Feb 6/96

Spectr. Temp.

Focus.....706

CCD Spectr. Temp.

Exp. Mtr. Seeing

065000

910 23"

5100 23"

7400 23"

5500 24"

1.25 3"

Spectr. Temp. Dome Temp./Hum. $-15.9^{\circ}\text{C}/59.2\%$ Transparency Conditions ... *mostly clear, clear* ... 148
 Focus *7.06*
 Spectr. Temp. $\rightarrow 100.9^{\circ}\text{C}$ Dome Temp./Hum.
N FAN ON (press 10325 kps and Fulling)
Wind (WSW @ knts/hr) 422 0 50 1024 4 1 ccd flat

Exp. Mtr.	Seeing	$\sqrt{\text{Mag}}$	Sp.	Inst.	Grating/Tilt	Slit	Emulston	P.H.	Program	Remarks	max. quality
OG 560 F12R				CAKSCCD	1800 h/mm G=5945	306 μ	6400A	17		Telescope on E side of piers.	
910	2-3"	10.8 -11.06	F5 -F9					18	Rm Cepheid		1.4K
		10.8 11.66	F5 F9					19			
								1			
								19			
5100	2-3"	7.30 -8.07	F6Ib -G2Ib					20	Rm Cepheid	RX Cam [7300/1 SKU]	10K
								21			
								22			
1,400	2-3"	7.9 -8.8	F6-G1					23	Rm Cepheid	AU Per	8K
								24			
								25			
5,500	3-4"	6.5 -8.0	F7Iab -K1Iab					26	Rm Cepheid		10K
								27			
								1/2			
								27		Megaster Field Right on	
1625	3"	8.9	G2					28	Asteroid	as Std Vel	26K

149
p9#3

Sun/moon

Date 1996 Feb 4/5..... Observers [Rm]/Tn/Sat.....

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.
CC38923	COMP 1							Fed clear	60
CG80352 → 55	HD 42126/1 x4	06 04 00	+48 44				Alt 68°	4x	.067
54/57	" x2				23 43	2 13 W		2x	.133
58 → 61	HD 74010 x4	08 36 18	+49 15				ALT 85°	4x	.067
62/63	" x3 x2							3x	.133
CG80364/67	HD 11511 x4	11 16 12	+37 19 00				ALT 63°	4x	.067
68/69	BD +37 21 74 HD 87447 x							2x	.133
CC38924	B/AS (4)			23 43					
25	comp							Fed clear	60s
26	HD 25361	03 56 42	+58 23 00	00 41 55		5 39 W			1221
27	comp							"	60s
28	B/AS (4)			01 06					
29	COMP							"	60s
30	HD 29587	4 34 30	+41 57 00	01 15 17		5 33 W			1086
31	Comp							"	60s

Spectr. Temp. ...

Focus 70

Spectr. Temp. ...

Exp. Mtr. Seeing

3'

3,108 3'

3320

7

Spectr. Temp. Dome Temp./Hum. *-17.2E 62/32H* Transparency Conditions *Slightly hazy* 150.
 Focus *7.06* N FAN ON
 Spectr. Temp. Dome Temp./Hum.
Cx 422 0 50 1024 4 1 ccd fax.

Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CHSS CCD	1800 μ /mm G=5945	306c	6400A	29			
	3"	primary 6.1	primary A0	EEV CCD TV GUI DEM		both slits above 30 μ m		—	Seeing test EEV CCD pixel to arcsec scale determination	Dbl star from Jan 16 1994 list.	
		primary				STRADDLING	306c cass slit		"	"	
						"					
						"					
						"					
								1/2			
								5			
3,100	3"	7.30	F616	CHSS -807-G216 CCD	1,800 μ /mm G=5945	306u	6400A	6	RX Cam	End of this tonight Telescope still Eastside Cloud at end	1.3K
								7			
								1/2			
								8			
3320		7.29	d62					9	std vel		6K
								10			

CCD
Spectr. Temp. ... -1.00.4°C

Dome Temp./Hum. ... -17.4°C 64.6% H

Transparency Conditions ... *Some clouds* ... 152
→ hazy but clear
→ some cirrus cloud.

Focus ... *F=0.6*

Dome Temp./Hum. ... -17.7°C / 66.7% H @ seeing test.
N FAN ON

422 0 50 1024 4 1 codfrnt.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
136 39 FILTER				CASS CCD	1800 Å G=5445	306"	6400 Å	2c		Telescope on E side of pier	12K
								11			
7.0K	3"	✓ 6.45	G8Vp					12	std vel		12.5K
								13			
								1			
	2"	✓ 6.45	G8Vp	EEV CCD TV GUIDER		above 3dpm		-	seeing test	Dome E, Telescope on E side of pier, some cirrus cloud coming, full moon up very good seeing, middle of cold snap	
		"	"					-	"		
								1			
								3/4	focus test	tried to get Pullos and a std vel but clouds are just too thick. -17.3°C - end of night.	

153

Mon/Tues

Date 1996 Feb 5/6 Observers ... KAK/In/smt...

Emulsion Batches:

.....

Exp. Mtr. Seeing
 Spectr. Temp. ...
 Focus ...
 Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 389 ⁴⁹ / ₅₀	INBOARD/outboard							REAn Clap	40/78
51	BIAS (4)			21 03					
52	COMP								
53	HD 20902	3 17 11	+49 30 19	21 05 31		2 31			327s
54	COMP								
55	HD 20902	"	"	21 15 20		W			95
56	"	"	"	21 17 25		2 38 W			50
57	Comp								
58	Comp								
59	HD 62509	7 39 12	28 16 04	21 27 08		-1 37 E			70
60	"	"	"	21 30 21		-1 29 E			60
61	"	"	"	21 31 13		-1 26 E			60
62	Comp								
63	bias (4)			21 36					
64	Comp	7 49 06	30 56 00						
65	HD 64090A	07 49 06	30 56 00	21 46 19		1 08 E			824

Exp. Mtr. Seeing
 Spectr. Temp. ...
 Focus ...
 Spectr. Temp. ...

CP Spectr. Temp. ... 101.0°C ... Dome Temp./Hum. ... 12.2°C ... 608H Transparency Conditions ... Part Clear ... 154

Focus ... 7.1.2

Spectr. Temp. ... Dome Temp./Hum. ... C J 422 0 58 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
BG 39 Fibre				CASS G=4508 1800	1800/1cm G=4508	306 μ	4340Å	3/4 1 5			940
32s 6000		1.79	F5 Ib					6 7	Sp Std-Tube		9.5K
95 10000		"	"					6	Sp Std-Kok		6.4K
50 16K		"	"					8 9 10	"		11.0K
20 36K		1.14	KO III					11 12	Sp Std-Kok		
60 37K		"	"					12	"		
60 40K		"	"					13 14 15	"		
829 1.2K	2.3"	B=9	G2V					16	Sp 13m - Kok		

p155
p1 #2

Mon/Tues

Date 1996 Feb. 5/6... Observers ...kak/.Tr./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.
CC38966	Comp							FeAr	60s
CC38967	HD64090A	074906	305600	220309	012418	n 34E		FeAr	1800
CC38968	Comp							FeAr Clear	60s
CC38969	HD64090A	"	"	223605		0 03E			1805
70	Comp							"	60
71	BIAS(4)								
72/80	FLATS x 9					0 10W	+3037	TUNG Clear	33
CC3898/82	Inboard / Out Board					0 26W	"	FeAr Clear	40/70
83	BIAS(4)								
84	Comp							FeAr Clear	30s
85	HD 748 74	84129	+064709	23 5601		0 04'E			60
86	Comp	"	"	23 5747				"	60s
87	"	"	"	23 5944					110
88	Comp								30
89/97	FLATS x 9					0 05W	+35°	TUNG Clear	5s
98	BIAS(4)								

CCD
Spectr. Temp. ...

Focus ... 7.12

Spectr. Temp. ...

Exp. Mtr. ...

Seeing ...

Filter ...

23

2610

Filter ...

Filter ...

4500

3900

7000

CCD Spectr. Temp. -101.0°C Dome Temp./Hum. -12.9°C 64% H Transparency Conditions ... *clear. new.* 156
 Focus ... *7.12* Then sudden overcast
 Spectr. Temp. -102.0°C Dome Temp./Hum. -13.3°C 66% H ADU MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter	2.3	B=7	G2V		1800 l/mm G=4508	306	A340X	17C 18	SP 19m-100K	= 65/1 S/N	
2700								19			
2610		"	"					20			
								21			940
								1/2			
								2			13.8K
(BG 39 Filter still)					F=7.10 F=7.24 600 l/mm G=2683	306u	4298A	3/4	focus test	455 091024 41 CCD FMT	
								1/2	format new	465 0 50 1024 4 1	
								5			
4500		3.98	G0V					6			9.6K
3900		"	"					6			8K
5000		"	"					6			9.4K
								7			840
								22			13K
								1/2			

157
pg#1

Tues/Wed

Emulsion Batches:

Date 1.996.Feb.6/7.... Observers Kok / 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 38999/39000	Inbound / out BOARD			18 56		0 07W	+46	Feather clear	40/70
cc 39001	BIAS (4)							"	65
02	Comp							"	65
03	HD 12929	20132	22 5923	19 0448		149W			148
04	"	"	"	19 0759		151W			138
05	"	"	"	19 11 11					.
06	Comp							Feather clear	60s
07	"							"	"
08	HD 48 329	3747	25 1349	19 29 14					470
09	"	"	"	19 3859					278
10	"	"	"	19 4423					226
11	Comp							Feather clear	60s
12	Bias (4)			19 53					
13	Comp							"	60
14	HD 28094	4 20 12	480500	20 0547		0 42W			926
15	Comp							"	60s

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus ... 7.0

Spectr. Temp. ...

Exp. Mtr. Seeing

3539

F. 149

T9

3255 2"

2435 "

13000

3020

3058

4500

335 2"

Spectr. Temp. ^{CD} -10.12 °C Dome Temp./Hum. -8.9°C 59.2% H Transparency Conditions Part cloudy 158

Focus 7.05

Spectr. Temp. Dome Temp./Hum. -9.7°C 59.2% H 90cyan

422 0 50 1024 4 1 CCD FIT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 F. Her	T 9.0°C	F=7.05		CASS CCD	1800/4mm G-4480	306μ	4298A 4298A	3/4	Focus test		MAX HD4
							4298A 4298A	1/2			
							4298A	7			1.1K
13255	2"	B=3.15	K2 III				4302 ± 0.5	8	Std - Koh		9.6K
12935	"	"	4				Feb 10 note	8	"		6.9K
13000								8	"		5.8K
								9			
								10	Std - Koh		
13080		B=4.40	G8 Ib					11	Std - Koh		3.6K
13058		"	"					12	"		5.3K
14000		"	4					13	"		
								14			
								15			
								16			
335	2"	B=8.8	G5 E					17	Obj - Koh	too cloudy (30/15N)	
								18			

154
Pg #2

Tues/Wed

Date 1996 Feb 6/7 Observers Kok/To

Emulsion Batches:

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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC39016	Comp			0				12 Hr Clear	60
17	HD 62345	9 38 25	24 38 16	20 33 25		2 2 E			1200
18	Comp							"	60
19	HD 62345	"	"	20 56 34		1 33 E			1577
20	Comp							"	60s
21	HD 62345	"	"	21 25 50		0 58 E			1917
22	Comp							"	60s
23	BIAS (4)			22 01					
24	Comp							"	60
25	HD 20902	3 17 11	149 30 19	22 10 24		3 56 W			964
26	Comp							"	60
27	HD 20902	"	"	22 30 48					210
28	HD 20902	"	"	22 35 02		4 12 W			738
29	Comp							"	60
30	Comp							"	60
31	HD 62509	7 39 12	28 16 04	22 56 27					154

CCD
Spectr. Temp. ...

Focus ... 7.0

Spectr. Temp. ...

Exp. Nr. Seeing

BG39
Filter

12600

12600

1750

1750

14800

4500

-000

CCP
Spectr. Temp. -101.2°C Dome Temp./Hum. -9.5°C 61.3% Transparency Conditions *medium thick cloud*

Focus 7.05

Spectr. Temp. Dome Temp./Hum.

MAX
APU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 FILTER				CASS CCD	1800 μ /1200 μ	306 μ	4298A	19	18		9.50 ADU
12600	2.3	B=449 356 G8 III					4302A _L	20	Pgm-Kok		4K
								21			
12600	<2.1	4.43	u					22	"		4.5K
								23			
12,750	2"	"	y					24	"		5.5K
								25			
								1/2			
								26			1.1K
15,650	2"	2.27	F5I b					27	Kok stol	Thick cloud done last night 4340A	8K
								26			
14,800		"	"					27	"	clear now	7K
14,500		"	"					27	"		7K
								28			
17000		B=244	K0 III					29	Kok Stol		5.5K
								30			

161
pg #3 Tues/Wed

Date .1996..Feb.6/7... Observers ... Kok./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.
CC39032	HD 62509	7 39 12	28 16 04	23 00 16	0 6 W				139
33	"	"	"	23 03 12	0 8 W				87
34	Comp							Fe Ar Clear	60
35	Bias(4)			23 07					
36	Comp							"	"
37	Comp								
37	HD 110010	12 34 06	79 46 00	23 17 44	3 51 E	03 51 E			2382
38	Comp							"	"
39	HD COMP							"	60
40	HD 74874	8 41 29	06 47 09	00 17 23		0 33 W			766
41	"	"	"	00 30 46					300
42	"	"	"	00 36 03		0 43 W			274
43	Comp							"	60s
44	BIAS(4)			00 43					
45	Comp							"	60s
46	HD 110010	12 34 06	+79 46 00	01 02 58		2 26 E			1200
47	Comp							"	60

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

Exp. Mtr. Seeing

126 34 film

832

16-45

109 2"

12700 3"

17,300 2-3"

2,400

abular

3600 2-3"

CCP
Spectr. Temp. ... -101.2°C ... Dome Temp./Hum. ... -9.4°C ... 60% Transparency Conditions ... 11.1 F cloudy ... 162..

Focus 7.05

Spectr. Temp. Dome Temp./Hum. c d

Clearing by OI AWT

max
ADU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter 18312		B-2.4	Ko III	CHSS CCD	1800 μ m G=4460	30 μ m	4298	31	Kok-std		8K
16345	4						4302 actually Feb 10/1964	32	"		8K
								33			
								1/2			
5009	2"	7.59	GO					10	Kok-pgm	Too cloudy = 50/1 S/N	
								14			
								15			
12,700	3"	3.98	GO III					16	Kok-std	Cloudy	4.4K
12,300	2-3"	"	"					16			4.7K
12,400	"	"	"					16			4.7K
								17			
								1/2			
								19		Then Topup	
Rebalanced Exp meter (Had been falling)								20	Kok. pgm		1.1K
3000	2-3"	7.59	GO					20	Kok. pgm	Clear now Exc Dx 000075 S6-000012	1.4K [85/1 S/N]
3000								21			

p1634 Tues/Wed

Emulsion Batches:

Date 1996 Feb. 6/7 Observers Kok./Tn.....

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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.
CC39048	HD110010	12 34 06	+79 46 00	01 25 53		2 5 E			1028
49	Comp							Fear clear	60
50/58	FLATS x 9					1 50 E	+22°	TUNG clear	33
59	BIAS(A)								
60-1	Inboard/outboard		HARTMAN			1 40 E	+22°	Fear clear	40/70
				0					

Spectr. Temp. ...
 Focus ... 7.05
 Spectr. Temp. ...

Exp. Mtr. Seeing

30

-86

Spectr. Temp. ... 101.0 ... 2 C ... Dome Temp./Hum. ... 8.9 C ... 73% Transparency Conditions ... Cloudy: 164

Focus ... 7.05

Spectr. Temp. Dome Temp./Hum. ... - 8.6 C ... 74.78 A

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
100%		7.59	G0	CASS CCD	1800 ^{ln/mm} E=4485	306u	4298A	22	K04-pgm		
60							4302A	23			
33							T ₄	B			
								1/2		Note Grating header Dose	
40/70		- 8.6 C						28/29		wrong all night. ✓	
										Note Feb 9, Central λ actually ≈ 4302A	

165
pg#1 Fri/SAT

Date 1996. Feb. 9/10..... Observers ... Pdy./Tn.....

Emulsion Batches:

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.....
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Exp. Mtr. Seeing
Spectr. Temp. ...
Focus..... 6.97
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc390 ^{62/63}	Inboard / OUT BOARD					0 10 W	+40°	Fear Clear	40/70
64	Bias(+)			23 27					
65	Comp							"	60s
66	HD 65301	7 52 58	59 19 08	00 05 57		1 22 W			476s
67	Comp							"	60s
68	HD 65301	"	"	00 25 39		1 43 W		"	1671
69	Comp							"	60s
70	HD 65301	"	"	00 46 59		2 07 W		"	1221
71	Comp							"	60
72	Bias(4)			01 12					
73	Comp							"	60s
74	HD 60335	7 28 54	14 35 03	01 24 19		3 25 W			2107
75	Comp							"	60s
76	HD 60335	"	"	02 02 31		3 38 W			598s
77	Comp							"	60s
78	Bias(4)								

Exp. Mtr. Seeing

60 35
Filter

0.6K 4"

0.7K

0.8K

0.6K 4.6"

0.7

Spectr. Temp. ^{CD} -101.0°C..... Dome Temp./Hum. -1.0°C 7152H Transparency Conditions *clearing mostly*..... 166

Focus *6.97*.....

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				C145500	1800/mm G=4475	306u	430-51P	3/4	Focus		
							430/15	1/2			
								5			
10.6K	4"	6.16	F2V					6	Ddy pgrm.		3.9K
								7			
10.7K		"	"					6	"		4.6K
								8			
10.8K		"	"					6	"		4.1K
								9			
								1/2			
								8			
7.6K	4"-6"	6.33	F0					10	Ddy pgrm		
								8			
687								10	"	Huge bank of clouds moving in!!	
								12			
								1/2			

1698.1

Mon / Tues

Date 1996 Feb 12/13.. Observers Dby / T_n

Emulsion Batches:

.....
.....
.....CCD
Spectr. Temp. ...
Focus .. 7.15
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC39089	BIAS(4)								
90	Comp							Fedn diag	60s
91	HD 60335	7 2854	43 1503	20 5235		1 00 E			1800s.
92	Comp							"	60s
93	HD 60335	"	"	21 25 44		0 37 E			1160s
94	Comp								60s
CC39105	BIAS(4)			21					
95/105	FLATS x10					0 0	0°	using K104	33s
CC39105	BIAS(4)			23 31					

Exp. Mtr. Seeing

BG89
Filter

7-6K 7-10

4-6K

CCD
Spectr. Temp. -101.3°C

Dome Temp./Hum. -12.6° 49.3% H

Transparency Conditions *clearing*..... 170

Focus 7.15

No focus test possible tonight.

Spectr. Temp.

Dome Temp./Hum.

422 0501024 4 1 CCD FMT

Comparison
Filter Exp.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	1800 l/mm G=4475	300 μ	4301 $\text{\AA} \pm 0.3$	1/2		4198 \rightarrow 4405 \AA : swms.	
								3			
7.6K	7-10	6.33	FO					4	D by pgm		
								5			
4.6K		"	"					6	"	It's snowing!	
								7			
								1/2		Dome T = -15.2°C	
								8			13.8K
								1/2			

Spectr. Temp. -100.1°C Dome Temp./Hum. $-8.3^{\circ}\text{C}/58.4\%$ Transparency Conditions \dots a few clouds \rightarrow increasing?Focus 7.05

FANS OFF

Spectr. Temp.

Dome Temp./Hum.

422 0 50 1024 4 1 ccd fit

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 $\text{\AA}/\text{mm}$ $G=4589$	30 μm	4461 \AA	3/4	focus test	in focus now	
								1			
								5		Aborted an attempt HD 214986 due to cloud & refraction.	
734	3"	6.42	B2Vp					6	Bln Herich	thin cloud here now \rightarrow very thick cloud, should clear some hope cut short due to cloud, strong sky line, cosmic ray in spectrum	
								7			
								1			
								8		closed up.	4.7K \rightarrow 10.9K
								1			
								9/10	focus test	show & cloud afterwards, same temp in dome as FT focus test.	

173# 1 of 3

Date 1996 February 14/15 Observers [Bin] / Smt

Emulsion Batches:

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC 39125/ 26	INBOARD/ OUTBOARD					0 ^h	+45°	Fair clear	40/70
27	BIAS(4)								—
28	COMP							"	60
29	HD210459	22 05 33	+32 41 15	18 26 23		PLATFORM 5 42 W	+33° 10'		360
30	COMP							"	60
31	COMP							"	60
32	HD214946	22 36 42	+44 29	18 39 55		VERY CLOSE TO LIMIT 5 55 W			2200
33	COMP							"	60
34	BIAS(4)			19 22					—
35	COMP							"	60
36	HD223094	23 41 30	+28 09	19 25 37		5 19 W			1200
37	COMP							"	60
38	COMP							"	"
39	HD37017	5 30 25	-04 33 36	19 55 11		0 18 W			2265
	COMP							"	60
40-48	FLAT X 9					0 ^h	+42°	Fair clear	22

CCD Spectr. Temp. ...

Focus.....

Spectr. Temp. ...

Exp. Mtr. Seeing

86.39
FILTER

9.8K 4"

6.5K 3"

5.3K 3.4"

5.4K 3"

CCD Spectr. Temp. -100.1 °C

Dome Temp./Hum. -5.3°C/.63.6%

Transparency Conditions clear with some clouds to far SW

Focus 7.01

@ focus test

N FAN ON

Spectr. Temp.

Dome Temp./Hum.

422 0 50 1024 4 1 readout.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 l/m G=4589	30µm	4461A ⁰ ±1Å	3/4 1	focus test		
9.8K	4" w/ red drive	^B 4.75	FSIII					5 6	Bln Ashell	clock drive off for comp. sky still bright. centred on 19 th column.	4.0K
6.5K	3"	^B 7.26	A5					7 8 9	Bln SB2	centred on 19 th column.	2.7K
2.3K	3"-4"	^V 7.51	K3III					10 11 12	std vel.	Pretty close in sky to previous 2 stars.	700
15.4K	3"	^B 6.42	B2Vp					13 14 15	Bln He-rich.	unable to get a 2nd comp. spectrograph controller died for a half hour.	
								16			

175
p9 #2 of 3

Date 1996 February 14/15 Observers [Blm] / 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.
CC39149	BIAS(4)								
50/51	INBOARD/OUTBOARD					0 ^h	+42°	Fed clear	40/70
52	BIAS(4)								—
53	COMP							"	60
54	HD 37468 AB	05 33 44	-02 39 28	22 16 04		2 01 W			200
55	COMP							"	60
56	HD 37468 D	"	"	22 23 43		2 43 W			2230
57	COMP							"	60
58	HD 37468 AB	"	"	23 08 11		2 53 W			180
59	COMP							"	60
60	BIAS(4)			23 18 23 18					—
61-69	FLAT x 9					3 10 W	-3°	Turn clear	22
70	COMP							Fed clear	60
71	HD 34759	05 14 44	+41 42 17	23 36 41		3 46 W			600
72	COMP							"	60

Exp. Mir. Seeing

Spectr. Temp. ...

Focus 7.0

Spectr. Temp. ...

Exp. Mir. Seeing

B&B
FILTER

"

15.5K 4"

"

18.5K 5"

"

15.5K 4"

"

15.5K 4"

"

15.5K 4"

"

15.5K 4"

"

15.5K 4"

"

15.5K 4"

"

15.5K 4"

"

15.5K 4"

"

15.5K 4"

"

CCD
Spectr. Temp. ... -100.2°C

Dome Temp./Hum. ... -8.4°C / 72.2%

Transparency Conditions ... clear ... no moon ... 176

Focus ... 7.04 now

@ focus test

N FAN ON

Spectr. Temp.

Dome Temp./Hum.

Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		BG 39 FILTER				CASS CCD	1800 λ mm G = 4589	30 μ m	4461 \AA	1		422 0 50 1024 4 1	
	40/70	"				"	"	"	"	3/4	focus test	416 0 50 1024 4 1 (later centre) changed to 7.04 since I dropped.	
	60									1			
	200	15.5K	4"	B 3.57	09.5V					6	Bln Dbl star	D on slit, too.	5.8K
	60									7			
	2230	10.5K	5"	B 6.3	B2V					8	Bln Dbl star	AB guided off slit, seeing 4.4K got really bad, though \rightarrow perhaps some contamination from AB spec centre failed before cap.	
	60									9			
	180	11.5K	4"	B 3.57	09.5V					10	Bln Dbl star	D on slit, too.	5.3K
	60									11			
										1			
	22									13		Just making sure I got them.	11.5K \rightarrow 11.1K
	60									14			
	600	14.6K	4"	Y 5.09	B5V					15	Bln		7.0K
	60									16			

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 pg 3 of 3

Date 1996 February 14/15 Observers [Blm]/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.
CC39173	COMP							Fedn clear	60
74	HD66141	07 57 04	+02 36 34	23 55 11		1 22 W			490
75	COMP							"	60
76	BIAS(4)								—
CG80376-79	HD82582 x 4	09 27 46	+47 20 45						.067
80/81	" x 2	"	"		00 16	0 02 W	87° Alt		.133
CC37177	COMP							Fedn clear	60
78	HD120315	13 43 36	+49 48 45	00 31 17		3 54 E			60
79	COMP							"	60
80	BIAS(4)			00 35					—
81/82	INBOARD/OUTBOARD					0 04 W	+10°	"	40/70

Exp. Mtr. Seeing
 Spect. Temp. ...
 Focus
 Spectr. Temp. ...

Exp. Mtr. Seeing

PK 39
 FILTER

PK

3'

40K ?

^{CCD}
 Spectr. Temp. ... -100.1°C Dome Temp./Hum. -9.2°C / 75.4% Transparency Conditions a few thin clouds 178
 Focus 7.04 @ top of page & focus test, too. N FAN ON
 Spectr. Temp. Dome Temp./Hum. -9.3°C / 75.7% @ seeing test 416 0 50 1024 4 1 ccd test

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800llm G=4589	306μ	4461 Å	17			
13.1K		√ 4.39	K2 III b F2-0.5					18	Std 161		
								19			
								1			
	3"	√ 6.52	F0 V	EEV CCD TV GUIDER		as before 306μ		-	seeing test	Done NW, no wind, a few thick wisps of cloud, no moon, pretty good seeing.	
								-	"		
				CASS CCD	as before			20			
40K	?	√ 1.86	B3 V					21	Bln	trailed a bit, saturated 1st attempt	10.6K
								22			
								1			
								3/4	focus test	still in focus.	

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Emulsion Batches:

Date 1996 February 15/16 Observers [Bln]/Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC39183/84	INBOARD/ OUTBOARD					0 07 W	+44°	Fed clear	40/70
85	BIAS(4)			18 26				"	—
86	COMP							"	60
87	HD214946	22 36 42	+44 29	18 41 01		5 54 W			1800
88	COMP							"	60
89	BIAS(4)			19 13				"	—
90	COMP							"	60
91	HD3765	00 35 18	+39 40	19 20 31		4 24 W			1200
92	COMP							"	60
93	BIAS(4)			19 47				"	—
94	COMP							"	60
95	HD37017	05 30 25	-04 33 36	19 51 05		0 15 W			2080
96	COMP							"	60
97	BIAS(4)			20 32				"	—
98	COMP							"	60

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

Exp. Mtr. Seeing

5439
FILTER

4695

2300

5K

CCD Spectr. Temp. $-4.00 \pm 0.1^\circ\text{C}$ Dome Temp./Hum. $-8.7^\circ\text{C}/52.1\%$ Transparency Conditions *clear* 180

Focus 7.02 FANS OFF

Spectr. Temp. Dome Temp./Hum. *cl* 416 0 50 1024 4 1 ccd font

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	40/70	BG 39 FILTER				CASS CCD	1800 l/m G=4589	30 μ m	4461 Å $\pm 1 \text{ \AA}$	3/4 1	focus test	T=7.7°C set finest bit cool.	
	60									5			
	1800	4685	4-5"	^B 7.26	A5					6	Blu SB2	sky was a bit bright here 700 at start. S/N ~ 155:1	
	60		then worse.							7			
	60									1			
	60									8			
	1200	2300	4-5"	^V 7.36	dk5					9	std vel	sort of close by. S/N ~ 85:1	1000
	60									10			
	60									1			
	60									11			
	2080	13.5K	4-5"	^B 6.42	B2Vp					12	Blu Herich	S/N ~ 280:1	5.5K
	60									13			
	60									1			
	60									14			

Pl # ~~2/181~~

Date 1996 February 15/16 Observers [Bin]/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.
CC39199	HD37022C	05 36 22	-05 27 20	20 35 46		0 37 W			730
CC39200	COMP							FeAr clear	60
01	COMP							"	"
02	HD37468AB	05 33 44	-02 39 28	20 56 02		0 45 W			220
03	COMP							"	60
04	HD37468D	"	"	21 02 44		1 30 W			2510
05	COMP							"	60
06	HD37468AB	"	"	21 48 05		1 37 W			215
07	COMP							"	60
08	BIAS(4)			21 54					-
09	COMP							"	60
10	HD34759	05 14 44	+41 42 17	22 00 39		2 14 W			670
11	COMP							"	60
CG80382-85	HD65583 x4	07 54 18	+29 31						.067
86/87	" x2				22 32	0 04 E	75° Alt		.133

CCD
Spectr. Temp. ...
Focus 7.1
Spectr. Temp. ...

Exp. Mtr.
FILTEX Seeing

16.1K 4"

18.5K 6"

26K 6"

77K 6"

0.3K

6"

CCD Spectr. Temp. -100 °C Dome Temp./Hum. -10.4°C/54.6% Transparency Conditions clear: 182

Focus 7.02

Spectr. Temp.

Dome Temp./Hum. -11.2°C/58.2% @ seeing test

FANS OFF

416 0 50 1024 4 1 ccd/ast

Comparison Filter	Exp.	Exp. Mtr. FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
730		16.1K	4-6"	B 5.15	06ep(?)	CASS CCD	1800xlm G=4589	30µm	4461A	15	Bln 0*	bright emission nebula b/g brightest * of trapezium θ Ori	6.4K
										16			
										17			
220		18.5K	6"	B 3.57	09.5V					18	Bln	brightest of 3 close. D on slit, too. s/w ~ 320:1 (col 17)	8.2K
										19			
350		12.6K	6"	B 6.3	B2V					20	Bln	guided AB off slit, ∴ centred on col 38 s/w ~ 25:1	5.3K
										21			
25		17.7K	6"	B 3.57	09.5V					22	Bln	centred on col 25 D on slit, too, on col 17	7.2K
										23			
										1			
										24			
670		16.3K		B 5.09	B5V					25	Bln		5.6K
										26			
			6"	V 7.00	dG7	EEV CCD TV GUIDER		above 30µm		-	seeing test	Dome SSW, light NW wind, clear, new moon, T still dropping.	
										-	"	bad seeing	
												FIRE on HTUSVIEW probably affected seeing & transparency	

pg #3 183

Date 1996 February 15/16 Observers [Bin]/Smt

Emulsion Batches:

.....

CCD
 Spectr. Temp. ...
 Focus 7.02
 Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC39212	COMP							FeA clear	60
13	HD65583	07 54 18	+29 31	22 35 47		0 25 W			1530
14	COMP							"	60
15	BIAS(4)			23 05					-
16	COMP							"	60
17	HD154528	17 00 54	+77 48	23 20 01		7 25 E			2830
18	COMP							"	60
19	BIAS(4)			00 10					-
20	COMP							"	60
21	HD120315	13 43 36	+49 48 45	00 21 44		4 00 E			60
22	COMP							"	60
23	COMP							"	"
24	HD138629	15 28 12	+41 14 19	00 36 32		5 22 E			900
25	COMP							"	60
26	BIAS(4)			00 48					-

Exp. Mtr. Seeing

BK 39
 FILTER

5550 5"

14.0K 5"

36K ?

1.3K 7?"

CCD
Spectr. Temp. -100.3°C

Dome Temp./Hum. $-11.2^{\circ}\text{C}/58.5\%$

Transparency Conditions *clear*.....LBK.

Focus 7.02

FANS OFF

Spectr. Temp.

Dome Temp./Hum.

416 0 50 1024 4 1 *ccdfmt*

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 lines G=4589	30 μm	4461 \AA	27			
5550	5"	\checkmark 7.00	DG7					28	std vel		2.2K
								29			
								1			
								5			
14.0K	5"	\checkmark 6.66	A0					6	Bl η SB2	SBIG ST-4 AUTOGU.D00	6.5K
								7			
								1			
								8			
36K	?	\checkmark 1.86	B3V					9	Bl η	trailed. 2.5K	8.7K
								10			
								11			
16.3K	7"	\checkmark 5.09	A5V					12	Bl η A-shell	spectrum spread out over columns, bad guiding/seeing.	5.0K
								13			
								1			

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Date Feb 16/17 V916 Observers Hnl/Ri

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.
Ce10749/50	In board/cable end							no filter	///
51	Bias (4)							ThAr	1
52	comp								
53	HD 27561	4 ^h 15 ^m 54 ^s	14° 11' 00"	19 ¹⁹ 45 ^m 37 ^s	01 ⁰¹	1 ^h 09 ^m W 00 32 W			900s
54	comp							ThAr	1
55	HD 27561	"	"	20 ^h 02 31		1 ^h 39 W			1802s
56	comp							ThAr	1 s
57	Bias (4)			20 ^h 34 38					
58	HD 27561	"	"	20 ^h 36:12		2 ^h 14 W			1800s
59	comp							ThAr	1s
60	HD 27561	"	11	21 ²¹ 09:03		2 ^h 46 W			1800
61	comp							ThAr	1/5E
62	Bias (4)			21:					
63	HD 27561			21:45		3 ^h 21 W			1800s
64	comp							ThAr	1s

Spectr. Temp. ...

Focus 0.2

Spectr. Temp. ...

Exp. Mtr. Seeing

44

123

94

118

109

Spectr. Temp. -1000 Dome Temp./Hum. $-8.2^{\circ}/52.9\%$ Transparency Conditions *Clear* 188Focus 0.2711

Spectr. Temp.

Dome Temp./Hum.

CCDFMT 00 257 1024 41

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	PH.	Program	Remarks	Quality
				CCD 18.13	.5685/300	400nm	6520 A	42	Hzl	CCD FMT 00 128 1024 81	
								1/2		Had trouble focussing (late about)	
		6.6	F4V					3			
44		6.6	F4V					4		SIN 7130	
								3			
								1/2			
								4			
								5			
								3			
								1/2			
94								4			
								5			
118								3e1			
								1/2			
109								4		SIN ~ 110A	
								3			

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Date Feb 16/17 Observers Hml/Ri

Emulsion Batches:

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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing
ce10765	HD 27561	4 ^h 15 54	14 ^o 11 00	22:16:41		3 ^h 54 W		1800 header says 1811		101	
66	BIAS(4)			22:47:53							
67/68/69	comp							ThAr	1s		
70	HD 27561	"	"	23:01:06		4 ^h 28 W		200s header says 1210		46	
71	comp										
72	comp										
73	HD 101606	11 ^h 36 22	32 ^o 17 59	23:36:38		2 ^h 06 E		1800s		196	
74	BIAS(4)			00:07:48							
75	comp							header says 1801			
76	HD 101606			00:10:53		1 ^h 32 E		1800s		185	
77	comp							ThAr	1s		
78	HD 101606			00:42:36		1 ^h 0 E		1800		166	
79	comp							ThAr	1s		
ce10780	BIAS(4)										
81	HD 101606			01:17		0 ^h 25 E		1800		221	
82	comp							ThAr	1s		

Spectr. Temp. ...

Focus 0

Spectr. Temp. ...

Exp. Mtr.

Seeing

Spectr. Temp. -100° Dome Temp./Hum. $-9.7/59.8$.. Transparency Conditions ... *Clear* 190 ..

Focus 0.211 ..

Spectr. Temp. Dome Temp./Hum.

CCDFMT 00 256 1029 91

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
101		5.6	F4V	1813	300 5685	400H	6520R	5	Hnl		
								1/2			
								2		GPB ERROR (on 67/68) only heads written correctly for 67/68	
46		"	"					2			
								3			
								3			
196		5.73	F4Y					4		SIN 7160	
								1/2			
								3			
185								5		SIN 7160	
								3			
166								6		SIN ~150	
								3			
								1/2			
221								4		SIN < 160	
								3			

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Date Feb 16/17 Observers Hml/Ri

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.
Ce10783	HD101606	1 ^h 3 ^m 22	32°17'59	01:48:53	02:19	006 W		red. SAS → 1800	1800s
84	comp							ThAr	1s
85	Bias(4)			2:20:19					
86	HD101606	"	"	2:22:24		040W			1800s
87	comp							ThAr	1s
88	HD101606			2:54:09		110W			1691
89	comp								
90	Bias(4)			3:23:46					
91/92/93	Inboard/Outboard								
794-803	10x Flats							Tung	1.7*
804	comp							ThAr	1s
805	HD101606	"	"	4:13:16	4:14:05	230 W			1800s
806	comp								
807	HD101606			4:45:37		303W			1800s
808	comp							ThAr	1s
809	Bias(4)			5:17:31					

Spectr. Temp. ...

Focus

Spectr. Temp. ...

Exp. Mtr. Seeing

203

181

138

64

Spectr. Temp. -100 Dome Temp./Hum. $-10.4/66\%$ Transparency Conditions *Clean, Cirrus, contg. 192
up southwest*

Focus

Spectr. Temp.

Dome Temp./Hum.

clouded out.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	D.H.	Program	Remarks	Quality
203		5.73	F4V	1813	300 5685	400u 60uH	6520A	2 5	Hml	S/N ~ 135	
								3			
								1/2			
181								6		S/N ~ 135	
								3			
								4			
								1/2			
								1/2			
								1/2			
								1			
138								2			
								3		S/N ~ 140	
								2			
69								4			
								2			
								1/2		clouded out	

Looks like only headers
written for CE10 992 & 93
Feb 20
GPIB error to onboard
writing ahead (only headers written
properly - no image)

* (1.7)s flats on scale 100
clearing up alert

193

SUM/MON

Date .1.996. Feb. 8/19.... Observers [H.M.] / T.N.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce108 ^{10/11}	In/BOARD /OUTBOARD HURT MANN					≈ 2 W	2+30°	Th Ar clap	1/1
12	BIAS(A)			18 15					
13	Comp							Th Ar	1s
14	HD 27561	4 1554	+14 11 00	18 33 33		0 18W			1800
15	COMP							"	1s
16	HD 27561	"	"	19 05 24		0 50W			1800
17	Comp							"	1s
18	HD 27561	"	"	19 36 53		1 21W			1800
19	Comp							"	1s
20	BIAS(A)			20 09					
21	BIAS(A)			23 04		1 38W	-6°		
22/31	FLATS x10			23 10		"	"	Tung	2sec

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus ... 0.22

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus ... 0.22

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus ... 0.22

Spectr. Temp. ...

Spectr. Temp. ^{CCD} -100.4E Dome Temp./Hum. -9.8°C 50% H Transparency Conditions Fine → suddenly cloudy

Focus ... 0.221

Spectr. Temp. Dome Temp./Hum. -10.5°C 60% H

194
A04
MAX

Exp.	Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/1	no filter Voltage = 1300				echelle 18.13°	0300 1.5685	60u = .277 set 400u = .225 set		1/2	focus test	CCDFMT 0 0 128 1029 8 1	
								6520A	1/2		CCDFMT 0 0 256 1029 4 1	
1/5									3			
1800	640		5.61	F4					4	Hml pyg		960
1/5	Exp meter now balanced (It wasn't out much)								3			
1800	615	2.3	"	"					4	"		
1/5									3			
1800	293		"	"					4	"		500
1/5									3			
2 sec							60u W 600u H = .205		1/2 2			14.3K

pg #1 K15

Emulsion Batches:

Date 1996. February 24/25 Observers KK. / 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.
CE10832	COMP							ThAr	1
33	HD47105	06 31 56	+16 29 05	18 56 34		1 38 E			193
34	COMP							ThAr	1
35	HD47105			19 01 07		1 34 E			186
36	COMP							ThAr	1
37	BIAS(4)			19 08					—
38	BIAS(4)			19 09					—
39	COMP							ThAr	2
40	HD32147	04 55 51	-05 52 16	19 16 40		0 55 W			2400
41	COMP							ThAr	2
42	COMP							"	2
43	HD20902	03 17 11	+49 30 19	20 08 59		2 52 W			490
44	COMP							"	2
45	HD20902			20 19 22					479
46	COMP							"	2

 CCD
 Spectr. Temp.
 Focus
 Spectr. Temp.

Exp. Mtr. Seeing

No. Hrs

10 35'

605

75

200

205

CCD Spectr. Temp. -100.1°C Dome Temp./Hum. +3.4°C/45.4% Transparency Conditions .clear, very windy.....1.96

Focus230.....

Spectr. Temp. Dome Temp./Hum.

Com. Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ar	1	no filter				ECHELLE 18.60	300 l/m .5800	60µ W 40µ	6300 Å	3		0 0 128 1024 8 1	ccd hot.
	143	610	>5"	1.93	AU IV			600µH (cops)		4	Std.	8 Gem. bad seeing	>10K
Ar	1									3			
	120	605								5	Std.		
Ar	1									3			
	-									1			
	-							60µ W 400µH		1		0 0 256 1024 4 1	ccd hot.
Ar	2									3			
	2400	75	40µH	6.21	K3 V					4	KK		
Ar	2									3			
	2									3			
	440	1200	6"	1.79	F5 IV					5	KK	very windy here, pointed into wind.	14.3K
	2									3			
	479	1205								6	KK	VERY windy.	154K
	2									3			

pg # 2 197

Emulsion Batches:

Date 1996 February 24/25 Observers KK/Smt

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(c) Spectr. Temp. ...
 Focus ... 230
 Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE10847	BIAS (4)			20 28					—
48	COMP							ThAr	2
49	HD8890	01 22 34	+88 46 26	20 39 51		4 32 W			444
50	COMP							"	2
51	HD8890			20 50 04		4 37 W			145
52	COMP							"	2
53	HD8890			20 54 02		4 40 W			83
54	COMP							"	2
55	HD8890			20 56 46		4 43 W			94
56	COMP							"	2
57	COMP							"	2
58	HD47105	06 31 56	+16 29 05	21 06 05		0 31 W			180
59	COMP							"	2
60	HD47105			21 10 30		0 35 W			160
61	COMP							"	2
62	HD47105			21 14 36		0 39 W			169

Exp. Mr. Seeing
 1200 5?
 310
 315
 310
 5
 10

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. $+3.5^{\circ}\text{C}/43.1\%$ Transparency Conditions *clear* 198.

Focus 230

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

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
-						ECHELLE 18.60	300.11mm .5800	60μW 400μW	#6300Å	1			
A	2									3			
44		1200	5?	BSC 2.5	F8D _b					4	KK	saturated last order (reddest)	
	2									3			
15		310								4	KK		
	2									3			
83		315								4	KK		
	2									3			
94		310								4	KK		
	2									3			
	2									3			
180		615		V 1.93	A0IV					5	Std. KK		1
	2									3			
160		610								5	"		
	2									3			
169		610								5	"		

pg #3 799

Date 1996 February 24/25 Observers KK/Smt

Emulsion Batches:

.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE10863	COMP							ThAr	2
64	COMP							"	2
65	HD61421	07 34 04	105 28 53	21 22 52					27
66	COMP							"	2
67	HD61421			21 24 41		0 14 E			33
68	COMP							"	2
69	HD61421			21 26 43		0 12 E			23
70	COMP							"	2
71	COMP							"	2
72	HD 62509	0739 12	28 16 04	22 33 03					35
73	Comp							"	2
74	HD 62509			22 35 28					48
75	Comp							"	2
76	HD 62509			22 37 50					8
77	HD 62509			22 38 50 ³⁸					19
78	HD 62509			22 39 25					11

dup at 84

Exp. Mtr. Seeing
 300
 400
 305
 300
 403
 75
 75
 75

p4 201

Date 1996 Feb 24/ps... Observers KK/SWT

Emulsion Batches:

.....
.....
.....Exp. Mtr. Seeing
Spectr. Temp. ...
Focus
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison		Exp. Mtr.	Seeing
								Type/Filter	Exp.		
CE108 79	Comp							ThAr	2		
80	Comp			22 48				"	2		
81	HD 99028	11 08 43	11 04 49	21 48 ⁵⁸					276	75	6"
82	Comp							ThA	2		
83	HD 99028	11 18 43	11 04 49	21 56 01					211	75	
84	Comp X							ThA	2		
85	HD 99028	"	"	22 01 ⁰⁵					219	75	
86	Comp							ThA	2		
87	bias (4)								—		
88	comp							ThA	2		
89	HD 103045	11 47 13	+38 26 10	22 14 09		3 06 E			1965	75	
90	COMP							ThAr	2		
91	HD 103045			22 48 39		2 34 E			1820	75	5"
92	COMP							ThAr	2		
93	BIAS (4)			23 20					—		

^{CLD}
 Spectr. Temp. -100°C Dome Temp./Hum. $+3.3/46\%$ Transparency Conditions *clear* 202

Focus 230

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1 ccd fnt.

File	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2											West wind	
	2												
276	2	75	6"	4.03	F2IV						KK		
	2												
211	2	75		(BSC 3.93)	F2IV						KK		
	2												
217	2	75									KK		
	2												
	2												
	2									1			
	2									3			
1965	2	75		6.45 ^v	G8V _p					4	KK	IAU Std. Vel.	
	2									3			
120	2	75	5"	"	"					4	KK		
	2									3			
	2									1			

pg #5 203

Date 1996 February 24/25 Observers KK/Smt

Emulsion Batches:

.....

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

Plate No.	Object	R. A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE10894	COMP							ThAr	2
95	HD116656	13 19 54	+55 26 51	23 31 24		3 51 E			115
96	COMP							"	2
97	HD116656			23 36 09		3 40 E			485
98	COMP							"	2
99	HD116657	13 19 55	+55 26 39	23 46 54		3 26 E			694
CE10900	COMP							"	2
01	COMP							"	2
02	HD8890	01 22 34	+88 46 26	00 19 14		8 07 W			114
03	COMP							"	2
04	HD8890			00 22 44					62
05	COMP							"	2
06	HD8890			00 25 25		8 14 W			68
07	COMP							"	2
08	BIAS(4)			00 30					

Exp. Mtr. Seeing

305

005

423

40

300

50

pg #6 205

Date 1996 February 24/25 Observers KK/Smt

Emulsion Batches:

.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE10909	COMP							ThAr	2
10	HD137909	15 23 42	+29 27 01	00 37 41		4 38 E			690
11	COMP							ThAr	2
12	HD137909			00 50 47		4 25 E			690
13	COMP							"	2
14	HD137909			01 03 59		4 13 E			635
15	COMP							"	2
16-25	FLAT x10					2 30 W	+13°	Tung	1
26	BIAS(4)			01 32					-
27/28	INBOARD/OUTBOARD					"	"	ThAr	2/2

Exp. Mtr. Seeing

390

300 6"

335

Spec. Temp. -100.5°C Dome Temp./Hum. $+7.3^{\circ}\text{C}/.51.4\%$ Transparency Conditions .. clear... still... gusty... 206

Focus 23.0

Spec. Temp. Dome Temp./Hum. $+3.0^{\circ}\text{C}/.53.7\%$ @ focus test. 0 0 256 1024 & 1 ccd test.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1				ECHELLE 18.60	300 lines/mm 5800	60 μm W 40 μm H	6300 \AA	3			
190	320	$\sqrt{3.160}$	FOP					4	KK	B Co Be	
2								3			
690	300	6"	"					5	KK		
2								3			
635	335	"	"					5	KK		
2								3			
1						60 μm W 600 μm H FOR FLATS		2			7.7K
-								1			
2/2						60 μm W 40 μm H		7/8	focus test	0 0 128 1024 8, 1 ccd test. set a bit cool, outboard is too strong. 3/2 prob good.	

pg #1 207 Sun 1mon

Date ... 1996 Feb 25/26... Observers RH/Tn/Snt.....

Emulsion Batches:

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CCO
 Spectr. Temp. ...
 Focus 23
 Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce 109 ^{29/30}	Inboard / OUTBOARD					2 22 W	+8°	ThAr	3/2
31	BIAS(4)			18 50					—
32	COMP							ThAr	2
33	HD22484	03 31 46	+00 05 04	18 53 16		1 36 W			985
34	COMP							"	2
35	COMP							"	2
36	HD22468A	03 31 39	+00 15 44	19 16 27		1 56 W			800
37	COMP							"	2
38	HD22468B	"	"	19 31 45		2 39 W			2402
39	COMP							"	2
40	HD 22 468 A	"	"	20 14 18		2 55 W			826
41	Comp							"	2
42	BIAS(4)			20 30					—
43	COMP							"	2
44	HD20902	03 17 "	+49 30 19	20 35 55		3 17 W			125

Exp. Mir. Seeing

No. +/rev

350 3"

69 3"

7 3"

57

870

CCP Spectr. Temp. -99.9°C Dome Temp./Hum. 4.0°C $42.3\% \text{H}$ Transparency Conditions *mostly clear* 208

Focus 230

Spectr. Temp. Dome Temp./Hum. *c lambda*

Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3/2	no filter				Echelle 18.60	0300 / dmm 15800	60 μm 400 μm	6300A	7/8	focus test	0 0 128 1024 8 1 T = 4.3°C, set a bit cool but T should drop below 0	
-									1		0 0 256 1024 4 1 late start because CCP was warm	
2									3		exp meter was balanced.	
985	350	3"	4.28	F9 II-V					4	Std. Vel		5.2K
2									3			
2									3			
800	69	3"	5.78	G9 V					5	KK Vis Bin	brighter & SE well separated	1.2K
2									3			
2402	7	3"	8.13	K6 V					6	KK Vis Bin	fainter & NW well separated	500K
2									3		But some contamination by A for short times	
826	57		5.78	G9 V					5	KK Vis Bin	brighter as gain	
2									3			
-									1			
2									3			
125	670		1.79	F5 Ib					4	KK		8.5K

Pg # 2 ²⁰⁹
Sun / Mon

Date 1996 February 25/26 Observers [KK] / Tn / Smt

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CE10945	COMP							ThAr	2
46	HD20902	03 17 4	+49 30 19	20 39 10	3 20 W	3 20 W			107
47	COMP							"	2
48	HD20902			20 42 25		3 24 W			115
49	COMP							"	2
50	Comp							"	2
51	HD32147	4 55 51	-05 52 16	20 49 55		2 11 W			1100
52	Comp							"	2
53	HD32147	"	"	21 09 34		2 31 W			1100
54	Comp							"	2
55	BIAS(4)			21 30					-
56	COMP							"	2
57	HD50635 A	06 49 00	+13 18 18	21 35 55		0 48 W			150
58	COMP							"	2
59	HD50635 B	"	"	21 40 49		1 28 W			2300

L.C.D.
Spectr. Temp. ...
Focus?
Spectr. Temp. ...

Exp. Mtr. Seeing

1" filter

640

630

5"

53

4.5"

54

55

4.5"

55

5.3"

CCD Spectr. Temp. -100.6°C Dome Temp./Hum. $+2.5^{\circ}\text{C}/43.9\%$ Transparency Conditions ... clear 2/10...

Focus 230

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1 CCD fast

Comparison Filter Exp.	Exp. Mtr.	Seeing	✓ Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality MAG
2	no filter*				ECHELLE 18.60	300 μm .5800	60 μm W 400 μm H	6300 \AA	3			400
107	640		1.79	F5Ib					4	KK		6.6K
2									3			
115	630	5"	"	"					4	KK		
2									3			
2									3			
1100	53	4-5"	6.21	K3V					5	KK ppm		1.1K
2									3			
1100	54		"	"					5	KK		
2									3			
									1			
2									3			
150	55	4-5"	4.74	F0Vp					4	KK Vis Bin	brighter and NW	760
2									3			
23	45	5-3"	7.68	G6V					5	"	farther and SE seeing is getting worse.	790

pg # 3 21st Sun/Mon

Emulsion Batches:

Date 1996 February 25/26 Observers [KK]/Tn/Smt

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE10960	COMP							ThAr	2
61	HD50635 A	06 49 00	+13 18 18	22 2100		1 33 W			203
62	COMP							"	2
63	BIAS(A)			2226					
64	Comp							"	2
65	HD 56986A	7 14 09	22 10 00	22 29 59		1 14 W			61
66	Comp							"	2
67	HD 56986 B	"	"	22 33 14		1 54 W			220
68	Comp							"	2
69	HD 56986A			23 12 02		1 57 W			68
70	COMP							"	2
71	Comp							"	2
72	HD 68257 AB	8 06 29	17 56 58	23 17 33		1 17 W			463
73	Comp							"	2
74	HD 68255 C	8 06 29	17 56 58	23 27 12		1 40 W			1259
75	Comp							"	2

Exp. Mtr. Seeing

no filter

60 3.4"

75 4"

30 3.8"

68

130 4.5"

125 4"

CCD Spectr. Temp. ... -100.0 °C ... Dome Temp./Hum. +2.3°C / 43.4% Transparency Conditions . a bit of cloud to S ... 212

Focus 230

Spectr. Temp. Dome Temp./Hum. +1.1°C / 46.9% H

0 0 256 1024 4 1 cd/hint

Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2	no filter				ECHELLE 18.60	300 l/mm .5800	60µW 400µH	6300Å	3			
	203	60	3.7"	4.74	FOVp					4			850
	2									3			
										1/2			
	2									3			
	61	75	4"	3.55	FOIV					2			1.1K
	2									3			
	200	30	3.8"	8.18	K3V					6		poor seeing at end of exposure Fairly well separated	680
	2									3			
	68	68		3.55	FOIV					2			1K
	2									3			
	2									3			
	433	130	4.5"	5.05	F8/GOV?					4			1.7K
	2									3			
	175	125	4"	6.02	dG2					5			1.6K
	2									3			

pg#4 213
SW/MON

Emulsion Batches:

Date 1996 Feb 25/26..... Observers [KK]/Th./Smt.....

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.....

Exp. Mtr. Seeing
Spectr. Temp. ...
Focus... 236
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE10976	HD68257AB	8 0629	+175658	234945		1 50 W			508
77	COMP							ThAr	2s
78	BIAS(4)			00 00					-
79	Comp							ThAr	2s
80	HD62509	7 3912	+281604	00 04 51		2 24 W			49
81	"	"	"	00 06 47		2 26 W			69
82	"	"	"	00 08 30		2 28 W			66
83	COMP								
84	COMP							ThAr	2s
85	HD79210	9 0742	+530700	00 16 08		1 36 W			1800
86	Comp							"	2
87	HD79211	9 0742	+53 07	00 49 46		2 24 W			2670
88	COMP							"	2
89	HD79210	9 0742	+53 07	01 36 08		3 07 W			2425
90	Comp							"	2
91	BIAS(4)			02 20					-

Exp. Mtr. Seeing
no f. exp
126 4.5
475
470
560
58 4"
55 5"
47 5"

Spectr. Temp. ^{CCD} -101.8°C Dome Temp./Hum. 71.0°C / 48.5% H Transparency Conditions .. Fine 214..

Focus 230

Spectr. Temp. Dome Temp./Hum. 0 0 256 1024 4 1 CCD ^{PF}

Filter	Exp.	Exp. Mtr.	Seeing	P _w Mag.	Sp.	CCD Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	508	no filter 126	4.5"	5.05	F8 +G01	Echelle 18.60	D300 lml/one 15800	60u Width 400u H	6300A	4	KK Vis Bin		
	25									3			
	-									1/2			
	25									3			
	49	475		1.14	K0116					2	KK Std		6.6K
	67	470		"	"					2	"		
	66	560		"	"					2	"		
	7									3/3			
	1800	58	4"	7.64	MOV					5	KK Vis Bin	sl. brighter and W faint compared to last	1.5K
	2									3			
	2670	55	5"	7.74	MOV					6	"	sl. fainter and E telescope got stuck on small step for a few minute or so.	↑ same strength
	2									3			
	425	47	5"	7.64	MOV					5	"	sl. brighter and W again. seeing must be bad.	
	2									3			
	-									1/2			

pg #5 215

Date 1996 February 25/26 Observers [KK] / Tn / Smt

Emulsion Batches:

.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE10992	COMP							ThAr	2
93	HD66751	07 59 54	+70 00 00	02 25 40		4 36 W			931
94	COMP							"	2
95	HD66751	"	"	02 42 29		4 54 W			1000
96	COMP							"	2
97	COMP							"	2
98	HD8890	1 22 34	88 46 26	03 08 25		10 57 W			120
99	COMP							"	2
cell000	HD8890			03 11 52					191
01	COMP							"	2
02	HD8890			03 15 39		11 06 W			118
03	COMP							"	2
04	COMP							"	"
05	HD99028	11 18 43	+11 04 49	03 23 44		2 15 W			600
06	COMP							"	2
07	HD99028			03 35 19		2 26 W			600

Exp. Mtr. Seeing
 no filter
 60 5"
 60
 520
 600 4"
 500
 600 5"
 607

CCD Spectr. Temp. ... -1.01... 6°C

Dome Temp./Hum. +0.2°C / 50.1%

Transparency Conditions ... a few clouds, thru. though

Focus ... 230

216

Spectr. Temp.

Dome Temp./Hum.

0 0 256 1024 4 1 CCD test.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	V _{Mag.}	Sp.	(CCD) Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2	no filter				ECHELLE 18.60	300 l/mm .5800	60u W 400u H	6300A	3			max 104
	9%	60	5"	6.48	DF8					2	KK	Telescope East side strars	970
	2									3			
	1/100	60		4	4					2			
	2									3			
	2									3			
	120	520		2.5	F8Ib					4	KK	delta -001220 delta +00024 Reversed. ever so slight	5.3K
	2									3			
	14	600	4"							4	KK		
	7									3			
	118	500								4	KK		
	2									3			
	"									3			
	100	280 280	5"	4.03	F2IV					5	KK	i Leo.	3K
	2									3			
	600	307								5	KK	more counts, less signal.	2.9K

Pg # 6 217

Date 1996 February 25/26 Observers [KK]/Tn/Smt

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11008	COMP							ThAr	2
09	BIAS(4)			03 53					-
10	COMP							"	2
11	HD120476A	13 44 36	+27 29	04 03 26		0 49 W			1800
12	COMP							"	2
13	HD120476B	"	"	04 35 03		1 19 W			1697
14/15	Comp x 2							"	2
16	HD120476A	"	"	05 31 07		2 17 W			1800
17	Comp							"	2
18	BIAS(4)								-
19	COMP							"	2
20	HD137909	15 23 42	+29 27 01	06 06 57		0 50 W			361
21	COMP							"	2
22	HD137909			06 14 15		0 58 W			363
23	COMP							"	2
24	HD137909			06 21 28		1 04 W			340

Spectr. Temp. ...

Focus.....?

Spectr. Temp. ...

Exp. Mtr. Seeing

39 3-4"

19 3-4"

17 3-4"

300 5"

300

300

Spectr. Temp. Dome Temp./Hum. - 0:6°C / 57.5% Transparency Conditions .. some thin cloud @ 0° and S. of there. 218

Focus 230

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1 ccd/nt

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2					ECHELLE 18.60	300 λ /mm .5800	60 μ W 400 μ m	6300 \AA	3		white 2nd attempt. CCD error prevented 1st attempt so I took another comp to be safe.	
	-									1			
	2									3			
1800		39	3"-4"	7.59	dkb					4	KK Vis Bin	vsl. brighter and NNW separated	860
	2									3			
1697		19	3"-4"	8.03	2 N/A					5	"	v sl. fainter and SSE CCD started warming > -90°C	
	2									3		LN ₂ TOPPED UP AFTER THIS COMP	
1800		17	3"-4"	7.59	dkb					4	"		
	2									3			
	-									1/2			
	2									3			
71		300	5"	3.66	F0p					2	KK	sky getting a bit brighter now. 2.4K	
	2									3			
363		300		"	"					2	KK		
	2									3			
340		306		"	"					2	KK		

pg #1 22¹ Mon / Tues

Emulsion Batches:

Date .1996.Feb.26/27. Observers [R.K.] / In. / Smt.....

.....

Exp. Mtr. Seeing
 Spectr. Temp. ...
 Focus ...: 230.
 Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CELL 0 ^{30/40}	Inbound (outbound) HARTMANN							THA	2/25
CE11041	BIAS(4)			18 35					
42	COMP							THA	25
43	HD8890	1 22 34	+88 46 26	18 45 28		2 38 W			150
44	COMP							"	2
45	HD8890	"	"	18 49 55					136
46	COMP							"	2
47	HD8890	"	"	18 53 57		2 48 W			134
48	COMP							"	2
49	COMP							"	2
50	HD4614A	00 43 03	+57 17 06	19 10 24		4 30 W			60
51	COMP							"	2
52	HD4614B			19 13 11		5 13 W			2430
53	COMP							"	2
54	HD4614A			19 56 14		5 16 W			60
55	COMP							"	2

320
 37
 375
 360
 62 4"
 3"
 3"

^{CCD} Spectr. Temp. -100.2°C Dome Temp./Hum. $+3.0^{\circ}\text{C} / 60\% \text{H}$ Transparency Conditions \dots Fine \dots 222

Focus \dots : 2.30 \dots

Spectr. Temp. \dots Dome Temp./Hum. \dots

Comparison date Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. ^{CCD}	x Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2/23					Echelle 18-60	0300 bl/min 15800	60 μ W-277 100 μ H	6300A	7/8	focus	0 0 ¹²⁸ 1074 8 1	
									1/2		0 0 256 1074 4 1	
23									3		telescope on E side of pier	
150	320		2.5	F8Ib					4	KK	4 μ -00 1472 85 +00 0237	
2	37								3			
136	375								4	KK		
2									3			
134	300								4	KK		
2									3			
2									3		telescope still on E side	
60	62	4"	3.45	G0V					5	KK Vis Bin		1.8K
2									3			
830	55	3"	7.51	K7V					6	"	spectral type difference in colour really noticeable.	2.0K blue end some red end stars
2									3			
60	83	3"	3.45	G0V					5	"	better focus this time.	
2									3			

pg # 2 223

Date 1996 February 26/27 Observers [KK]/Tn/Smt

Emulsion Batches:

.....

Spectr. Temp. ...
 Focus ...: 230
 Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CE11056	BIASCA)			19 59					-
57	COMP							THAr	2
58	HD17332 A	02 41 48	+18 59	20 12 18		3 53 W			1200
59	COMP							"	2
60	HD17332 B	"	"	26 34 25		4 22 W			1639
61	COMP							"	2
62	HD17332 A			21 03 21		5 00 W			2200
63	COMP							"	2
64	BIAS(4)			21 42					-
65	COMP							"	2
66	HD20902	03 17 11	+49 30 19	21 49 33		4 36 W			90
67	COMP							"	2
68	HD20902			21 52 56		4 38 W			94
69	COMP							"	2
70	HD20902			21 56 39		4 42 W			90
71	COMP							"	2

Exp. Mtr. Seeing

34 4"

18 4"

30

120 3"

240

Spectr. Temp. Dome Temp./Hum. $+0.5^{\circ}\text{C} / 62.2\%$ Transparency Conditions *Slightly hazy* 224

Focus: 2.30 To increasingly cloudy

Spectr. Temp. Dome Temp./Hum.
c d 0 0 256 1024 4 1 ccd/m²

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
-						ECHELLE 18.60	300 μm .5800	60 μm 400 μm	6300A	1/2			MAX ADY
2										3		telescope still on E side	
1200		34	4"	7.40	df9					4	KK Vis Bin	sl. brighter and SE	570
2										3			
1624		18	4-3"	8.20	N/A					2	"	sl. fainter and NW cloud at end	390
2										3			
224		30		7.40	df9					4	"	sl. brighter and SE strongest at 3 obviously.	700
2										3			
-										1			
2										3		telescope still E side of pier.	
90		620	3"	1.79	F5Ib					6	KK		7.5K
2										3			
94		740	"	"	"					6	KK		9.3K
2										3			
90		600	"	"	"					6	KK		8.6K
2										3			

pg #3 225

Date 1996 February 26/27 Observers [KK] / Tn / Smt

Emulsion Batches:

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11072	COMP							ThAr	2
73	HD59438A	07 24 49	-14 47 08	22 10 34		W			769
74	COMP							"	2
75	HD59438B	"	"	22 21 39		1 15 W			581
76	COMP							"	2
77	HD59438B	"	"	22 38 37		1 20 W			161
78	COMP							"	2
79	BIAS(4)			22 42					-
80	COMP							"	2
81	HD66751	07 59 54	+70 00 00	22 49 14		~ 1 ^h W			447
82	COMP							"	2
83	COMP							"	2
84	HD137909	15 23 12	+29 27 01	23 05 07		E			783
85	COMP							"	2
86/95	FLATS x 10			23 36		2 18 W		Tung	1
96	BIAS(4)			23 44					

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

Exp. Mtr. Seeing

1000

26 2.0"

0 4"

?

15 3.4"

130 4.5"

Spectr. Temp. Dome Temp./Hum. $-0.5^{\circ}\text{C}/68.4\%$ Transparency Conditions *hazy, cloud to the far S. 256*
 Focus $\dots\dots 230$ \rightarrow mostly cloudy.
 Spectr. Temp. $\dots\dots -100.9^{\circ}\text{C}$ Dome Temp./Hum. $-00.3^{\circ}\text{C} \dots 66.3\% \text{H}$
 0 0 256 1024 4 1 CCD flat

Exp.	Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2	No filter				ECHELLE 18.60	3002/mm .5800	60μW 400μH	6300Å	3		telescope still on E side	
76	26	3-4"	6.40	FTV					4	KK Vis Bin	sl. brighter and S, not really "Vis" Bin, guiding on S half of fuzzy light patch.	500
2	0	4"	7.50	N/A	But looks "K"				5	"	cut short - useless. Some cloud, may or not resolved.	
2		?	6.40	FTV					4	"	cleared during comp before hand. cloud again	
2									3			
2									1			
2									3		telescope still on E side.	
147	15	3-4"	6.48	DF8					6	KK	clear here for now	450
2									3			
2									3			
78	130	4-5"	3.66	Fop					2			2.4K
2									3			
19									1/2			6.9K

[600u # for FLats only]

Pg # 4 ²²⁻⁷ Mon/Tues

Emulsion Batches:

Date 1996..Feb..26/27.. Observers [K.K.]/T.R./Sont.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
Ce1097	Comp (Lost)							Thr	2s
Ce11097	HD 99028	111843	+11 0449	00 0917		0 54 E			700
98	Comp							"	2s
99	HD 99028	"	"	00 2225		0 29 E			1452
Ce11100	Comp							"	2s
01	HD 99028	"	"	00 4803		0 22 E			353
02	Comp							"	2s
03	BIAS(A)			00 58					
04	Comp							"	2
05	HD 89484	10 1428	202051	00 5920		0 50 W			157
06	Comp							"	2
07	HD 89485	10 1428	202049	01 0324		0 57 W			324
08	Comp							"	2
09	HD 89484	10 1428	+202051	01 1012		1 01 W			167
10	Comp								2

Spectr. Temp. ...

Focus ... 1230

Spectr. Temp. ...

Exp. Mtr. Seeing

10-12

166 34'

190 45'

180 34'

300 34'

370 3'

420

Spectr. Temp. Dome Temp./Hum. -00.2°C $66.8\% \text{H}$ Transparency Conditions *mostly cloudy* 228
 Focus 1230
 Spectr. Temp. Dome Temp./Hum. *Topup complete by 00:05* \rightarrow *clear*

Comp. Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2	no filter				Echelle 18.60°	0300 In/Min .5800	60u W 400u H	6300Å	3			MAX ADV
	70	166	3.4"	403	F2II					2	K.K. pym		2.5K
	25									3			
	152	190	4.5"	"	"					2			2.6K
	25									3			
	353	180	3.4"	"	"					2			
	25									3			
										1/2			
	2									3			
	157	300	3.4"	2.22	K1 III					4		Brighter of pair good separation	5.2K
	2									3			
	321	370	3"	3.47	G7 III					5			5.2K
	2									3			
	167	420		2.22	K1 III					4			10K
	2									3			

pg #5 229

Date 1996 February 26/27 Observers [KK]/Tn/Smt.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE1111	COMP							ThAr	2
12	HD131156A	14 46 46	+19 30 57	01 21 28		3 05 E			960
13	COMP							"	2
14	HD131156B			01 39 26		2 19 E			2654
15	Comp							"	2
16	HD131156A			02 25 09		2 06 E			1064
17	Comp							"	2
18	BIAS(4)			02 46					-
19	COMP							"	2
20	HD146361	16 10 56	+34 06 42	02 51 32		3 05 E			695
21	COMP							"	2
22	HD 146362	"	"	03 04 21		2 29 E			1963
23	Comp							"	2
2A	HD146361	"	"	03 39 02		2 12 E			893
25	Comp								2
26	BIAS(4)			03 55					-

Spectr. Temp.

Focus 23

Spectr. Temp.

Exp. Mtr. Seeing

300 4"

87 3-4"

250

80 3-4"

86 3"

86 3"

83 4"

83 4"

Spectr. Temp. Dome Temp./Hum. - 0.8°C / 66.8% Transparency Conditions . clear again 230

Focus 230

Spectr. Temp. Dome Temp./Hum. - 1.3°C / 71.2% H

0 0 256 1024 4 1 cd 6h

Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	(C) Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2					ECHELLE 18.60	300 X/mm .5800	60uW 400uH	6300 Å	3			
	960	300	4"	4.74	G8V					4	KK Vis Bin	bright one, well separated - FAR TOO STRONG FOR B	4.7K
	2									3			
	2654	87	3"-4"	6.90	K5V					5	"	faint one, well separated.	2.4K
	2									3			
	1664	250		4.74	G8V					4	"	a bit of cloud.	
	2									3			
	-									1/2			
	2									3			
	15	80	3"-4"	5.58	G0V					6	"	ADS 9979 A, brighter NE	1.2K
	2	est ± 5"	3"-4"	5.58	G0V					3			
	1963	88	3"	6.59	G1V					2	"		1.7K
	2					6.59 G1V				3			
	993	83	4"	5.58	G0V					6	"		
	2									3			
	-									1/2			

pg. # 6 231

Date 1996 February 26/27 Observers [kk]/Tn/Smt

Emulsion Batches:

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE1127	COMP							ThAr	2
28	HD138918	15 30 01	+10 52 23	04 00 29		1 21 E			245
29	COMP							"	2
30	HD138917	15 30 01	+10 52 19	04 06 43		1 07 E			731
31	COMP							"	2
32	HD138918	15 30 01	+10 52 23	04 20 11		0 59 E			410
33	COMP							"	2
34	COMP							"	"
35	HD8890	01 22 34	+88 46 26	04 34 30		12 27 W			239
36	COMP							"	2
37	HD8890	"	"	04 40 11		12 37 W			512
38	COMP							"	2
39	HD8890	"	"	04 50 11		12 45 W			384
40	COMP							"	2
41	BIAS(4)			04 59					-
42/43	INBOARD/OUTBOARD					2 04 W	+17°	ThAr	3/2

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

Exp. Mtr. Seeing

18 3"

05 3"

11 4"

136 4"

10 N/A

1 "

Spectr. Temp. Dome Temp./Hum. -1.4°C / 75.5% Transparency Conditions half clear, half cloud... 232
 Focus 230 → cloud.
 Spectr. Temp. Dome Temp./Hum. -1.6°C / 81.1% @ focus test. 0 0 256 1024 4 1

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2				ECHELLE 18.60	300 2/min .5800	62.4 400.4	6300A	3			
245	118	3"	4.20	F0 IV				4	KK Vis Bin	ADS 9701A, brighter Nas, well separated.	1.5K
2								3			
731	105	3"	5.20	dFO				5	"	ADS 9701B, fainter and S well-separated.	
2								3			
410	111	4"	4.20	F0 IV				4	"	ADS 9701A again cloud at end.	
2								3			
"								3		telescope on E side of pier.	
739	136	4"	2.5	F8 Ib				6	KK	cloudy all over sky. a few holes here.	
2								3			
512	10	N/A	"	"				6	KK	thick cloud, hardly visible with intensifier.	
2								3			
384	1	"	"	"				6	KK	a hole? sucked in, only there for a sec.	
2								3			
-								1			
Ar 3/2								7/8	focus test	end of night.	

page 1 ~~note~~ 233 CC 392 43-4A perhaps undocumented daytime tests.

Date 1996 Feb. 28/29. Observers [Blm.] / T. n. S. ent.....

Emulsion Batches:

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CCO
 Spectr. Temp. ...
 Focus ... 7.06...
 Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
* CC 392 ^{45/} / 46	Inboard / outboard					0 0	+41°	FeAr Clear	40/50
47	BIAS (4)			03 39					—
48	COMP							"	60
49	HD120315	13 43 36	+49 48 45	03 43 49		0 14W			110
50	COMP							"	60
51	COMP							"	60
52	HD138629	15 28 12	+41 14 19	03 54 01		1 01 E			1200
53	COMP							"	60
54	BIAS (4)			04 18					—
55	COMP							"	60
56	HD148283	16 21 56	+37 37 18	04 23 23		1 14 E			1916
57	COMP							"	60
58	COMP							"	60
59	HD136202	15 14 12	+02 08 37	05 05 38		0 17 W			839
60	COMP							"	60
61	BIAS (4)			05 22					

Exp. Mtr. Seeing

3639
544

30.0K 15"

5.4K 10"

52K 12"

26K 10"

^{CCD} Spectr. Temp. -100.2°C Dome Temp./Hum. -10.0°C $55\% \text{H}$ Transparency Conditions *Clarity by 2:30* 2.34
 Focus 7.06 *horrendous seeing.*

Spectr. Temp. Dome Temp./Hum. -12.7°C $57\% \text{H}$
 $c \delta$ $412 \ 0 \ 50 \ 1074 \ 4 \ 1 \ \text{CCDFast}$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 filter				CASS CCD	1800 $\mu\text{m}/\text{mm}$ (#4589)	30 μm	4464B $\pm .5A$	3/4	focus test	Set cool but spec T should drop a lot.	MAX ADU
								1			
								5			
30.0K	15"	\checkmark 1.86	B3 \checkmark					6	Bln	γ UMa <i>centred low</i>	8.6K
								7			3.1K
								8			
15.4K	10"	\checkmark 5.09	A5 \checkmark			S/N $\sim 305:1$		9	Bln shell	seeing is still awful. centred on col 27	4.0K
								10			
								11			
15.2K	12"	\checkmark 5.52	A5 \checkmark			S/N $> 300:1$		12	Bln Shell		3.5K
								13			
								14			
10.6K	10"	\checkmark 5.06	F8 \checkmark			S/N $> 240:1$		15	Std vel		3.5K
								16			3.0K
								1/2			

pg#2 ~~Wed~~ / Thurs

Date 1996 Feb 28/29..... Observers [B/n] / T.n. / Smt.....

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC39262	Comp							FeAr Clear	60s
63	HD 152614	16 49 17	+10 19 48	05 27 01		1 02 E			490
64	Comp							"	60s
65	Comp							"	60
66	HD 158352	17 23 44	+00 24 42	05 41 29		1 06 E			1491
67	Comp							"	60
68	COMP							"	60
69	HD 164852	17 58 07	+20 50 00	06 12 12		~ 1 20 E			691
70	COMP							"	60
71	BIAS (4)								-
72/80	FLATS x 9					~ 1 ^h E	+20°	TUNG Clear	13
81/82	INBOARD / OUTBOARD					"	"	FeAr Clear	40/50
1996 Feb 29 / MAR 1st									
CC39283/84	Inboard / Outboard			Hanilton 1846				FeAr Clear	

Exp. Mtr. Seeing

B639
Filter

14.8K 7"

14.5K 5"

10.9K 6"

11.6K 6"

Spectr. Temp. Dome Temp./Hum. -13.2°C / $58.5\% \text{RH}$ Transparency Conditions *mostly clear* 236

Focus 7.06

Spectr. Temp. Dome Temp./Hum. -13.9°C / $58.9\% \text{RH}$ ^{Q focus} test. 412 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	1800k/mm G=4589	306a	4464A	17ci			3.0K
14.8K	7"	^B 4.30	B8V					18	dbl line	SB Bln	
								19			
								20			
14.5K	5-10"	^B 5.66	A8V					21	A shell Bln		3.7K
								22			
								23			
10.9K	6	^B 5.19	B3IV					24	Bln SB4	sky starting to get bright.	
								25			
								1			
								26			
								26	focus test	right in focus	
								27/28			
T = -6.1°C	F = 6.93			CASS CCD	1800k/mm G=5950	306a	6399A	3/4	focus test	for Feb 29/mar 1	
										But no observing after all.	

237
pg #1~~Flare~~ FI/SATDate .. 1996. ~~FEB 29~~ / MAR 1 / 2 Observers Bla. J. T. ~~Le~~ (Vys. ^{H₂} pgm)

Emulsion Batches:

.....
..... FOR Compound FLAT
..... GG385 Filter

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC392 ⁸⁵ 86	Inboard / Out Board HARTMANN			18 48				Feltr Clear	40/40
87	BIAS(4)			18 52.					
88	Comp								40s
89	HD 34029	05 0918	+45 54	19 04 52		0 12 W			16s
90	Comp							Feltr Clear	40s
91	Comp							"	40
92	HD 36395	05 2618	-3 41 00	19 15 25		0 14 W			42s
93	Comp							"	40s
94	Comp							"	40s
95	AE +54 231 -89	03 33 54	+54 53 34	19 31 45		2 30 W			988
96	Comp							"	40s
CC39300	BIAS(4)	Done Later.		20 25					
CG 80388/91	CG 80388/91 HD 52860		[6 57 39]	17 55 21				4x	67ms
CG 80 ⁹² /93	HD 52860					0 37 E		2x	133ms
CC39297	Comp								
98	HD 87901	10 03 03	112 27 22	20 19 36		3 26 E			24
99	Comp							Feltr Clear	40

CO
Spectr. Temp. ...Focus G₁

Spectr. Temp. ...

Exp. Mtr. Seeing

T = -42C

6-9
F. 1/100 inCont. Power
IT 1

560 1/2"

165 1/2"

1/2"

1/2"

FK

CO₂ Spectr. Temp. -101.0°C Dome Temp./Hum. -4.2°C 57.6% Transparency Conditions ... Hazy - increasing cloud.

Focus 6.93.....

238

Spectr. Temp. -100.3°C Dome Temp./Hum. -4.3°C 57.4%

397 0 50 1024 4 1 CCD/FIT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C455CCD	1200bl/mm G=4497	306 μ	6490A $\pm 1\text{A}$	3/4 1/2	Focus test		
BG39 F. Herbig (cont. from IT!)								5		(Fast sweep exp) Telescope encoder NORMALIZATION	
		0.09	G8III+F					6			12K
								7			2.7K
								8			
560	1.2'	7.97	M1					9	Murcy Std.		7.5K
								10			
165	1.2'	11.0	MO					12	Vys 424 Vys Hd pgn	still strong H α em pgn	H α em 7.1K
								13			2.4K
								11/2			
	great!	6.34	B9III	ALT 82 $^{\circ}$		Above 306 μ slit				Seeing Test, Done west medium SW wind. [medium ^{cloud} uniform]	
	1.2'							16			
5K		1.35	B7V					17	Telluric std.	medium cloud	
								18		A.R. mass=1.72	

239
p442 Fri/Sat

Date 1996 MAR 1/2 Observers Tn.. [^{Ha}Vys. F.M.]

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc39301/30	FLATS x 9					0318E	+12°	TUNG Ap 1/4	25
10	Comp							FE+ CLEAR	40s
11	^{BD} FE +33 1646 B	08 0234	+3306 25	20 4127		0 48 E			
12	Comp							"	40s
13	^{BD} FE +33 1646 A	n	"	21 0146		0 16 E			1688s
14	Comp							"	40
15	BIAS(4)								
16	Comp							"	40s
17	Vys 516 ?	⁰⁸⁰⁴ 08 0824	^{B1950} +52 05	21 5927		0 32 W			1290
18	Comp							"	40s
19	BIAS(4)								
20	Comp								
21	Vys 39 ?	11 2206	+40 1500	223931		2 16 E			346
22	Comp								
cc39320/21	Inboard / out board					0 0	+32°	FE+ CLEAR	40/40

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

Exp. Mtr. Seeing

8639
F.1102
500
in

391 1.2"

500 1.2"

350 1.2"

100 1.2"

T:-45

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions cloudy 240..

Focus ~~7.03~~ 7.03Spectr. Temp. ^{LED} -100.5°C

Dome Temp./Hum. ... -4.5°C ... 59.0% H

MAX

Exp. Mtr.	Seeing	Phot Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter still stuck in				CHSS CCD	1200 1/4/mm G-4497	306 μ	64-90A	19c			11K
391	1.2"	12.1	MO					14c		sky hazy, moon nearby	
								15	Vys 250 B?	The NE and brighter one	
								16		Good H α emission	3.7K
500	1.2"	13	M					20	Vys 250 A?	The SW and fainter one	1.7K
								21		Good H α even (+ Sky lines inc solar)	
								1/2			
								22			
350	1.2"	10.3	MO					23	Vys 516 hopefully	DRK 000015? AS-00 0200	
								24		position not too great either	
								1/2		Looks exactly like BD +331646B	
										Also similar to BD	
700	1.2"	9.4	MO					25	Vys 39	DRK 000015? AS-00 0040	
								26		Too cloudy	
										previous "FeNe" comparison saturated a bit. (exposure was poor too)	
T = -4.5		F set = 7.03							27/28	focus test	

241
Pg #1

Sun / Mon

Date .. 1996 MAR 31/4 Observers .. Tu... [V. G. H.]

Emulsion Batches:

.....

.....

..... ORDER Sep... GG 385 FOR Comp only

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc393 ^{20/23}	INBOARD / OUTBOARD HARTMANN					0 0	+40°	Rtr clear	40/42
cc39324	BIAS(4)								
25	Comp							Rtr clear	40
26	HD 36 395	05 2618	-03 4100	18 50 14		0 06E			283
27	Comp							"	40
28	Comp							"	40
29	Fld star SW of AC-4 2410 -76			19 04 28		2 36W			482
30	Comp UYSA13							"	40
31	AC-4 2410 -76	03 02 34	-04 21 13	19 20 27		3 01 W			1031
32	Comp							"	40
33	BIAS(4)			19 41					
34	Comp UYSA 238							"	40
35	AC+72 3338	06 32 57	+71 59 24	19 56 14		0 03W			1236
36	Comp							"	40
37	Comp							"	40

CCO
Spectr. Temp. ...

Focus ... 7.04

Spectr. Temp.

Exp. Mtr. Seeing

16 5/42

1250 4"

360

450 4"

450 3"

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. -7.7°C 57.3% H Transparency Conditions *Clearing mostly* 24.2
 but gusty WNW wind

Focus 7.04

Spectr. Temp. Dome Temp./Hum. *cj*

397 050 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CHSS CCD	1200 l/mm G=4497	306 μ	6490 I.A	3/4 1/2	Focus	Just slightly set cooler at Row #360	
								5			2.5K
1250	4"	7.97	M1				6490 ^D	6	Maury Stavel	Sky still slightly bright	2.7K
								7			
								8			
360		2.10	Lock Kike					9			
								10			
450	4"	10.5	MO					11	Vys H α pgm	no H α em (Last H α deck) no + previous 6 done.	
								12			
								1/2			
								13	A 2000 10 A S100 0024	used for Vys 238 offset	
450	3"	11.0	MO	Looks Like it				14	Vys 238 H α pgm	Fainten 3 TAD seen 2-3' to NE no H α em seen	S/N 100/1
								15			
								16			

243
p#2

Sun/Mon

Date 1996 MAR 3/4..... Observers Tm... [Vys, Hu].....

Emulsion Batches:

.....
.....
..... GG 385 Filter

Plate No.	Object	R.A. 1900 1950 + p ^{er} motion 50yrs	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing
CC39338	* wrong? BD+59 1056	07 0754	+59 21 46	20 34 32		0 16 W			1365	510	3.4"
39	Comp							FeAr check	40s		3
40	BIASCA)			21 01							
41	Comp							"	40		
42	Vys 494A	B 1950 + p ^{er} motion 50yr 07 1912	35 59 55	21 09 14		0 38 W			1196	470	3"
43	Comp							"	40		
44	Vys 494B	"	"	21 33 39		1 05 W			1358	425	3"
45	Comp							"	40		
46	Vys 494A	"	"	21 59 52		1 26 W			1050	430	3"
47	Comp							"	40		
48	BIASCA)			22 23							
49	Comp							"	40		
50	Vys 23 BD+43 1827	B 1950 + p ^{er} motion 08 30 36	+42 43 58	22 28 08		0 49 W			1411	710	3.4"
51	Comp							"	40		
52	Comp							"	40		

Spectr. Temp. ...
Focus 7.04
CCP
Spectr. Temp. ...

Exp. Mtr. Seeing

No. 1140
510 3.4"

470 3"

425 3"

430 3"

710 3.4"

Spectr. Temp. Dome Temp./Hum. -9.0°C 55.1% H Transparency Conditions ... Fine ... Part. Full Moon ... 244

Focus 7.04

Spectr. Temp. -10.0°C 55.1% H Dome Temp./Hum. -10.2°C 63.0% H

S/N

Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality	
1365 510	3.4"	10.0	* MO	CASS CCD	1200 μm G=4497	306 μ	6490A	17	x? Vys	A 2 00 00 07 L S -00 01 06	Late, but MO? 100/1	
40	3							18		Star = 10th seen to west 25' Another to NORTH also		
								1/2				
								19				
470	3"	10.8	MO					20	Vys 494A	nasty the cosmic rays SE and brighter of pair	90/1	
								21		A 2 00 00 00 L S -00 01 00		
1358 425	3"	11.2	MO					22	Vys 494B	no the em fainter in NW one	85/1	
40								24		A 2 00 00 04 -00 00 39		
1050 430	3"	10.8	MO					20	Vys 494A	Reported, no the em		
40								24				
								1/2				
								24				
710	3.4"	9.8	MO	Looks slightly earlier?					25	Vys 23	A 2 00 00 05 L S -00 00 -21	
								27				
								27				

2459#3

Sun/Mon

Emulsion Batches:

Date 1946 MAR 3/A Observers T.M. [V.S. ~~H.M.~~].....
..... For Comp
..... G.G. 385 Filter

Plate No.	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 39353	HD 95735	10 57 54	+36 38 00	23 04 35		1 24 E			222
54	Comp							Felt clear	40
55	Comp							11	40s
			1950 + 50 yr P.M.						
56	BD+38 2037	09 25 48	+38 17 01	23 22 29		0 43 W			1061
57	Comp							4	40s
58	BINS(4)								
59/67	FLATS x 9					1 00 W	G.G. 385 F. 16 removed As no filter was used for	TUNG Ap 1/4 stellar	2s
CC 39468/69	In board/out board HARTMANN			00		0 0	+32	Felt clear	40/43
							Let G.G. 385 Filtered OUT for focus.		

Spectr. Temp. ...

Focus 7.04

CCO

Spectr. Temp. ...

Exp. Mtr. Seeing

10 Filter

1500

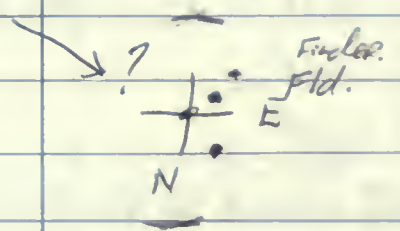
550 3"

Spectr. Temp. Dome Temp./Hum. Transparency Conditions ... *Slight haze* 246

Focus *7.04*

Spectr. Temp. Dome Temp./Hum. *70.3° 68% H*

Comp
5 Fil/2
Comparison
Filter Exp.
27
40
10s
161
40s
1/4 2s
1/2
1/3
fours

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>No Filter</i> 1,500		<i>7.48</i>	<i>M2</i>	<i>CHSS CCD</i>	<i>1200/n</i> <i>G4497</i>	<i>306u</i>	<i>6490A</i>	<i>28</i>	<i>Mag Std</i>	<i>Vgs 594</i>	
								<i>29</i>			
								<i>5c.</i>			
<i>550</i>	<i>3"</i>	<i>104</i>	<i>M0</i>					<i>6</i>	<i>Vgs 545</i>		
								<i>7</i>			<i>max</i>
								<i>2</i>			<i>11.5K</i>
								<i>3/4</i>		<i>Looks right on at</i> <i>Row # 360</i> <i>not much change in mag</i>	

247 #1 of 1 [Tue/Wed]

Date 1996 March 5/6... Observers E.V. S. / Smt.....

Emulsion Batches:

.....

CD
 Spectr. Temp. ...
 Focus 6.9
 Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC39370/71	INBOARD/OUTBOARD							Fed clear	60/60
72	BIAS x 4			0 37					-
73	COMP							"	60
74	H036395	05 26 18	-03 41	19 40 20		0 59 W			700
75	COMP							"	60
76	COMP							"	"
77	AC+51 2576-63	04 50 58	+50 47 35	20 08 22		2 09 W			1200
78	COMP							"	60
79-81	FLAT x 3					2 15 W	+51°	Tung clear	2

Exp. Mtr. Seeing

No. 1/12

2250 3"

35 3"

CCD
Spectr. Temp. ... -100.5°C....

Dome Temp./Hum. ... -2.9°C/74.0%

Transparency Conditions. cleared @ 18:30 248

Focus 6.95.....

@ focus test

FANS OFF (freezing rain was forecasted)

Spectr. Temp.

Dome Temp./Hum.

hazy down low on horizon
412 0 50 1024 4 1 ccd flat

Comparison Filter	Exp.	Exp. Mtr.	Seeing	V _{mag} Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		no filter				CASS CCD	1800 l/mm G=5163	30μm	5304d	3/4	focus test	just right.	
										1			
										5			
		2250	3"	7.97	M1					6	{V45} Mancy std vel.	V45 9, hazy here	1.2K over 2 cols
										7			
										8			
		535	3"	10.98	M0					9	{V45} RV	V45 457, thin cloud field checks out. cut short due to cloud.	~200 above/g
										10			
										11		DOME closed after flats.	15K

pg #1 of 2
249

Date 1996 ~~Feb~~ March 7/8 Observers {Vys}/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.
CC39382/83	INBOARD/ OUTBOARD							FeAr Clear	30/30
84	BIAS x 4							"	-
85	COMP							"	60
86	BD+52 911	04 55 18	+53 00 17	19 31 07		2 00 W		"	2730
87	COMP							"	60
88	BIAS x 4			20 20				"	-
89	COMP							"	60
90	AC+47 256-150	07 15 58	+46 16 52	20 27 32		0 36 W		"	2700
91	COMP							"	60
92	BIAS x 4			21 15				"	-
93	COMP							"	60
94	BD+02 1729	07 34 11	+02 24 52	21 31 01		1 10 W		"	1875
95	COMP							"	60
96	BIAS x 4			22 05				"	-
97-99	FLAT x 3					0 36 W	+35°	Turn clear	1

Exp. Mtr. Seeing

Spectr. Temp. ...

Spectr. Temp. ...

367 8"

34 7"

475 6"

^{CCD}
 Spectr. Temp. ... -107.0°C Dome Temp./Hum. ... -9.6°C / 50% Transparency Conditions . partly cloudy 20.

Focus 6.99

Spectr. Temp. Dome Temp./Hum. ... -11.1°C / 52.8% once observing 412 0 50 1024 4 1 CCD Aint.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion λ	P.H.	Program	Remarks	Quality
3030				CASS CCD	1800 2lmm G=5163	30 μ m	5304 Å	3/4			
-								1		sum of 4 biases.	
60								5			
2730	1367	8" + 9.9	M2		S/N ~ 80:1			6	{V _{ys} } RV	V _{ys} 110 AWFUL SEEING	400 above 6/9
60								7			
-								1			
60								8			
2700	1134	7" 10.5	M2					9	{V _{ys} } RV	V _{ys} 493, seeing still terrible @ zenith	350 above 6/9
60								10			
-								1			
60								11			
1875	1425	6" 9.6	M0					12	{V _{ys} } RV	V _{ys} 503, seeing improving slightly.	500 above 6/9
60								13			
-								1			
60								14			8.3K

pg #2 of 2

251 Date 1996 March 7/8... Observers {Vys}/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.
CC39400	COMP							Ferr clear	60
01	AC+36 28826	08 22 03	+35 21 00	22 20 14		1 30 W			3035
02	COMP							"	60
03	BIAS x 4			23 14					—
04	COMP							"	60
05	BD -09 3070	10 ^{20 15} 20 15	+09 43 25	23 43 57		0 31 W			1500
06	COMP							"	60
07	BIAS x 4			00 12					—
08	COMP							"	60
09	BD+01 2447	10 23 49	+01 21 36	00 20 59		1 07 W			1640
10	COMP							"	60
CG 80394 → 97	HD 103095 x 4	11 47 13	+38 26 10						.067
98/99	" x 2				0 59	0 07 E	84° Alt		.133
CC39411	BIAS x 4			01 10					—
12/13	INBOARD/OUTBOARD					0 0	+38°	Ferr clear	60/60

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

Exp. Mtr. Seeing

125 5.6"

955* 6.8"

40 8"

7"

8"

^{CCD}
 Spectr. Temp. ... -10.0 °C ... Dome Temp./Hum. ... -12.7 °C / 54.3% Transparency Conditions . clear now, moon rising to 25%
 Focus 6.99
 Spectr. Temp. Dome Temp./Hum. ... -13.4 °C / 54.4% @ Marystdvel FANS OFF
 412 0 50 1024 4 1 ccdfrnt.

Exp. Mir.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 21mm G=5163	30µm	5304 Å	15			
1125	5-6"	10.7	M0					16	{Vys} RV	Vys 253AB	
								17			
								1			
								18			
955*	6-8"	10.2	M0					19	{Vys} RV	hazy & windy, * lots of sky Vys 579 S/N < 50:1	
								20			
								1			
								21			
1440	8"	9.65	M2					22	Marcy {Vys} std vel	Vys 127 hazy and windy.	
								23			
	7"	6.45	G8Vp	EEV CCD TV GUIDER		above 30µm		-	SEEING TEST	Dome SW, light SE wind, -13.8 °C, 54.4% RH. moon up, clear, bad.	
	8"							-			
								1		Dome closed.	
								3/4	focus test	T = -13.0 °C F = 6.99. end of night. T got down to -14 °C.	

253
pg #1

Date 1996 March 8/9 Observers KK/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.
CE11144	Harman-inboard							ThrAr	2
45	Harman-outboard							"	2
46	bias (4)								-
47	COMP							"	1
48	HD34029	05 09 18	+45 53 47	19 13 24		0 48 W			28 26
49	COMP							"	1
50	HD34029			19 15 35		0 50 W			23
51	COMP							"	1
52	HD34029			19 17 51		0 52 W			23
53	COMP							"	1
54	COMP							"	1
55	HD47105	06 31 56	+16 29 05	19 24 53		0 18 E			280
56	COMP							"	1
57	HD47105			19 31 19		0 12 E			280
58	COMP							"	1
59	HD47105			19 37 39		0 04 E			315

Ccd
Spectr. Temp. ...
Focus ... 0.22
Spectr. Temp. ...

Exp. Mtr. Seeing

370

370

370

375

370

375

CCD Spectr. Temp. ... -102.0°C ... Dome Temp./Hum. ... -8.6°C / 53.6% Transparency Conditions ... mostly cloudy ...

Focus ... 0.225 ...

S FAN ON

254

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. CCD	X Grating/Tilt	N-S Slit	Emulsion CA	P.H.	Program	Remarks	Quality
				Echelle 18.60	300 .5795	60μW 400μH	6300 Å	1	focus test	0 0 128 1024 8 1 T = -8.6 F = 0.225	16.4K
								2	"		16.0K
								1		0 0 256 1024 4 1	
								3			12.1K
		✓ 0.08	G5III + G6III					4	KK	Saturated the first attempt of Auv	5.5K
								3			11.4K
								5	KK		6.3K stronger than 1st
								3			11.3K
								6	KK		6.3K
								3			12.2K
								3			11.9K
		✓ 1.93	A0IV					4	KK	some cloud here. & Gem	3.4K
								3			12.4K
			A0IV					5	KK		3.5K
								3			10.8K
								4	KK		3.5K

255
Pg # 2

Date 1996 March 8/9 Observers KK/Smt

Emulsion Batches:

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.....
.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CE11160	COMP							ThAr	1
61	COMP							"	1
62	HD8890	01 22 34	+88 46 26	19 52 53		4 45 W			953
63	COMP							"	1
64	HD8890			20 10 43		4 50 W			243
65	COMP							"	1
66	HD8890			20 17 26		5 00 W			424
67	COMP							"	1
68	BIAS (4)			20 26					-
69	COMP							"	1
70	HD95689	10 57 34	+62 17 27	20 33 55		3 34 E			290
71	COMP							"	1
72	HD95689			20 40 37		3 30 E			186
73	COMP							"	1
74	HD95689			20 44 24		3 27 E			115
75	COMP							"	1

Exp. Mtr. Seeing

315 4.5"

140

34

286

206

215

Spectr. Temp. Dome Temp./Hum. -11.6°C / 55.1% Transparency Conditions .. mostly... cloudy..... 22.

Focus 0.225

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	N-S Slit	Emulston	P.H.	Program	Remarks	Quality
1				ECHELLE 18.60	300 l/m .5795	60µW 40µm	6300 Å	3			9.9K
1								3		Telescope on E side of pier	8.7K
953	4-5"	2	F81b					4	KK	α UMi	
1								3			7.9K
283	140							5	KK		3.2K
1								3			7.6K
424	134							6	KK		
1								3			7.3K
1								1			
1								3			7.0K
796	306	Vcomb 1.79	K0 IIIa					4	KK		10K
1								3			7.2K
186	306							5	KK		10K
1								3			7.9K
115	315							6	KK		12.5K
1								3			7.3K

257
79 #3

Date 1996 March 8/9 Observers KK/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.
CE 11176	COMP							ThAr	1
77	HD68257	08 06 29	+17 56 58	20 54 57		0 19 E			420
78	COMP							ThAr	1
79	HD68255			21 03 41		0 01.5 E			965
80	COMP							ThAr	1
81	HD68257			21 21 50		0 08 W			440
82	COMP							ThAr	1
83	BIAS (4)			21 32					-
84	COMP							ThAr	1
85	HD79210	9 07 42	+53 07	21 42 01		0 11 E			1800
86	COMP							"	1
87	HD79211	9 07 42	+53 07	22 14 22		0 26 W			2090
88	COMP							"	1
89	HD79210			22 51 14		0 59 W			1850
90	COMP							"	1

160
Spectr. Temp. ...
Focus 0.2
Spectr. Temp. ...

Exp. Mtr. Seeing

60 4"

60 4"

60 4"

30 4"

30 4"

32 4-5"

Spectr. Temp. ¹⁰⁰... -102.0°C

Dome Temp./Hum. -12.3°C/56.6%

Transparency Conditions ..mostly..cloudy..but thinning

Focus 0.225.....

→ clear 258

Spectr. Temp.

Dome Temp./Hum. -14.1°C/60.1% @ 4079211

0 0 256 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	N-S Slit	Emulsion	P.H.	Program	Remarks	Quality
1				ECHELLE 18.60	300 l/mm .5795	60μW 400μH	6300 Å	3			11.8K
420	60	4" ✓ 5.05 +1.20	F8V + Gal?					4	KK Vis Bin	ADS 6650 AB (w brighter) some cloud	1.3K
1								3			10.5K
965	60	4" ✓ 6.02	dG2					5	KK Vis Bin	ADS 6650 C, thin cloud.	sl. bright than 1st
1								3			9.7K
440	60	4" ✓ 5.05 +6.20	F8V +60V?	or F8V combined?				4	KK Vis Bin	ADS 6650 AB, clear now	1.6K
1								3			11.5K
1								1			
1								3			9.9K
180	30	4" ✓ 7.64	M0V					6	KK Vis Bin	clear, sl. brighter and ADS 7251 A far W, 17"	1.3K
1								3			9.9K
209	30	3"-4" ✓ 7.74	M0V					2	"	sl. fainter and E ADS 7251 B thin cloud	sl. weaker
1								3			9.4K
1850	32	4"-5" ✓ 7.64	M0V					6	"	thin cloud, sl brighter and W ADS 7251 A again.	900
11								3			10.5K

259
pg # 4

Date 1996 March 8/9... Observers KK/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.
CE11191	BIAS(4)			23 24	2				—
92	COMP							ThAr	1
93	HD89484	10 14 28	+20 20 51	23 32 01		0 06 W			132'
94	COMP							"	1
95	HD89485	10 14 28	+20 20 49	23 36 34		0 15 W			440'
96	COMP							"	1
97	HD89484	10 14 28	+20 20 51	23 45 59		0 20 W			151'
98	COMP for below (one for HD89484 not written)							"	1
99	HD95735	10 57 54	+36 38	23 55 32		0 14 W			1816'
CE11200	COMP							"	1
01	BIAS(4)								—
02-08	FLAT X 7					1 04 W	+36°	Tung	1
09/10	INBOARD/OUTBOARD					2 56 W	"	ThAr	2/2

Spectr. Temp. ...

Focus..... 1.22

Spectr. Temp. ...

Exp. Mtr. Seeing

340 5"

344 5"

340 5"

35 4.5"

261
Pg

SAT / SUN

Emulsion Batches:

Date 1996 March 9/10 Observers [KK] / Tn / Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11211/12	INBOARD/ OUTBOARD							ThAr	2/16
13	BIAS (4)			19 00				"	21
14	COMP							"	21
15	HD8890	1 2234	+88 46 26	19 11 23		3 52 W			101
16	COMP							ThAr	21
17	HD8890	1 2234	+88 46 26	19 17 28		3 59 W			71
18	Comp							ThAr	1
19	HD8890	"	"	19 21 22		4 03 W			123
20	Comp							ThAr	1
21	COMP							"	"
22	HD16895 A	02 37 22	+48 48 20	19 48 51		4 02 W			146
23	COMP							"	1
24	HD16895 B	"	"	19 55 50		4 45 W			2300
25	Comp							"	1
26	HD16895 A	"	"	20 35 28		4 48 W			134
27	COMP							"	1

Spectr. Temp. ...

Focus ... 0.2

Spectr. Temp. ...

Exp. Mtr. Seeing

360

376

375

380

Spectr. Temp. ^{CCD} -100.5°C

Dome Temp./Hum. -8.5°C / 61.3% H

Transparency Conditions ... Fine 262

Focus 0.225

@ focus test

Spectr. Temp.

Dome Temp./Hum. ... N/S ... CA

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst. edhelle	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ar	2/16					18.60	300 1.5795	60uW 400uH	6300A	1/2	focus test	outband is VERY weak! 0 0 128 1024 8 1 count	
	—									1		0 0 250 1024 4 1	
	24									3			
	101	360		2	F8Ib					4	KK		
Ar	21									3			
	71	376		"	"					4	KK		8K
Ar	1									3			
	123	325		"	"					4			
FAr	1									3			
"	"									3			
	146	80 ?		4.13	F7V					5	KK Vis Bin		1.3K
"	1									3			
	1300	1	3.6"	9.87	M1V					6	"	Some cloud	100 avg 2ly
"	1									3			
	134	30		4.13	F7V					5	"	solid cloud bank coming	
"	1									3			

263
p9#2

SAT/54N

Date 1996.01.18.9/10..... Observers [KK]/Tn/Smt.....

Emulsion Batches:

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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11228	BIAS(4)			20 39					—
29	COMP							ThAr	1
30	HD90839	10 24 14	+56 29 36	20 45 20		2 24 E			1600
31	Comp							ThAr	1
32	HD90839	10 24 14	+56 29 36	21 15 57		2 06 E			814
33	COMP							"	1
34	HD90839	"	"	21 30 52		1 18 E			1093
35	COMP							"	1
36	BIAS(4)			21 49					—
37	COMP							"	1
38	HD68257	08 06 29	+17 56 58	22 05 35		0 54 W			330
39	COMP							"	1
40	HD68255	"	"	22 17 54		1 09 W			725
41	COMP							"	1
42	HD68257			22 28 24		1 16 W			301
43	COMP							"	1

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

Exp. Mtr. Seeing

80 5"

200 4"

197 3"

72 3-4"

76

71

LCD
Spectr. Temp. -100.1°C Dome Temp./Hum. -9.4°C / 62% H Transparency Conditions . Part Cloudy 264

Focus 0.225

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	P.P. Mag.	Sp.	Inst.	Grating/ Tilt	N-S Slit	Emulsion	P.H.	Program	Remarks	Quality
				estelle CCD 18.60	0300 15795	60u 40u	6300 Å	1			
								3			
80	5"	4.8	F8V					4	kk Std Vel	cloudy now	2K
								3			
200	4"	"	"					4	"	thinner cloud now → clear	
								3			
197	3"	"	"					4	"	clear here, partly cloudy overall.	
								3			
								1		attempted 4074874 and unsuccessful.	
								3			
72	3-4"	5.05	F8V?					5	kk Vis Bin	brighter and WSW, clear here	1.5K
								3		ADS6650AB	
76		6.20	G0V					6	"	fainter and ENE, still clear	1.6K
								3		ADS6650C	
71		5.05	F8V					5	"		
								3		ADS6650AB again.	

265
19#3

SAT/Sun

Date 1996 March 9/10 Observers [KK]/Tn/Smt

Emulsion Batches:

.....
.....
.....CCO
Spectr. Temp. ...
Focus ... 0.22
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11244	BIAS(4)			22 35					0
45	COMP							ThAr	1s
46	HD 79210	09 07 42	+53 07 00	22 47 40		0 53 W			1482
47	COMP							ThAr	1s
48	HD 79211	"	"	23 12 52		1 16 W			1344
49	COMP							ThAr	1s
50	HD 79210	"	"	23 37 38		1 43 W			1470
51	COMP							ThAr	1s
52	BIAS(4)			0 04					0
53	COMP							"	1
54	HD 99028	11 18 43	+11 04 49	00 10 59		0 07 E			620
55	COMP							"	1
56	HD 99028			00 22 49		0 04 W			600
57	COMP							"	1
58	HD 99028			00 34 22		0 15 W			550
59	COMP							"	1

Exp. Mtr. Seeing

36 3"

36

37 23"

300 4

311

34

^{CCD}
 Spectr. Temp. -100.7°C Dome Temp./Hum. $-10.4^{\circ}\text{C}/65.9\%$ Transparency Conditions *hazy to clear* 268
 Focus 0.225
 Spectr. Temp. Dome Temp./Hum.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst. CCD	X Grating/Tilt	N-S Slit	Emulsion	P.H.	Program	Remarks	Quality
	0					EMERLE 18.60	300 lines .5795	60μW 400μH	6300 Å	1			
	1s									3			
	1482	36	3"	7.64	MOY					4	KK Vis Bin	17 th September A057251A, Wae	1.3K
	1s									3			
	1344	36		7.74	MOY					5	"	B, E one	1.1K
	1s									3			
	1470	37	2.3'	7.64	MOY					4	"	A again	
	1s									3			
	0									1			
	1									3			
	620	300	4"	4.03	F2 IV					6	KK		
	1									3			
	600	311								6	KK		
	1									3			
	550	314								6	KK		
	1									3			

267
pg # 4

Date 1996 March 9/10 Observers [kk] / Tn / Smt

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11260	COMP							ThAr	1
61	HD110379	12 36 36	-00 54 03	00 52 57		0 51 E			140
62	COMP							"	1
63	HD110380	"	"	00 57 54		0 45 E			200
64	COMP							"	1
65	HD110379	"	"	01 03 24		0 39 E			240
66	COMP							"	1
67	BIAS(4)			1 09					0
68	COMP							"	1
69	HD89484	10 14 28	+20 20 51	01 17 58		1 55 W			95
70	COMP							"	1
71	HD89485	"	+20 20 49	01 21 54		2 02 W			300
72	COMP							"	1
73	HD89484	"	+20 20 51	01 28 52		2 06 W			120
74	COMP							"	

Spectr. Temp. ...

Focus 0

Spectr. Temp. ...

Exp. Mtr. Seeing

138 4.5"

131 5"

290 5"

345 4.5"

350

220

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *clear* 268.

Focus 0.225

Spectr. Temp. Dome Temp./Hum. *-11.6°C 67.5%RH*

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	N-S Slit	Emulsion	P.H.	Program	Remarks	Quality
	1									3			
	140	138	4-5"	3.48	FOV					4	KK Vis Bin	not really separated. ADS 8630A, E one.	4K
	1									3		(HD #'s reversed? E is usually larger than W one)	
	200	131	5"	3.50	FOV					5	"	not separated anymore. ADS 8630B, W one	2K!
	1									3		guiding on W side of blob.	
	240	290!	5"	3.48	FOV					4	"	went too long (misread previous) A again (E side of blob)	2.8K
	1									3			
	0									1			
	1									3			
	95	345	4-5"	2.22	K1 III					6	KK Vis Bin		
	1									3			
	300	350		3.47	G7 III					2	"		
	1									3			
	120	320		2.22	K1 III					6	"		
										3			

28945

Date 1996 MAR 9/10..... Observers [kk]/Tn/Swt.....

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.
CE11275	Comp							TBAr	1s
76	HD 122742	13 58 38	+11 16 34	01 36 49		1 11 E			1200
77	Comp							"	1s
78	HD122742			01 58 18		0 49 E			1250
79	COMP							"	1
80	HP122742			02 21 00		0 30 E			947
81	COMP							"	1
82	BIAS(4)			02 38					—
83	Comp							"	1s
84	HD121325 A	13 49 43	-07 34 00	02 44 29		0 02 W			1009
85	Comp							"	1s
86	HD121325 B	"	"	03 03 14		0 33 W			1728
87	Comp							"	1s
88	HD121325 A	"	"	03 33 57		0 59 W			1448
89	Comp							"	1s
90	BIAS(4)								

Spectr. Temp. ...

Focus... 0.22

Spectr. Temp. ...

Exp. Mtr. Seeing

76 6-8

88 6-5

80 4-5

18 3-4

25 4-5

13 4

Spectr. Temp. Dome Temp./Hum. ... -11.5°C / 67.0% Transparency Conditions . clear . , moon @ 15.2^h m ...
 Focus ... 0.225 ...
 Spectr. Temp. ... -100.5°C ... Dome Temp./Hum. ... -11.3°C / 66.3% H ...
 -16° dec

CCD
 0 0 256 1024 4 1
 270

Comparison Filter	Exp.	Exp. Mtr.	Seeing	P _v Mag.	Sp.	Inst. echelle	Grating/ X Tilt	N-S Slit	Emulsion	P.H.	Program	Remarks	Quality
r	1s					CCD 18.60	03001 ^m 15795	60 _m 400 _m	6300Å	3			max
	1200	76	6"-8"	6.21	G8V					4	KK pgr		1.2K
	1s									3			
	750	88	6"-5"	"	"					4	"		1.8K ⁷
	1									3			
	947	80	4"-5"	"	"					4	4	seeing improving.	1.5K
	1									3			8.6K
	-									1			
	1s									3			
	1009	18	3"-4"	6.60	F8V					2	Kk Vis Bin	West and brighter one	830
	1s									3		Reasonably separated	
	1720	25	4"-5"	7.50 ^x		rough Latice from "A"				6	1	poorly separated, but separated	560
	1s									3			
	1440	13	4"	6.60	F8V					2	"		950K
	1s									3			10.5K
										1/2			

Pg #6

271

Date 1976 MAR 9/10

SAT/Sun

Observers [K.K.] / Jn / Sent

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.
CE11291	Comp							TbAr	1s
92	HD131156A	14 46 46	+19 30 57	04 06 31		0 16 W			307
93	Comp							"	1s
94	HD131156B	"	"	04 14 05		0 50 W			1900
95	Comp							"	1sec
96	HD131156A	"	"	04 47 44		1 01 W			535
97	COMP							"	1
98	BIAS(4)			04 59					-
99	COMP							"	1
CE11300	HD146361	16 16 56	+34 06 42	05 06 19		0 02 W			865
01	Comp							"	1
02	HD146362	"	+34 06 42	05 22 26		0 19 W			933
03	Comp							"	1
04	HD146361	"	"	05 39 37		0 28 W			419
05	Comp								1

Spectr. Temp. ...

Focus 0.2

Spectr. Temp. ...

Exp. Mtr. Seeing

85 3.4"

46 4"

144 4"

100 3.4"

36

50

Spectr. Temp. Dome Temp./Hum. -11, 2°C./66.7% Transparency Conditions ... clear, moon @ meridian.

Focus 0.225

272

Spectr. Temp. Dome Temp./Hum. ^{Slit} (N/S alignment)

Comparison date	Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst. E-fal/teccp	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/5						18.60	0300 05795	60 _u W 400 _u N	6300A	3			
307		85	3-4"	4.74	G8V					4	KK Vis Bin	A059413A, brighter and SE	1.2K
1/5										3			
1/00		46	4"	6.90	K5V					5	KK Vis Bin	seeing is variable, fainter NW one	2.2K!
1/82										3			
5/5		144	4"	4.74	G8V					4	"	exp mtr counts are unreliable.	2.9K!
1										3			
-										1			
1										3			
8/5		100	3-4"	5.58	G0V					4	KK Vis Bin	A059979A, brighter NE	2.2K
1										3			
9/3		36		6.59	G1V					2	"	B	
1										3			
4/9		50		5.58	G0V					4	"	A	
1										3			

Pg # 7

Date 273 1996 March 9/10

Observers [KK]/Tn/Smt

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11306	COMP							ThAr	1
07	HD8890	01 22 34	+88 46 26	05 53 08		9 46 E			81
08	COMP							"	1
09	HD8890			05 55 52		9 43 E			97
10	COMP							"	1
11	HD8890			05 58 50		9 40 E			66
12	COMP							"	1
13	BIAS (4)			06 01 31					-
14-20	FLAT x 7					2 40 W	+13°	Tung	2s
21/22	INBOARD/OUTBOARD					"	"	ThAr	1/10
									1/15

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus 0.1

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus 0.1

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus 0.1

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus 0.1

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus 0.1

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus 0.1

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus 0.1

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus 0.1

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus 0.1

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus 0.1

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus 0.1

Spectr. Temp. ...

Spectr. Temp. ^{CCD} -102.0°C Dome Temp./Hum. -11.5°C / 67.5% Transparency Conditions clear.. dawn approaching...

Focus 0.225

Spectr. Temp. Dome Temp./Hum. -11.6°C @ focus test.

274

0 0 256 1024 4 1

Comparison filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	N-S Slit	Emulsion	P.H.	Program	Remarks	Quality
-	1					ECHELLE 18.60	300 slmm .5795	60μW 400μH	6300 Å	3			
	81	300	4"	2	F8D6					6	KK	2nd time tonight Last time was ~10 h ago	5K
	1									3			
	97	400								6	KK		6K
	1									3			
	66	300								6	KK		5K
	1									3			
	-							700μ = .225V		1			
	25							600μW 600μH 600μW 400μH	for flats	3		Position set -.150	10.5K
	1/15									7/8	focus test	0 0 128 1024 8 1 end of night	13K / 11.5K
												strengths are ridiculously off. Perhaps slit pos'n was moved instead of slit height some time between flats last night and focus test at beginning of tonight	

275
Pg #1

SUN/mon

Emulsion Batches:

Date 1996 March 10/11 Observers [kk]/Tn/Smt.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11323/24	INBOARD/ OUTBOARD							ThAr	1/10*
25	BIAS(4)			19 59				"	—
26	COMP							"	1
27	HD20902	03 17 11	+49 30 19	20 09 41		3 46 W			139
28	COMP							"	1
29	HD20902			20 14 11		3 50 W			99
30	COMP							"	1
31	HD20902			20 18 05		3 54 W			103
32	COMP							"	1
33	Comp							"	1
34	HD32147	04 55 51	-05 52 16	20 27 22		2 40 W			866
35	Comp							"	1
36	HD32147	"	"	20 47 25		3 05 W			1190
37	COMP							"	1
38	HD32147	"	"	21 09 33		3 21 W			793
39	Comp							"	1

CCD

Spectr. Temp.

Focus.....0:

Spectr. Temp.

Exp. Mtr. Seeing

300

333

343 3"

5

28 3"

5

CCD Spectr. Temp. ... -1.00.2°C

Dome Temp./Hum. ... -4.6°C / 59.8%

Transparency Conditions ... mostly cloudy ... 2.76

Focus ... 0.235

Spectr. Temp. ...

Dome Temp./Hum. ... -5.3°C / 58.2% H

experimented with different slit pos'ns to help

Comparison Filter	Exp.	Exp. Mtr.	Seeing	V _{DE} Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
Ar	1/10					ECHELLE 18.60	300 Alum .5795	60um 400umH	6300A	1/2	focus test	0 0 128 1024 8 1 *keyboard is much weaker for same time and has wider lines 0 0 256 1024 4 1	
	-							POS'N -150	.150	1			
	1							as on previous nights (probably months)		3		Old References mention .223 and .200 as usual set	
	139	300		1.79	F5T6					4	KK		7K
	1									3			
	99	333								4	"		"
	1									3			
	103	343	3"							4	"	all 3, same strength	"
	1									3			
	1									3			
	866	5		6.21	K3V					5	KK pgn	some cloud → very thick cloud. 150.00x 151AS	
	1									3			
	1192	28	3"	"	.					5	KK	cloud passed quickly clear for this obs.	1.3K
	1									3			
	793	5		"	"					5	KK	thick cloud increasing.	
	1									3			12.5K

237
P742

Sun/moon

Emulsion Batches:

Date 1996 March 10/11

Observers [KK] / Tn / Smt

.....
.....
.....CCD
Spec. Temp. ...
Focus ... 0.23
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce 113240	BIAS(4)			21 27					0
41	Comp							ThAr	1s
42	HD60179	7 2813	+320627	21 2952		0 59W			326
43	Comp							"	1s
44	HD60178	"	"	21 3712		1 08 W			390
45	Comp							"	1s
46	HD60179	"	"	21 4522		1 12W			106
47	Comp							"	1s
48	Comp							"	1
49	HD 56986A	7 1409	22 10 00	21 5421		1 35W			112
50	Comp							"	1
51	HD 56986B	"	"	21 5855		2 17W			2338
52	Comp							"	1
53	HD 56986A	"	"	22 3957		2 21 W			151
54	Comp							"	1
55	BIAS(4)			22 44					

Exp. Mtr. Seeing

206 3'

240 43'

230 43'

87 3'

21 3'

80

CCD Spectr. Temp. -99.2°C Dome Temp./Hum. $-5.3^{\circ}\text{C}/59.2\%$ Transparency Conditions *mostly cloudy* 278

Focus 0.235

Spectr. Temp. -100.1°C Dome Temp./Hum. $-5.8^{\circ}\text{C}/59.9\%$

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst. Echelle	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	C					CCD	300 5795	60μ 100μ	6300A	1/2			
A	1s									3			
	326	206	3"	1.94	A1V					2	KK Vis Bin	2 Gen Gen In cloud	
	6									3			
	390	240	<3"	2.92	A2V _m					6	"	clearer now	
	1s									3			
	106	230	<3"	1.94	A1V					2			6.6K
	1s									3			
	1									3		clearing here	
	112	87	3"	3.55	F0 IV					4	KK Vis Bin	ADS 5983A	3.3K
	1									3			
	233	21	3"	8.18	K3V					5	"	ADS 5983B	1.6K
	1									3			
	157	80		3.55	F0 IV					4			
	1									3			
										1/2			

27 pgs 3

Sun/moon

Emulsion Batches:

Date 1996 MAR 10/11..... Observers [KH] / T. / Smt.....

.....
.....
.....Spectr. Temp. ...
Focus ... 0.2
CD
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cell 356	Comp			"				ThAr	1s
57	HD 74874A	8 41 29	+6 47 07	21 51 53					97
58	Comp							"	1
59	HD 74874B	8 41 29	+6 47 07	22 56 09		1 43 W			2058
60	Comp							"	1
61	HD 74874A	"	"	23 37 21		1 47 W			113
62	Comp							"	1
63	Comp							"	1
64	HD 8890	1 22 34	+88 46 26	23 45 19		8 32 W			183
65	Comp							"	1
66	HD 8890	"	"	23 49 33					120
67	Comp							"	1
68	HD 8890	"	"	23 52 39					193
69	Comp							"	1
70	BTAS(4)								

Exp. Mtr. Seeing

77

37 <34

85

335 341

345

370

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *improving* 280

Focus *0.235*

Spectr. Temp. Dome Temp./Hum. *-6.2°C / 62% H*

Comparison Filter	Exp.	Exp. Mtr.	Seeing	H _v Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	1s					<i>CCD</i>	<i>0300</i>	<i>60_v W</i>					
						<i>1860</i>	<i>.5795</i>	<i>400_v H</i>	<i>6300A</i>	<i>3</i>			
	97	<i>77</i>		<i>3.40</i>		<i>(Later than B)</i>				<i>2</i>	<i>KK Vis Bin</i>	<i>AP56993A</i>	<i>2.5K</i>
	1									<i>3</i>			
	2058	<i>37</i>	<i><3"</i>	<i>6-80</i>	<i>dF7</i>					<i>5</i>	<i>"</i>	<i>B</i> <i>Difficult, but separable</i>	<i>2.4K</i>
	1									<i>3</i>			
	113	<i>85</i>		<i>3.40</i>						<i>2</i>	<i>"</i>	<i>A</i>	
	1									<i>3</i>			
	1									<i>3</i>			
	193	<i>335</i>	<i>3.4"</i>	<i>2</i>	<i>F816</i>					<i>4</i>			
	1									<i>3</i>			
	120	<i>345</i>								<i>4</i>			
	1									<i>3</i>			
	193	<i>320</i>								<i>4</i>			
	1									<i>3</i>			
										<i>1/2</i>			

281
pg#4

Sun/8770M

Emulsion Batches:

Date ..1996.MAR10/11..... Observers [KJ]/Th./Sat.....

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.....
.....

Spectr. Temp.
Focus.....0.23
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cell371	Comp							ThA	1
72	HD 79210	9 0742	+53 0700	00 0713		2 18 W			1505
73	Comp							ThA	1
74	HD 79211	"	"	00 35 12		2 48 W			1600
75	COMP							"	1
76	HD 79210	"	"	01 05 16		3 17 W			1600
77	COMP							"	1
78	BIAS(4)			01 34					0
79	COMP							"	1
80	HD90839	10 24 14	+56 29 36	01 41 16		2 20 W			550
81	COMP							"	1
82	HD90839	"	"	01 52 23		2 37 W			900
83	COMP							"	1
84-90	FLAT x7					3 ^h W	+17°	Tung	2
91 91	BIAS(4)			02 24					0
92/93	INBOARD/OUTBOARD								

Exp. Mtr. Seeing

30 3"

30 23"

31 2-3"

60 4"

10

Spectr. Temp. Dome Temp./Hum. $-6.5^{\circ}\text{C}/63.6\%$ Transparency Conditions *Part cloudy* 282

Focus *0.235*

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1 ccdamt

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	1					<i>Echelle</i>	<i>0300</i>	<i>60</i>	<i>6300A</i>	<i>3</i>			
	1565	30	<i><3"</i>	<i>7.64</i>	<i>MOV</i>	<i>18'60</i>	<i>.5795</i>	<i>400</i>			<i>KK Vis Bin</i>	<i>AD57251A</i> <i>Slightly brighter westward</i>	<i>1.5K</i>
	1									<i>3</i>			
	1660	30	<i>2-3"</i>	<i>7.74</i>	<i>MOV</i>					<i>5</i>	<i>"</i>	<i>AD57251B, sl fainter & E</i> <i>Seeing is very nice now.</i>	<i>1.3K</i>
	1									<i>3</i>			
	1600	31	<i>2-3"</i>	<i>7.64</i>	<i>MOV</i>					<i>6</i>	<i>"</i>	<i>A again, clouding in</i>	<i>1.5K</i>
	1									<i>3</i>			
	0									<i>1</i>			
	1									<i>3</i>			
	550	60	<i>4"</i>	<i>4.94</i>	<i>F8V</i>					<i>4</i>	<i>std vel</i>	<i>cloudy</i>	<i>1.5K</i>
	1									<i>3</i>			
	900	10		<i>"</i>	<i>"</i>					<i>4</i>	<i>"</i>	<i>very cloudy all over.</i> <i>moon covered up.</i>	<i>500 ADU above it</i>
	1									<i>3</i>			
	2									<i>3</i>		<i>Plots are now 1/2 as</i> <i>strong as last run, last 7K</i> <i>night they were 3x as strong.</i>	
	0									<i>1</i>			

283
Pg#1

Mon/Tues

Date 1996 MAR 11/12..... Observers [KK]/Tn/Smt.....

Emulsion Batches:

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

Focus.....0:

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11394/95	INBOARD/ OUTBOARD							ThAr	3/2
96	BIAS(4)			19 09					0
97	COMP							"	2
98	HD47105	06 31 56	+16 29 05	19 11 10		0 23 E			80
99	COMP							"	2
CE11400	HD47105			19 14 48		0 19 E			80
01	COMP							"	1
02	HD47105			19 18 23		0 15 E			118
03	COMP							"	2
04	Comp							"	2
05	HD20902	3 17 11	+49 30 19	19 30 07		3 10 W			75
06	Comp							"	2
07	HD20902			19 33 36		3 14 W			120
08	COMP							"	2
09	HD20902			19 37 34		3 18 W			120
10	COMP							"	2

Exp. Mir. Seeing

560

565

(exp)

560

620

560

510

CCD
Spectr. Temp. -100.5°C

Dome Temp./Hum. $-0.7^{\circ}\text{C}/59.8\%$

Transparency Conditions *clear* 284..

Focus 0.225.....

@ focus test.

Spectr. Temp.

Dome Temp./Hum. Now a EW orientation slit

Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3/2					CCD ECHELLE 18.60	300.8mm .5795	60μW 400μH	6300Å	7/8	focus test.	0 0 128 1024 8 1	
0							E-W		1		0 0 256 1024 4 1	
2							now.		3			
80	560		1.93	A0 IV					4	KK	γ Gem	5.0K
2									3			
80	565								4	"		4.7K
1	(corps)								3			
118	650								4	"		5.0K
2									3			
2									3			
75	620	3-4"	1.79	F5 Ib					5	KK	α Per	4.0K
2									3			
120	1600								5	KK		12.4K
2									3			
120	1010								5	KK		14K
2									3			

pg # 2

Mon/Tues

Emulsion Batches:

Date 1996 March 11/12 Observers [kk]/Tn/Smt

.....

Exp. Mtr. Seeing
 Spectr. Temp. ...
 Focus ...
 CCD Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cell 411	Comp							ThA	2
12	HD 32147	04 55 51	-05 52 16	19 45 40		2 02 W			900
13	Comp							"	2
14	HD 32147	"	"	20 02 03		2 16 W			721
15	Comp							"	2
16	HD 32147	"	"	20 15 21		2 30 W			794
17	Comp							"	2
18	BIAS(A)			20 30					
19	Comp							"	2
20	HD 50635 A	06 49 00	r13 18 18	20 37 28		0 45 W			136
21	Comp							"	2
22	HD 50635 B	"	"	20 41 43		1 08 W			1081
23	Comp							"	2
24	HD 50635 A	"	"	21 01 12		1 12 W			146
25	Comp								2

Exp. Mtr. Seeing
 79 34
 80
 82 3"
 84 2-3"
 46 3"
 00 2-3"

CCD Spectr. Temp. -99.9°C Dome Temp./Hum. $-1.3^{\circ}\text{C}/60.0\%$ Transparency Conditions *clear, a few very thin clouds*

Focus 0.225

288

CCD Spectr. Temp. -100.1°C Dome Temp./Hum. $-1.9^{\circ}\text{C}/63.3\%$

0 0 256 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	P.V. Mag.	Sp.	CCD Inst.	X Grating/Tilt	E-W Slit	Emulsion	P.H.	Program	Remarks	Quality
	2					ELMELÉ 18.60	300 μm / .5795	60 μm W / 400 μm H	6300A	3			\approx MAX AD4
	900	79	3.4"	6.21	K3V					6	KK		1.9K
	2									3			
	721	80	"	"	"					6	KK		1.5K
	2									3			
	794	82	3"	"	"					6	KK ppa		1.4K
	2									3			
										1/2			
	2									3			
	136	84	2-3'	4.74	FOV _p					2	KK Vis Bin	Bright NW one	900
	3									3			
	1088	46	3'	7.68	G6V					4	"	well separated	650
	3									3	[Rebalanced Exp meter. It had been slightly falling]		
	146	100	2-3"	4.74	FOV _p					2	"		860
	2									3			

19#3
287

Mon/Tues

Date 1996 MAR 11/12... Observers [R.K.]/Tr./Smt.....

Emulsion Batches:

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

Exp. Mtr. ...
Spectr. Temp. ...
Focus ... 0.22 ...
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce 11426	Comp							ThAr	2s
27	HD 59438A	07 24 49	-14 47	21 10 08		0 53 W			540
28	Comp							"	2
29	HD 59438B	"	"	21 21 26		1 09 W			838
30	Comp							"	2
31	HD 59438A	"	"	21 37 42		1 28 W			1002
32	Comp							"	2
33	BIAS(4)			21 56					0
34	Comp							"	2
35	HD 8890	01 22 34	+88 46 26	22 06 55		6 56 W			45
36	Comp							"	2
37	HD 8890			22 09 46		6 59 W			55
38	COMP								2
39	HD 8890			22 12 19		7 02 W			56
40	COMP								2

Exp. Mtr. Seeing

30

40 3"

43 3"

370 3"

80

50

CCY Spectr. Temp. ... 1.00. 1.0°C ... Dome Temp./Hum. ... 1.9°C / 64.4% Transparency Conditions ... Slightly hazy ...

Focus ... 0.225

288

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

0 0 256 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	25					CCD 18.60	0300 .5795	60u 400u	N H6300A	3			
540		30		6.40	F7V					4	KK VisBin	ADSG126A Brighter South one	500
	2									3			
88		40	3"	7.50						5	"	B Fainter one, seeing blew up @ end.	250 along
	2									3			
1002		43	3"	6.40	F7V					4	"	A again.	530
	2									3			
	0									1			
	2									3		telescope pseudo-reversed.	
45		370	3"	2.5	F8Ib					2	KK		3K
	2									3			
55		380								2	"		3K
	2									3			
56		400								2	"		
	2									3			

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pg #4

Mon/Tues

Emulsion Batches:

Date 1996 March 11/12 Observers [KK]/Tr/Sut

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cell 41	Comp							ThAr	2
42	HD 78154 A	09 01 36	+67 32 26	22 19 09		0 13 W			75
43	COMP							"	2
44	HD 78154 B	"	"	22 22 45		0 46 W			1850
45	COMP							"	2
46	HD 78154 A	"	"	22 55 30		0 50 W			97
47	Comp							"	2
48	BIAS(4)			22 58					
49	Comp							"	2
50	HD 76644	8 52 22	+48 26 04	23 08 39		1 15 W			136
51	Comp							"	2
52	Comp							"	2
53	HD 90839	10 24 11	+56 29 36	23 27 51		0 03 W			174
54	Comp							"	2
55	HD 90839	"	"	23 32		0 08 W			193
56	Comp							"	2

Spectr. Temp. ...

Focus ... 0.22

Spectr. Temp.

Exp. Mtr. Seeing

50 3'

47 3'

70 2.3'

450 2"

135 2'

65

Spectr. Temp. Dome Temp./Hum. -2.2°C / 66.0% Transparency Conditions . pretty clear, some haze. 290

Focus 0.225

Spectr. Temp. Dome Temp./Hum. -2.6°C / 70%
cl

0 0 256 1024 4 1 cd/ft

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	E-Slit	Emulsion	P.H.	Program	Remarks	Quality
	2					CCD ECCHELLE 18.60	300 l/mm .5795	69uW 400uH	6300Å	3			
	75	50	3"	4.85	F6IV					4	KK Vis Bin	4 mags brighter. 450 ^{mag} ADS7203A, and 5, well sep'd.	
	2									3			
1850		47	3"	8.16	N/A	"Later than A"				5	"	B good separation	500 above
	2									3			
	97	70	2-3"	4.85	F6IV					4	"		
	2									3			
										1/2			
	2									3	KK Vis Bin	couldn't see faint companions	
	136	450	2"	3.14	A7 IV					2	"	ADS 7114A	33K
	2									3			
	2									3			
	174	135	2"	4.84	F8V					4	StdVel		1K
	2									3			
	193	165	"	"	"					4	"		
	2									3			

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pg#5

Mon / Tues

Emulsion Batches:

Date ..1996. MAR 11 / 12... Observers [K.F.] / T.n. / S.m.f.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
CE11457	HD 90839	10 24 11	+56 29 36	23 36 35		0 14 W			275
58	Comp							ThAr	2s
59	Comp							"	2s
60	HD 79210	9 07 42	+53 07 00	23 48 20		1 48 W			648
61	Comp							"	2s
62	HD 79211	9 07 42	"	00 00 33		2 06 W			999
63	Comp							"	2
64	HD 79210	"	"	00 18 35		2 23 W			932
65	Comp							"	2
66	BIAS(4)			00 35					
67	Comp							"	2
68	HD 110379/80	12 36 36	-00 57 03	00 45 15		0 51 E			115
69	Comp.							"	2
70	HD 110379/80	"	"	00 50 32					108
71	Comp							"	2

Spectr. Temp. ...

Focus.....

Spectr. Temp.

Exp. Mtr. Seeing

170 2.5"

40 2.5"

46 2"

49 2"

200

200

Spectr. Temp. Dome Temp./Hum. Transparency Conditions ... Fine 292

Focus 0.225

Spectr. Temp. Dome Temp./Hum. 2 ADU
MAX

Comparison Filter	Exp.	Exp. Mtr.	Seeing	P ₀ Mag.	Sp.	Inst. <i>Echelle</i>	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
275		170	2-3"	4.84	F8V	CCD 18.60	0300 .5795	60u 400u	6300A	4	Std Vel		
Ar	2s									3			
	2s									3			
648		40	2-3"	7.64	MOV					5	KK Vis Bin	AD5 7251A West one is sl brighter ?? Look for same tonight,	(350 above bias)
n	2s									3			
999		46	2"	7.74	MOV					5	"	Eof one	11K above
n	2									3			
932		49	2"	7.64	MOV					6	"		1.1K above
n	2									3			
										1/2			
n	2									3			
115		200		3.48/3.50	FOV					4	KK Vis Bin	2.5" X separation Experiment,	
n	2									3		well resolved for guiding, but forget	
108		200		"	"					4		that Y bin of 4 last	
n	2									3		that resolution,	

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pg # 6

Date 1996. March. 11/12. Observers [KK] / Tn / Smt

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11472	Comp							THA	2
73	HD99028	11 18 43	+11 04 49	00 59 05		0 45 W			400
74	COMP							"	2
75	HD99028	"	"	01 07 48		0 54 W			400
76	COMP							"	2
77	HD99028	"	"	01 16 44		01 04 W			465
78	COMP							"	2
79	BIAS(4)			01 31					0
80	COMP							"	2
81	HD120476 A	13 44 36	+27 29	01 34 23		0 55 E			940
82	COMP							"	2
83	HD120476 B	"	"	01 51 56		0 19 E			2068
84	Comp							"	2
85	HD120476 A	"	"	02 28 25		0 13 W			1777
86	COMP							"	2
87	BIAS(4)			3 10					0

Spectr. Temp. ...

Focus 0.2

Spectr. Temp. ...

Exp. Mtr. Seeing

474

527

583

31

16

21

2-3"

3"

3"

Spectr. Temp. Dome Temp./Hum. - 3.4°C / 76.3% Transparency Conditions . clear 29.4.

Focus 0.225

Spectr. Temp. ^{SEP} °C Dome Temp./Hum.

0 0 256 1024 4 1

Companson / Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	Emmision	P.H.	Program	Remarks	Quality
A	2					ECHELLE 18.60	300 l/mm .5795	600 W 400µH	6300Å	3			
	400	474		4.03	F2 IV					5	KK		4.6K
	2									3			
	400	527								5	KK		4.0K
	2									3			
	465	583								5	KK		4.6K
	2									3			
	0									1			
	2									3			
	940	31	2"-3"	7.59	dk6					4	KK Vis Bin	ADS 9031A, sl brighter and N	570 above bias
	2									3		nice separation	
	2063	16	3"	8.03	dk/A (similar to A)					5	"	ADS 9031B, sl fainter and S	650 Above
	2									3			
	1177	21	3"	7.59	dk6					4	"	A again.	1.1K
	2									3			
	0									1/2			

295
A#7

Emulsion Batches:

Date 1996 MAR 11/12..... Observers [K.K.] / T.A. / Smit.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CD11488	Comp							ThAr	2
89	HD 131156A	14 4646	+19 30 57	03 06 16		0 38 E			196
90	Comp							ThAr	2
91	HD 131156B			03 11 44		0 07 W			2575
92	Comp							"	2
93	HD 131156A			03 57 46		0 16 W			372
94	COMP							"	2
95	BIAS (4)			04 06					0
96	COMP							"	2
97	HD 138918	15 30 01	+10 52 23	04 12 42		0 15 E			185
98	COMP							"	2
99	HD 138917	"	+10 52 19	04 17 15		0 04 E			540
CE11500	COMP							"	2
01	HD 138918	"	+10 52 23	04 28 16		0 01 W			220
02	COMP							"	2

100
Spectr. Temp. ...

Focus ... 0.22

Spectr. Temp.

Exp. Mtr. Seeing

100 Spectr. Temp. ... -100.4°C... Dome Temp./Hum. ... -4.0°C/82.6% Transparency Conditions ... Slightly hazy ... 296.

Focus ... 0.225

Spectr. Temp. ... Dome Temp./Hum. ... 28

0 0 256 1024 4 1

Companson Filter	Exp.	Exp. Mtr.	Seeing	Plg Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
	2					Echelle CCD 18.60	0300 .5795	60x4	6300Å	3			
	196	90	3"	4.74	G8V					2	KK Vis Bin	ADS 9413A SE one	1.5K
	2									3			
	2575	46		6.90	K5V					6	"	B large strength difference due to spectral type.	3.5k!
	2									3			
	372	180	3"	4.74	G8V					2	"	A again. well-matched with B.	3.5K
	2									3			
	0									1			
	2									3			
	185	163	3"	4.20	F0IV					4	KK Vis Bin	very hazy now, fog? ADS 9701A, brighter and N	1.8K
	2									3			
	540	174	3"	5.20	dF0					5	"	catwalk railing frosty, 95% RH ADS 9701B, on catwalk	2.2K
	2									3			
	220	215	3"	4.20	F0IV					4	"	A again.	
	2									3			

297
Pg #8

Date 1496 March 11/12 Observers [KK]/Tr/Smt

Emulsion Batches:

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

CCD
Spectr. Temp. ...
Focus ... 0.22
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11503	COMP							ThAr	2
04	HD146361	16 10 56	+34 06 42	04 40 49		0 20 E			610
05	COMP							"	2
06	HD146362	"	"	04 53 06		0 16 W			2000
07	COMP							"	2
08	HD146361	"	"	05 28 21		0 30 W			750
09	COMP							"	2
10	BIAS(4)			05 43					6
11	COMP							"	2
12	HD8890	1 2234	+88 46 26	05 49 21		9 43 E			75
13	Comp							"	2
14	HD8890	"	"	05 52 03		9 40 E			80
15	Comp							"	2
16	HD8890	"	"	05 55 03		9 36 E			90
17	COMP							"	2
18/24 25/26	FLAT 15 X 7 IN BOARD / OUT BOARD HARTMANN					3 02 W	[1 sec +120	TUNG ThAr	7 3/2

Exp. Mir.	Seeing
168	3"
39	3"
96	3"
350	3"
340	
350	

201

Pg#1

Tues/Wed

Emulsion Batches:

Date 1996 MAR 12/13..... Observers [FK] / T.n.....

.....
.....
.....CCO
Spectr. Temp.
Focus..... 0.22
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE115 ^{27/28}	Inboard/outboard HURTMAN								3/2
29	BIAS(4)			1900					
30	Comp							ThAr	2s
31	HD47105	6 3156	16 29 05	19 08 39		0 13 E			584
32	Comp							n	2s
33	HD47105			19 19 47					181
34	Comp							n	2s
35	HD47105			19 24 53		0 05 E			89
36	Comp							n	2s
37	Comp							n	2
38	HD59438A	7 24 49	-14 47 08	19 39 59		0 27 E			948
39	Comp							n	2
40	HD59438B	v	n	19 57 45		0 12 E			792
41	Comp							n	2
42	HD59438A	n	.	20 13 07		0 01 W			636
43	Comp							n	5

Exp. Mtr. Seeing

2

33"

377 23"

330

450 2'

32 23"

47 23"

22 2'

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. $+1.7^{\circ}\text{C}$ 56.78H Transparency Conditions ... Part. Cloudy 300...

Focus ... 0.225 unchanged despite warmer air today

Spectr. Temp. Dome Temp./Hum. $+1.6^{\circ}\text{C}$ 50.176H

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3/2				Etello CCD 18.60	0300 .5795	60u W 400u H	6300A	7/8	focus test	good focus? despite wobble 0 0 128 1024 8 1 CCD only	HK
	2"							1/2		0 0 256 1024 4 1 observing	
25	1.3"							3			
584	2.3"	1.93	A0IV					4	KK pgm	Quite Cloudy	3K
23								3			
181								5			7K
23								3			
89	2"							6			
23								3			
2								3		(Biased to Guide's 1 South guide, slightly south of image)	
948	2.3"	6.40	F7V					2	KK Vis Bin	ADS 6126A	1K
2								3			
792	2.3"	7.50	N/A	(similar sp to A)				5	"	ADS 6126B (Guide off perhaps North of image to avoid South crop)	300 above Bias
2								3			
636	2"	6.40	F7V					2	"		
5								3			

30th p1#2 Tues/Wed

Date 1996 MAR 12/13..... Observers [K.H.] / T.W.....

Emulsion Batches:

.....

CCO
Spectr. Temp. ...
 Focus ... 0.22
 CCO
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11 54A	BIAS(4)			20 25					
45	Comp							THAr	2s
46	HD86986 A	7 1409	+221000	20 3239		0 20W			49
47	Comp						"		2
48	HD86986B	"	"	20 3510		0 39W			1040
49	Comp						"		2
50	HD86986 A	"	"	20 5420		0 45W			238
51	Comp						"		2
52	Comp						"		2
53	HD90839	10 2414	+562936	21 0610		2 09E			573
54	Comp						"		2
55	HD90839 [sky rally] but lots of Em lines from it			21 1957		1 48E			955
56	comp						"		2
57	BIAS(4)			21 39					
58/64	FLATS x 7			21 50		1 27W	-5°	Tung	15
All copied to m:									

Exp. Mtr. Seeing

400
1
100
2
27 2"
56 2"
10 23"

CCD Spectr. Temp. ... 100.5 °C.

Dome Temp./Hum. ... +1.9°C / 50.7% H

Transparency Conditions PART. Cloud 302

Focus ... 0.225

→ SUDDEN Solid Cloud

CCD Spectr. Temp. ... 100.4 °C.

Dome Temp./Hum. ... +1.0°C / 53.0% H

3 MAX ABOVE BIAS

Comparison filter	Exp.	Exp. Mtr.	Seeing	Flt. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsifön	P.H.	Program	Remarks	Quality
		100				Echell 10 CCD 18-60	0300 575	60u 400u	6300A	1/2			
	25	T								3			
	49	100		3.55	F0IV					2	KK Vis Bin		1.6K
	2									3			
	140	27	2"	8.18	K3V					6	"	Cloud at end	400
	2									3			
	238	56	2"	3.55	F0IV					2	"	Some cloud	
	2									3			
	2									3			
	573	10	2-3"	4.84	F8V					5	Std vel	Thickening cloud	60 only
	2									3			
	955	5		"	"					5	Stky mostly		
	2									3			
										1/2			
	9	15						600u H for plate = 205 sot		3			6K

207cp#3

Tue/Wed

Emulsion Batches:

Date 1996 MAR 12/13..... Observers [KTS]/TM.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cell 565	Comp							ThAr	2
66	HD 90839	10 24 14	+56 29 36	23 13 42		0 07 W			1900
67	Comp							ThAr	2
68	BIAS (4)			23 32					.
69	HD 90839	"	"	23 33 41		0 W			637
70	Comp							ThAr	2
71	HD 90839	"	"	23 46 08		"			757
72	Comp							ThAr	2
73	Comp							"	2
74	HD 8890	1 22 34	+88 46 26	00 13 26		9 07 W			93
75	Comp							"	2
76	HD 8890			00 16 08					73
77	Comp							"	2
78	HD 8890			00 18 26					68
79	Comp							"	2
80	BIAS (4)								

CCD Spectr. Temp. ...

Focus 0.22

Spectr. Temp. ...

Exp. Mtr. Seeing

27 3.2

64 3.0

80

425

50 3.4

435

CCD Spectr. Temp. -100.6°C Dome Temp./Hum. $+0.8^{\circ}\text{C}$ 59% H Transparency Conditions ... PART Cloudy ... 304

Focus 0.225

Spectr. Temp. ... Dome Temp./Hum. $+00.7^{\circ}\text{C}$ 69.5% H

3 MAX HOLD

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2					Echelle CCD 18"0	0300 .5795	600 W 400 W H	6300A	3			
1000	27		3"2	484	F8V			Reset H after Flats		6	Std vel	PART Cloudy	230
	2									3			
										1/2			
637	64		3"	4	2					6	Std vel		
	2									3			
757	80									6	Std vel		910
A 2										3			
	2									3			
93	425			2	F8Ib					5	Kk pgn		62K
	2									3			
73	450		3"							5			
	2									3			
68	435									5			
	2									3			
										1/2			

305

pg#1

Wed/Thurs

Date 1996 MAR 13/14

Observers [HK]/Tm

Emulsion Batches:

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cell 581	BIAS(4)			18 40					
82	Comp			18 43				T/Ar	2
83	HD34029	5 09 18	+45 53 47	18 43 48		0 39 W			98
84	Comp							"	2
85	HD34029			18 47 46					
86	Comp							"	2
87	HD34029			18 51 43					32
88	Comp							"	2
89/90	Inboard / out board					3 09 W	+35		3/2
91/97	FLATS x 7					2 W	+16	Tung	15
cell 598	BIAS(4)			19 29					
99	Comp							T/Ar	2
cell 600	HD47105	6 31 56	+16 29 05	20 25 08		1 08 W			612
01	comp							"	2
02	HD47105	"	"	20 37 03		1 25 W			934
03	COMP							"	2

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus. 0.235

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus. 0.235

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus. 0.235

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus. 0.235

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus. 0.235

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus. 0.235

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus. 0.235

Spectr. Temp. ...

Exp. Mtr. Seeing

Spectr. Temp. ...

Focus. 0.235

Spectr. Temp. ...

Spectr. Temp. ^{CCD} - 100.2 °C Dome Temp./Hum. +3.9 °C 48.2% H Transparency Conditions ... Hazy / Part cloudy 206

Focus . 0.225

Spectr. Temp. ... Dome Temp./Hum. +3.0 °C 46.9% H

MAX
-40000

Comparison filter Exp.	Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst. Edelkr CCD	Grating/ x Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1860	0300 15795	60 μ W 400 μ H	6300A	1/2			
2									3		Focus looks ok ^(FWHM) 2.6 pixels	
98	670		008	65 IIIe 160 III					2	KK pgm	was there for encoder normalization.	15.4
2									3			
	630	2"							2			13.4
2									3			
32	480								2	OH!	focus test done would affect.	
2									3		11034029 observations or reductions unfortunately	
3/2									7/8	Focus test	Looks like it's set for only slightly cooler, despite warm weather.	6K
6							60 μ W 600 μ H	For Flats	3			
									1/2			
2							400 μ H		3			
612	98	3"	1.93	A0 II					6	KK pgm	part cloudy	720
2									3	maybe some	dbl lines at 96 col 2 nd Rows 482, 500	
93+	206								6	n		1.6K
2									3			

307
pg#2

Wed / Thurs

Emulsion Batches:

Date ..1996 MAR 13/14.....

Observers [K.A.] / T.A.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
CE 11604	HD 47105	6 3156	+16 2905	20 549		1 44 W			1126
05	Comp							Th Ar	25
06	BIAS(4)			21 18					
07	Comp							"	2
08	HD 8890	1 2234	-86 4626	22 10 45		7 16 W			309
09	Comp							"	2
10	HD 8890	"	"	22 20 45		W			1001
11	Comp							"	2
12	HD 8890	"	"	22 38 57		7 37 W			60
13	Comp							"	2
14	BIAS(4)			22 4 2					
15	Comp							"	2
16	HD 90839 <i>wrong star.</i>	10 2414	56 2936	22 48 40		0 21 E			614
17	Comp							"	2
18	HD 90839	"	"	23 04 16		00 08 E W			475
19	Comp							"	2

CCD
Spectr. Temp. ...
Focus... 0.22
Spectr. Temp. ...

Exp. Mtr. Seeing

78 3"

170 4"

215

340

4 23"

90 23"

CCD Spectr. Temp. -100.7°C Dome Temp./Hum. $+1.7^{\circ}\text{C} \dots 50.6\% \text{H}$ Transparency Conditions *mostly cloudy* 308.

Focus 0.225

Then clearing nicely

Spectr. Temp. Dome Temp./Hum. $+1.6^{\circ}\text{C} \dots 57.2\% \text{H}$

Comparison / Filter	Exp.	Exp. Mtr.	Seeing	Flg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	1126	78	3"	193	A0.1V	echelle CCD	0300 15795	60u 400u	6300R	6	KK pgm		
	4r 2s									3			
										1/2			
	2									3			
	509	120	4"	2	F8T6					2	KK pgm	some cloud	1.4K
	2									3			
	1001	215								2	"		2.5K
	2									3			
	60	340								2	"		
	2									3			
										1/2			
	n 2									3			
	614	14	2.3"			*very late m?				4		STAR NW 3' from HD 90839	
	2									3			
	475	190	2.3"	4.84	F8V					5	std vel		
	n 2									3			

30A
p#3

Wed / Thurs

Emulsion Batches:

Date 1996 MAR 13/14... Observers [KK]/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.
CE11620	HD90839	10 24 14	+56 29 36	23 13 32		0 08 W			866
21	Comp							J3A-	2
22	HD90839			23 30 06		0 23 W			782
23	Comp							2	2
24	BIAS(4)			23 44					
25	Comp							n	2
26	HD 47105	6 31 56	+16 29 05	23 52 09		4 26 W			145
27	Comp							n	2
28	HD 47105	n	n	23 56 21					178
29	Comp							n	2
30	HD 47105			00 02 25		4 37 W			62
31	Comp							n	2
32	Comp							n	2
33	HD 89484	10 14 20		00 24 49		1 18 W			32
34	Comp							n	2

 CCD
 Spectr. Temp.
 Focus 0.22
 Spectr. Temp.

Exp. Mtr. Seeing

165 3.5

175

175

280

155

200 3"

CCD
Spectr. Temp. ... -100.7 °C

Dome Temp./Hum.

Transparency Conditions ... mostly clear ... 3/10

Focus ... 0.225

Spectr. Temp.

Dome Temp./Hum.

Comparison
Filter Exp.

Exp. Mtr.	Seeing	P. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
864	165	3.5-4.8	F8 V	Schelte 18-60	0300 05795	60u 400u	6300A	5	std vel		1.9K
Ar 2								3			
782	175							5	"		
2								3			
								1/2			
7								3			
175	175	1.93	A0 IV					2.5	KK exp.	(wast is best or only clear sky) and set for night	2.9K
2								3			
178	280							5			
2								3			
62	155							5			
2											
2								3			
200	200	3"	2.22 K I III					4	KK Vis Bin	NW Brighter one	
2								3			

pg # 1 [Thu / Fri]

313 Date 1996 March 14/15

Observers [KK]/Smt + Glen Galang

Emulsion Batches:

.....

(C)
 Spectr. Temp. ...
 Focus
 Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11640/41	INBOARD/OUTBOARD							Th Ar	3/2
42	BIAS(4)							"	-
43	COMP							"	2
44	HD47105	06 31 56	+16 29 05	21 14 40		1 54 W		"	128
45	COMP							"	2
46	HD47105			21 20 22		2 00 W		"	185
47	COMP							"	2
48	HD47105			21 26 31		2 07 W		"	225
49	COMP							"	2
50	COMP							"	2
51	HD79210	09 07 42	+53 07	21 45 17		0 36 W		"	3030
52	COMP							"	2
53	HD79211	"	"	22 38 03		1 14 W		"	2125
54	COMP							"	2
55	HD79210	"	"	23 15 57		1 47 W		"	1816
56	COMP							"	2

Exp. Mtr. Seeing
 400
 525
 27560 4"
 0 4"
 0 5"
 0 8"
 1
 at

CCD Spectr. Temp. -100.4°C

Dome Temp./Hum. $+4.0^{\circ}\text{C}/75.5\%$

Transparency Conditions Cleared ~19:30

Focus ~~0.230~~ 0.235

@ focus test.

a few clouds. 1

314

Spectr. Temp.

Dome Temp./Hum.

VERY HAZY!

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
r	3/2					ECHELLE	300 Klmm	60µW	6300 Å	7/8		0 0 128 1024 8 1	
	-					18.60	.5795	400µW		1		0 0 256 1024 4 1	
	2									3			
	128	400		1.93	AO IV					4	KK	γ Gem.	2.6K
	2									3			
	185	525		"	"					4	"		3.2K
	2									3			
	225	560	4"	"	"					4	"		
	2									3			
	2									3			
	3030	0	4"	7.64	MOV					5	KE Vis Bin	AD57251A, 17" sep. Wae	1.3K
	2									3			
	2125	0	5-8"	7.74	"					6	"	B seeing blew up. weak.	300 above 2/9
	2									3			
	1810	0	4-8"	7.64	"					5	"	VERY HAZY, not quite foggy but better seeing, than	~300 above
	2		at times.							3			

pg #2

3/5 Date 1946 March 14/15 Observers [KK]/Smt + Glen Galang

Emulsion Batches:

.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11657	BIAS(4)			23 48					0
58	COMP							ThA	2
59	HD8890	01 22 34	+88 46 26	00 02 51		9 04 W			100
60	COMP							"	2
61	HD8890	01 22 34	"	00 06 14		9 08 W			100
62	COMP							"	2
63	HD8890	"	"	00 09 24		9 11 W			100
64	COMP							"	2
65	COMP							"	2
66	HD66751	7 59 54	+70 00	00 23 24		3 49 W			120
67	COMP							"	2
68	BIAS(4)			00 47					-
69	COMP							"	2
70	HD90839	10 24 14	+56 29 36	00 54 59		1 50 W			610
71	COMP							"	2
72	HD90839	"	"	01 06 24		2 00 W			515

Exp. Mtr. Seeing
 375 4"
 375 4.5"
 300
 0 6"
 43 5"
 00

CCD Spectr. Temp. ... -100.5°C Dome Temp./Hum. +2.5°C / 80.3% Transparency Conditions .. Very .. hazy .. → thin cloud ..

Focus ~~0.230~~ 0.235

316

Spectr. Temp. Dome Temp./Hum. +2.1°C / 82.7%
C)

0 0 256 1024 Y 1

Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
	0					ECHELLE 18.60	300 l/mm .5795	60μW 400μH	6300 Å	1			
	2									3		telescope on E side	
	100	325	4"	2.18	F8Ib					4	KK	α UMi Δα -16" 43"	4.7K
	2									3			
	100	375	4.5"	"	"					4	KK		5.0K
	2									3			
	100	300	"	"	"					4	KK		5.0K
	2									3			
	2									3		telescope still on E side.	
	120	0	6"	6.48	dF8					4	KK	2nd priority (a 3rd) getting cloudy.	
	2									3			
	-									1			
	2									3		telescope on W side now	
	60	43	5"	4.84	F8I					5	std vel.	through thin cloud	1.2K
	2									3		92% RH on catwalk and rising	
	56	100	"	"	"					5	std vel.	clear here now.	1.5K

317
pg #3

Date 1996 March 14/15 Observers [KK]/Smt + Glen Galang

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.
CE11673	COMP							ThAr	2
74	HD90839	10 24 14	+56 29 36	01 16 52		2 11 W			545
75	COMP							"	2
76	COMP							"	2
77	HD99028	11 18 43	+11 04 49	01 33 22		1 32 W			440
78	COMP							"	2
79	BIAS(4)			01 55					0
80-86	FLAT x 7					3 ^h W	+15°	Tung	1
87/88	INBOARD/OUTBOARD					"	"	ThAr	3/2

CCD
Spectr. Temp. ...

Focus ...

Spectr. Temp. ...

Exp. Mtr. Seeing

130 4

15

319
pg #1

Date 1996 March 15/16 Observers [kk]/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.
CE11689/90	INBOARD/ OUTBOARD					3 10 W	+40°	ThAr	3/2
91	BIAS(4)								0
92	COMP							"	2
93	HD20902	03 17 11	+49 30 19	19 54 24		3 52 W			200
94	COMP							"	2
95	HD20902	"	"	19 59 42		3 57 W			190
96	COMP							"	2
97	HD20902	"	"	20 04 10		4 02 W			200
98	COMP							"	2
99	COMP							"	"
CE11700	HD8890	01 22 34	+88 46 26	20 17 09		5 23 W			150
01	COMP							"	2
02	HD8890	"	"	20 22 00		5 28 W			150
03	COMP							"	2
04	HD8890	"	"	20 26 00		5 32 W			190
05	COMP							"	2

0
Spectr. Temp. ...
Focus 0.2
Spectr. Temp.

Exp. Mtr. Seeing

575 5"

590 4"

555

327 4-3"

345

309

Spectr. Temp. -100.4°C Dome Temp./Hum. $-1.1^{\circ}\text{C}/57.5\%$ Transparency Conditions *clear now, a few clouds to the south.*
 Focus 0.230 @ focus test 320
 Spectr. Temp. Dome Temp./Hum. cd ~~0.0~~

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
3/2						ECHELLE 18-60	300 $\text{\AA}/\text{mm}$.5795	60 μm 40 μm	6300 \AA	7/8	focus test	0 0 128 1024 8 1	
0										1		0 0 256 1024 4 1	
2										1		GPIB error induced by overfilling keyboard buffer. Reset ACPD and Hec.kon.	
200		525	5"	1.79	F5Jb					2	KK	α Per. some thin clouds	6K
2										3			
190		590	4"	"	"					2	"		6K
2										3			
200		555		"	"					2	"		5.3K
2										3			
"										3			
150		327	4-3"	2	F8Jb					4	KK		3.9K
2										3			
150		345		"	"					4	KK		4.8K
2										3			
190		309		"	"					4	KK		4.7K
2										3			

32
pg # 2

Date 1996 March 15/16 Observers [KK]/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.
CE11706	BIAS(4)							ThAr	0
07	COMP							ThAr	2
08	HD79210	09 07 42	+53 07	20 42 00		0 44 E			1705
09	COMP							"	2
10	HD79211	"	"	21 13 41		0 13 E			1730
11	COMP							"	2
12	HD79210	"	"	21 44 10		0 07 E			232
13	COMP							"	2
14	HD79210	"	"	21 50 47		0 23 W			1640
15	COMP							"	2
16	BIAS(4)			22 20					0
17	COMP							"	2
18	HD47105	06 31 56	+16 29 05	22 27 54		3 11 W			120
19	COMP							"	2
20	HD47105	"	"	22 31 42		3 15 W			120

 CCD
 Spectr. Temp. ...
 Focus 0
 Spectr. Temp. ...

Exp. Mtr. Seeing

36 3"

37 3"

6 3"

44 3"

435 3"

44 4"

CCD Spectr. Temp. -100.7°C Dome Temp./Hum. $-2.7^{\circ}\text{C}/59.2\%$ Transparency Conditions *clear* 3:22

Focus 0.230

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

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	ADU max Quality above bias
	0					ECHELLE 18.60	300 λ/mm .5795	60 μm 400 μm	6300 \AA	1			
	2									3			
	1705	36	3"	7.64	MOV					5	KK Vis Bin	ADS7251A, 17" sep, W one	400
	2									3			
	1730	37	3"	7.74	MOV					6	"	ADS7251B, 17" sep, E one	570
	2									3			
	232	6	3"	7.74	MOV					5	"	A again B again, ^{E one.} oops	100
	2									3			
	1640	44	3"	7.64	MOV					6	"	A this time. W one	530
	2									3			
	0									1			
	2									3			
	120	435	3"	1.93	AOIV					4	KK	γ Gem	33K
	2									3			
	120	364	4"	"	"					4	KK		3.0K

322
pg #2

Date 1996 March 15/16 Observers [KK] / 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
CE11721	COMP							ThAr	2
22	HD47105	06 31 56	+16 29 05	22 35 35		3 20 W			170
23	COMP							"	2
24	COMP							"	2
25	HD62509	07 39 12	+28 16 04	22 45 07		2 20 W			60
26	COMP							"	2
27	HD62509	"	"	22 47 36		2 22 W			60
28	COMP							"	2
29	HD62509	"	"	22 50 00		2 25 W			60
30	COMP							"	2
31	COMP							"	2
32	HD89 ⁴⁸⁴ 485	10 14 28	+20 20 51	22 58 13		0 01 E			725
33	COMP							"	2
34	HD89485	"	+20 20 49	23 02 23		0 09 W			450
35	COMP							"	2
36	HD89484	"	+20 20 51	23 12 13		0 13 W			125

CCD
Spectr. Temp. ...
Focus 0.2
Spectr. Temp.

Exp. Mtr. Seeing

450 5"

570 4"

460 4.5"

450 5"

200 4"

255 4"

275 4"

CCD Spectr. Temp. -100.6°C Dome Temp./Hum. $-3.3^{\circ}\text{C}/61.4\%$ Transparency Conditions .. clear..... 32V

Focus 0.230.....

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ar	2					ECHELLE 18.60	300 l/mm .5795	60μW 400μH	6300A ⁰	3			
	170	450	5"	1.93	A0IV					4	KK	γ Gem	3.7K
	2									3			
	2									3			
	60	520	4"	1.14	K0IIIb					2	KK stdvd	β Gem, not primary, sbdvd. ^{8.0K} trough	
	2									3			
	60	460	4-5"	"	"					2	"		8.0K
	2									3			
	60	450	5"	"	"					2	"		6.4K
	2									3			
	2									3			
	125	200	4"	2.22	K1III					5	KK Vis Bin	AP57724A, brighter and NW	4.7K
	2									3			
	450	255	4"	3.47	G7III					6	"	A057724B, fainter and SE	4.7K
	2									3			
	125	275	4"	2.22	K1III					5	"	A again.	

325
pg #4

Date 1996 March 15/16 Observers [KK]/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.
CE11737	COMP							ThA ₂	2
38	BIAS (4)			23 18					0
39	COMP							"	2
40	HD99028	11 18 43	+11 04 49	23 29 26		0 23 E			740
41	COMP							"	2
42	HD99028	"	"	23 43 32		0 09 E			740
43	COMP							"	2
44	HD99028	"	"	23 58 13		0 06 W			755
45	COMP							"	2
46	BIAS (4)			00 13					0
47	COMP							"	2
48	HD90839	10 24 14	+56 29 36	00 20 57		1 23 W			800
49	COMP							"	2
50	HD90839	"	"	00 36 03		1 39 W			840
51	COMP							"	2
52	HD90839	"	"	00 51 24		1 53 W			801

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

Ap. Mtr. Seeing

216 4.5"

245 4"

300 4"

286 3.4"

228 4"

248

CCD Spectr. Temp. -100.7°C Dome Temp./Hum. $-3.4^{\circ}\text{C}/60.0\%$ Transparency Conditions *clear* 326

Focus 0.230

Spectr. Temp. Dome Temp./Hum. *ca* 0 0 256 1024 4 1

Comparison / Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
A	2					ELMUE 18.60	300 lines .5795	69W 40µm	6300Å	3			
	0									1			
	2									3			
	740	216	4"5"	4.03	F2IV					4	KK		4K
	2									3			
	740	245	4"	"	"					4	KK		4K
	2									3			
	745	300	4"	"	"					4	KK		3.8K
	2									3			
	0									1			
	2									3			
	800	286	3"4"	4.84	F8V					2	std vel		2.2K
	2									3			
	840	228	4"	"	"					2	"		1.5K
	2									3			
	801	248	"	"	"					2	"		1.6K

32 #5
Pg

Date 1996 March 15/16 Observers [kk]/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.
CE11 753	COMP							ThAr	2
54	BIAS (4)			01 10					0
55-61	FLAT x 7					3 08 W	+ 27°	Tung	1
62	BIAS (4)			02 40					0
63	COMP							ThAr	2
64	HD120746 ^{476 Th} A	13 44 36	+27 29	02 44 07		0 37 W			1320
65	COMP							"	2
66	HD120746 ^{476 Th} B	"	"	03 08 32		1 07 W			1700
67	COMP							"	2
68	HD120746 ^{476 Th} A	"	"	03 39 06		1 33 W			1400
69	COMP							"	2
70	BIAS (4)			04 04					0
71	COMP							"	2
72	HD131156A	14 46 46	+19 30 57	04 10 52		0 44 W			275
73	COMP							"	2
74	HD131156B	"	"	04 18 39		1 07 W			1170

(not correct HD^{476 Th} noted Apr 22/96 Th) corrected now ThLCO
Spectr. Temp. ...
Focus 0:
Spectr. Temp. ...

Exp. Mtr. Seeing

27 3"

79 2-3"

26 3"

68 3"

58 3"

CCD Spectr. Temp. -100.7°C Dome Temp./Hum. $-3.9^{\circ}\text{C}/58.2\%$ Transparency Conditions *clear* 328

Focus 0.230

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	over All Quality
	2					ECHELLE 18.60	300 L/mm .5795	60um 400um	6300A	3			
	0									1			
	1							60um 600um	for flats	3			
	0							60um 400um		1		Viewed Comet C/1996 B2 took very weak spectrum of nucleus (~9-10 mag)	5.6K
	2									3			
	1320	27	3"	7.59	dk6					5	KK Vis Bin	AD59031A, sl brighter and HUGE grazing cosmic ray.	350
	2									3			
	1700	29	2"-3"	8.03	N/A					6	"	B, sl fainter and S	250
	2									3			
	1400	26	3"	7.59	dk6					5	"	A again	250
	2									3			
	0									1			
	2									3			
	275	68	3"	4.74	G8V					2	KK Vis Bin	AD59413A, brighter and SE	600
	2									3			
	1170	38	3"	6.90	K5V					4	"	B, fainter and NW	

329
pg #6

Emulsion Batches:

Date 1996 March 15/16 Observers [KK]/Smt.....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11775	COMP							ThAr	2
76	HD131156A	14 46 46	+19 30 57	04 40 03		1 16 W			425
77	COMP							"	2
78	BIAS(4)								0
79	COMP							"	2
80	HD138918	15 30 01	+10 52 23	05 15 51		1 06 W			290
81	COMP							"	2
82	HD138917	"	+10 52 19	05 22 25		1 18 W			640
83	COMP							"	2
84	HD138918	"	+10 52 23	05 34 53		1 24 W			240
85	COMP							"	2
86	COMP							"	"
87	HD137909	15 23 42	+11 27 01	05 44 00		1 39 W			160
88	COMP							"	2
89	HD137909	"	"	05 47 56		1 43 W			185

Spectr. Temp. ...
Focus 0.2
Spectr. Temp.

Exp. Mtr. Seeing

160 4"

112 4"

126

105 4"

108 4"

148

Spectr. Temp. ... Dome Temp./Hum. -5:9°C / 59.8% Transparency Conditions ... clear 330

Focus 0.230

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	ADU per Quality above bias.
	2									3			
425		100	4"	4.74	G8V					2	KK Vis Bin	ADS9031A again	750
	2									3		GP1B error again, same reason as earlier - keyboard buffer intolerance, ∴ lastcap was a bit late.	
	0									1			
	2									3			
290		112	4"	4.20	F0IV					4	KK Vis Bin	ADS9701A, brighter and N	750
	2									3			
640		126		5.20	(BSC) dFO					5	"	ADS9701B, fainter and S.	650
	2									3			
240		105	4"	4.20	F0IV					4	"	A again, sky getting brighter now	650
	2									3			
	"									3			
160		108	4"	3.60	F0p					6	KK	(β Cor Ber or) β Cr B	650
	2									3		Dawn approaching fast.	
185		148								6	KK		1000

338
pg #1 [Sat/Sun]

Date 1996 March 16/17 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.
CE11796/97	INBOARD/ OUTBOARD					3 13 W	+46°	ThAr	3/2
98	BIAS(4)								0
99	COMP							"	2
CE11800	HD27561	04 15 54	+14 11	19 52 27		3 27 W			1835
01	COMP							"	1
02	HD27561	"	"	20 28 56		4 01 W			1800
03	COMP							"	1
04	BIAS(4)			21 01					0
05	COMP							"	1
06	HD27561	"	"	21 04 33		4 36 W			1800
07	COMP							"	1
08	HD27561	"	"	21 37 27		5 10 W			1800
09	COMP							"	1
10	HD27561	"	"	22 13 02		5 45 W			1800
11	COMP							"	1

(C)
Spectr. Temp. ...
Focus 0.2
Spectr. Temp. ...

Exp. Mtr. Seeing

520 V
4.4

624 4"

910 4.5"

610 4"

580 5"

37 5"

CCD
 Spectr. Temp. ... 100.4 °C ... Dome Temp./Hum. ... -1.0 °C / 43.8% ... Transparency Conditions ... clear ...
 Focus ... 0.230 ... @ focus test ... 334
 Spectr. Temp. ... Dome Temp./Hum. ...

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	3/2	1320V no filter				ECHELLE 18.13	300 l/mm .5685	60uW 400uH	6520A	7/8	focus test	0 0 128 1024 8 1	
	0								apparently very close	1		0 0 256 1024 4 1	
	2								actually took a while to verify though.	3		telescope is on E side of piers.	
	1835	1024	4"	5.61	F4V					4	Hnd		1.5K
	1									3			
	1800	910	4"-5"-3"	"	"					5	"		1.3K
	1									3			
	0									1			
	1									3			
	1800	610	4"	"	"					6	"		1.0K
	1									3			
	1800	580	5"	"	"					4	"	better focus, I guess.	1.3K
	1									3			
	1800	137	5"	"	"					5	"	had to leave dome, so this exposure was VERY poorly guided.	5.0 4.60
	1									3			

335
Pg # 2

Date 1996 March 16/17 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.
CE11812	BIAS(4)			22 46					0
13	COMP							ThAr	1
14	HD99984	11 25 07	+43 43 20	22 57 24		0 40 E			1800
15	COMP							"	1
16	HD99984	"	"	23 31 50		0 06 E			1800
17	COMP							"	1
18	BIAS(4)			00 04					0
19	COMP							"	1
20	HD99984	"	"	00 07 02		0 30 W			1800
21	COMP							"	1
22	BIAS(4)			02 00					0
23-32	FLAT x 10					3 07 W	+14°	Tung	1
33/34	INBOARD/OUTBOARD					"	"	ThAr	3/3

CCD
Spectr. Temp. ...
Focus 0.2
Spectr. Temp. ...

Exp. Mtr. Seeing

320
in filter

3060 2"

3465 4"

3525 2"

337
Pg #1

[Sun/Mon]

Date 1996 March 17/18.

Observers [Hml] / 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.
CE11835/36	INBOARD / OUTBOARD							ThAr	3/3
37	BIAS (4)			19 00				"	0
38	COMP							"	1
39	HD68146	08 06 02	-13 30 18	19 14 31		1 00 E			1815
40	COMP							"	1
41	HD68146	"	"	19 46 47		0 27 E			1800
42	COMP							"	1
43	BIAS (4)			20 21					0
44	COMP							"	1
45	HD68146	"	"	20 23 43		0 11 W			1920
46	COMP							"	1
47	COMP							"	1
48	HD87141	9 57 58	54 22 32	21 03 14		1 11 E			1448
49	COMP							"	1
50	HD87141	"	"	21 03 14		0 44 E			1482
51	COMP							"	1

Spectr. Temp.

Focus 0.22

Spectr. Temp.

Exp. Mtr. Seeing

1320
2.5

2080 3"

935 2.2"

1500 3"

3340 2.3"

4220 2"

339 pg#2 Sun/Mon

Emulsion Batches:

Date 1976 MAR 17/18 Observers [Hm]/[Tn]/[Smt]

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
CE11852	BIAS(4)			21 56					0
53	Comp							ThA	1
54	HD 113337	12 57 53	+64 08 51	22 08 25		2 57 E			1800
55	Comp							"	1
56	HD 113337	"	"	22 40 32		2 24 E			1820
57	Comp							"	1
58	HD 113337	"	"	23 13 16		1 52 E			1772
59	Comp							"	1
60	BIAS(4)			23 45					0
61	Comp							"	1
62	HD 100563	11 29 15	+03 36 56	23 52 02		0 15 W			1800
63	Comp							"	1
64	HD 100563	"	"	00 24 23		0 48 W			1869
65	Comp							"	1
66	HD 100563	"	"	00 56 53		1 20 W			1813
67	Comp							"	1

 CCD
 Temp.
 Focus ... 0.230
 Spectr. Temp.

Exp. Mtr. Seeing

 320 V
 no filter

3270 2.2"

2820 2.2"

3930 2.2"

3100 2.3"

2830 3"

1720

Spectr. Temp. ^{CCP} -101.0 °C Dome Temp./Hum. -0.4°C/49.9% Transparency Conditions ... Clear in North... 340
 some thin clouds in South

Focus ... 0.230

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

0 0 256 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0				Echelle CCD 18113	0300 .5685	60u W	6520H	1/2			
1								3			
1800	3270	<2"	6.00	F6 V				4	Hml		4.7K
1								3			
1820	2820	2.2"	"	"				5	Hml	I guess the seeing/focus wasn't as good as I thought	3.8K
1								3			
1772	3930	<2"	"	"				6	Hml	better focus now	5.5K
1								3			
0								1/2			
1								3			
1800	3100	2-3"	5.77	F5 V				4	Hml		3.1K
1								3			
1869	2830	3"	"	"				5	Hml		3K
1								3			
1813	2120	"	"	"				6	Hml		27K
1								3			

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. -1.4°C 53.2% H Transparency Conditions ... Clouding in 342

Focus 0.230

Spectr. Temp. Dome Temp./Hum. $c \delta$

Comparison / Filter	Exp.	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst. Echelle	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	0		3"			CCD 18.13	0300 .5685	60uW 400uH	6520A	1/2			
	1711	1111	3"	5.77	F5V					2	Hm 1		
A	1/5									3			
	1/5									3			
	1800	1500	2-3"	5.74	F5V					4	Hm 1 pgm	2200/1 SN PART cloudy = 35 Kphotons	1.6K
	1/5									3			
	1800	2900	2-3"	"	"					5	"	clearing 250/1 SN 60 Kphotons	33K
	1/5									3			
	0									1/2			
	1708	3370	2-3"	5.74	F5V					6	"	[7200/1 SN] 50 Kphotons	2.5K
	1/5									3			
	1800	5535!	2"	"	"					2	"		7.5K
	1/5									3			
	0									1			
	1									3			

343
pg #4

Sun/Mon

Date 1996 March 17/18 Observers [Hml]/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.
CE11883	HD168151	18 13 19	+64 21 48	04 21 20		2 09 E			930
84	COMP							ThAr	1
85	HD168151	"	"	04 38 45		1 58 E			600
86	COMP							"	1
87	COMP							"	1
88	HD173667	18 41 21	+20 27 02	04 55 00		2 08 E			900
89	COMP							"	1
90	HD173667	"	"	05 11 19		1 51 E			948
91	COMP							"	1
92	BIAS(4)			05 28					0
893-902	FLATS x 10					3 10 W	+21°	T416	1
CE11903(04)	INBO ARP/OUTBO CARD					"	"	ThAr	3/3

Spectr. Temp.

Focus 0.23

Spectr. Temp.

Up. Mir. Seeing

090 2"

100 2"

5040 2"

100 2"

Spectr. Temp. -101.7°C Dome Temp./Hum. $-1.2^{\circ}\text{C}/51.4\%$ Transparency Conditions *clear* 344..
cloud at end

Focus 0.230

Spectr. Temp. Dome Temp./Hum. $-1.4^{\circ}\text{C}/51.4\%$ *for focus test.* 0 0 256 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
930		5090	2"	5.03	F5V	ECHELLE 18.13	300 l/mm .5685	60μW 400μH	6520Å	4	Hnd	150K photons in middle order ~400:1 S/N itself.	>10K
Ar	1									3			
600		3100	<2"	"	"					5	"		
	1									3			
	1									3			
900		5040	<2"	4.19	F6V					4	Hnd	Some cloud ~120K photons ⇒ 350:1 S/N in middle order	8.5K
	1									3			
945		3,100	2-4"	"	"					5	"	Some more clouds	5.5K
	1									3			
	0									1			
16	1							60μW 600μH 60μW 900μH	for flats only	3			8K
Ar	3/3									7/8	focus test	twilight and mostly cloudy. 0 0 128 1024 1 still perfectly in focus.	

345
pg#1

Mon/Tues

Date 1996 March 18/19

Observers [Lm]/Tn/Smt + Mki & 3 grad. students

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.
CC394 ^{14/15}	Inboard / outboard		Hardman					Fed Ar clear	30/30
16	BIAS(4)								
17	Comp							Fed Ar clear	30
18	HD 44990	6 19 49	+7 08 25	20 48 24		2 00 W			380
19	Comp							"	30
20-24	FLAT x 5					2 10 W	+7°	14 Ap Tung clear	5
25	BIAS(4)			21 06					0
26	Comp							Fed Ar clear	30
27	HD 62509	7 39 12	+28 16 04	21 26 31		1 14 W			179
28	Comp							"	30
29	BIAS(4)			21 33					0
30	BIAS(4)			23					0
31	COMP							"	30
32	HD 103095	11 42 13	+38 26 10	00 00 51		0 11 E			623
33	COMP							"	30

COO
spectr. Temp.
.....
6.82
.....
spectr. Temp.

ap. Mtr. Seeing

10 V
76568
Filter

750 5"

1750

2925 3"
but
.....

CCD Spectr. Temp. -100.2°C Dome Temp./Hum. $+4.2^{\circ}\text{C}/68.6\%$ Transparency Conditions .. mostly cloudy 346.

Focus 6.82

@ focus test

FANS ON @ 23:30.

Spectr. Temp.

Dome Temp./Hum.

412 0 50 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
	30/30	1000 V CG 568				CASS CCD	1800 μm G=5960	306 μm	6399A	3/4	focus test		
		Filter								1/2			
	30									5			
	380	750	5"	B 6.5 -80	F7Iab -K1Iab					6	Rim pgrm	T mon cloudy	
	30									7			
	5									8		clouded in completely	11.5K
	0									1		β Gem isn't visible.	
	30									9			
	179	1750		V 1.14	KOIIIb					10	std vel	In cloud	
	30									11			
	0									1			
	0									1			
	30									12			
	625	2925	3"	V 6.45	G8Vp					13	std vel	very hazy.	5K
	30		but turbulent.							14			1.7K

34A
Pg #1

SAT/SUN

Date 1996 MAR 23/24... Observers [Vys]/Tn.....

Emulsion Batches:

..... ORDER separate
 For Comps
 GG385 Filter 05560 Filter

Plate No.	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 394 ^{37/} 38	Inboard/outboard		HARTMAN			0 26W	+41	F ₄₅ clear	90/45
39	BIAS(A)								
40	Comp							F ₄₅ clear	40
41	HD 36395	5 2618	-03 4100	19 46 42		2 11 W			335
42	Comp							"	40
43	Comp SA059189							"	40
44	HD 258728	6 3206	+34 3519	20 00 55		1 25W			360
45	Comp							"	40
46	HD 258728	6 3530	34 3700	20 11 30		1 57W			1628 1755
47	Comp							"	40
48	BIAS(A)			20 41					
49	Comp							"	40
50	BD+33 1646A	08 02 39	+33 06 25	20 47 13		0 43 W			893
51	Comp							"	40
52	BD+33 1646B	"	"	21 05 44		1 18 W			1859
53	Comp							"	40

CCD
Spectr. Temp. ...
Focus ... 6.97
Spectr. Temp. ...

Exp. Mtr. Seeing

No
Filter

1280 4"

150

1255 3"

150 3"

360 3"

CCD Spectr. Temp. -101.7 °C Dome Temp./Hum. 0.0 °C 55.2% H Transparency Conditions .. Fine 3.50

Focus 6.97

Spectr. Temp. Dome Temp./Hum. -2.1 °C 60% H

397 0 50 1024 4 1 CCD MAX A04

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
NO FILTER				CASS CCD	1200 30 B ^u G-4503		GA95A	3/4	focus test	set for slightly cooler.	
					1st ORDER NO ORDER Separation used in this case.		F. Filter	1/2			
								5			2.5K
1280	4"	7.97	M1					6	MARCY std vel		3.5K
								7			
								8			
1150		8.2	K2	Late Thoug.				9	Brighter	Fid star error	1.7K
								10			
1255	3"	9.8	MO					11	Vys 475	Deltas look good using 1950+ pr motion coords	2.7K
								12			
								1/2			
								13			
650	3" = 11		MO					14	Vys 250A	NE end much brighter of pair	Max En 2.4K
								15			
360	3"	12.1	MO					16	Vys 250B	SW one } mag. up faintest very slow	Max En 1.9K
								17			

35 pgs 2 SAT/Sun

Emulsion Batches:

Date 1996 MAR 23/24 Observers [Vys.] T.u.

.....
 GG385
 ~~GG560~~ Filter in

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC39454	B/HSC(A)			21 40					
55	Comp							FeAr Clear	40s
56	HD77175 A	¹⁹⁰⁰ 8 55 48	+15 41 00	21 48 48		0 52 W		Ap=	861
57	Comp							n	40s
58	HD77175 B	"	"	22 06 11		1 09 W			855
59	Comp							n	40s
60	Comp							n	40s
61	Vys 573	¹⁹⁰⁰ 10 11 52	-11 27 17	22 35 15		0 34 W			
62	Comp							n	40s
63	B/HSC(A)			23 02					
64	Comp							n	40s
65	Vys 125	¹⁹⁵⁰ 10 19 42	+77 43 54	23 14 05		1 05 W			1564
66	Comp							n	40s
67	Comp								
68	HD 103095	11 47 13	+38 26 10	23		0 13 E			87
69	Comp								

CC0
 Spectr. Temp. ...
 Focus ... 6.97
 Spectr. Temp.

Exp. Mtr. Seeing

960 3"

340 3 1/2"

340 4"

320 4"

200

CCD Spectr. Temp. -100.4°C Dome Temp./Hum.

Transparency Conditions ... Only slightly hazy ... 352

Focus 6.87

Comet Hyakutake very nice and bright.

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASCCD	1200 l/mm G4503	306 μ	6495A	1/2		previous graty header wrong i.e. 1800	
								18			
960	3"	8.0	MOP	Looks M type				19	Vys 264A	slightly brighter	1.9K
								20	and N of	close pair. sep 2 8"	
740	3.4"	9.0	MOP	Looks late				21	Vys 264B		1.7K
								22			2.4K
								23			
340	4"	11.0	MO	Late, K type? any way				24	Vys pgm	not previously done at Hd	
								25			
								1/2			
								26			
620	4"	10.3	MO	looks right.				27	Vys pgm	Digital Fld checks well.	1.1K
								28			
1200		6.5	G8Vp					6	std vel	s for seeing test	
								7			

-Pg #3 SAT/SUN
353

Date 1996 MAR 23/24 Observers (Vys. H.) T.M.

Emulsion Batches:
.....
.....
..... GG 385

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CG80 406/09	HD103095	11 4713	+38 2610					4x67ms	
CG80 10/11	"					00 07E		2x133ms	
70	Comp							Fear Clear	40s
		1950 + prismator 50gr							
71	Vys 605	11 1130	+52 16 03	00 0515		01 07W			
72	Comp							"	40s
73	BIAS (4)			00 35					
74	Comp							"	40
		1900							
75	HD95735	10 5754 5754	36 3800	00 4541		1 36W			171
76	Comp							"	40
77/85	FLATS x9					0 17W	36°	TUNG Ap 1/4	2s
75 clear 87	Comp							Fear Clear	40s
		1900							
88	Hyakutake	14 41	41°	01 1447					165
89	Comp							"	40s
CC 39498	BIAS (4)								

CG
Spectr. Temp. ...
Focus 6.5
Spectr. Temp. ...

Exp. Mtr. Seeing

3-4'

330 3'

1100

I think

16 GG

ASS

It's

CCD Spectr. Temp. -101.7°C

Dome Temp./Hum. $-2.6^{\circ}\text{C } 60\% \text{ H}$

Transparency Conditions \dots Fine \dots to slightly hazy 35%

Focus \dots 6.97 \dots

Spectr. Temp. \dots

Dome Temp./Hum. \dots

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	3.4"	6.5	G8Vp			306 μ ABOVE				Dome SW, medium N.W. wind	
				CASS CCD	1200h G4503	306 μ	CD 6495A	8	ALT 83 $^{\circ}$		
330	3"	11.4	M0					9	V45pgm	Encoder error Fine Digital Field checks nicely	
								10			
								1/2			
								12			
1100		7.4	M2						MAR 27		
								15			
								29			11K
								27	(Head mainly)	Tail upper sist. Left In guide view	

I think ~~the~~ NO ORDER separation used for flats
 i.e. GG 385 taken out for flats. To MAR 27
 ASS stars not done with order separation
 FIT FOR as planned

It's Intended not to ORDER separate for these Red stars.
 All on D: To-CDROM

(Head mainly) Tail upper sist.
 Left In guide view

