

CCD
Spectr. Temp. -100.3°C
Focus 6.97
Spectr. Temp.

Dome Temp./Hum. $-5.5^{\circ}\text{C}/47.8\%$
@ focus test
Dome Temp./Hum.

Transparency Conditions . Clear . now . moon on 15°
N FAN ON way down now ($\approx 2^{\text{h}}$ W)
420 0 50 1024 4 1 ccd fnt

Exp. Mtr.	Seeing	Big. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADU Quality over b/g.
1000 V no filter				CASS CCD	1800R/mm 6=5163	306 μm	5305A $\pm .5\text{h}$	3/4	focus test	set slightly cool. T is 1° lower $\frac{1}{2}$ hour later.	
								1		average of 4 biases - oops	
								5		(usually take a sum of 4)	
555	6"?	11.2	MO					6	{V ₄₅ } RV	V ₄₅ 242 deltas are fine; only star on screen but not ≈ 100 visible in finder. re-200	
								7			
								1			
								8			
2000	8" 6"	7.48	MZ	"				9	Marcy std vel	V ₄₅ 594, bad seeing.	1.3K
								10			
								11			
2600	6"	11.0	MO					12	{V ₄₅ } RV	V ₄₅ 549, autoguided with SBIG ST-4	
								13			
								14			

Spectr. Temp. -100.5°C
 Focus 6.97
 Spectr. Temp.

Dome Temp./Hum. $-8.4^{\circ}\text{C}/50.8\%$
 Dome Temp./Hum. $-7.9^{\circ}\text{C}/55.2\%$ @ focus test

Transparency Conditions \dots clear, some haze near horizon, moon is 5^{h} W
 N FAN ON
 420 0 50 1024 4 1 ccd/ind.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADU Quality above 6/9
510	?	11.5	MO	CASS CCD	1800kl/mm G=5163	306u	5305A	15	{Vys} RV	East one of pair, guided on col 32 to keep B off sit	150
								16			
								1			
490	6"	11.6	MO					17	{Vys} RV	West one of pair	
								18			
								1		Dome closed.	
								23			
								20/22	focus test	set the tiniest bit cool if not in perfect focus.	8K
								10			
								11			
								13			
								1			

Date 1996 March 27/28

Observers

E. V. S. / 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.
CC395 18/19	INBOARD/OUTBOARD							Fair clear	25/30
20	BIAS x4							"	0
21	COMP							"	30
22	AC+67 2334	06 57 38	+67 21 08	19 38 12		$\leq 1^h$ W		"	3000
23	COMP							"	30
24	BIAS x4			20 35				"	0
25-29	FLAT x5							Tung clear	1
30	COMP							Fair clear	30
31	AC+68 3124	07 21 38	+68 49 12	20 48 48		2 05 W		"	2501
32	COMP							"	30
33	BIAS x4			21 34				"	0
34	COMP							"	30
35	AC+55 30267	07 27 18	+55 03 45	21 39 50		2 51 W		"	2400
36	COMP							"	30
37	BIAS x4			22 25				"	0

CCD Spectr. Temp. ... -100.2°C ... Dome Temp./Hum. - 3.1°C / 56.3% Transparency Conditions a few thin clouds to start¹⁰
 Focus ... 6.96 ... @ focus test. FANS OFF then clear.
 Spectr. Temp. ... Dome Temp./Hum. - 4.5°C / 58.2%
 420 0 50 1024 4 1 ccdfront.

Exp. Mtr.	Seeing	✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulston	P.H.	Program	Remarks	max ADU Quality was big
1000V no filter				CASS CCD	1800 λ /mm G=5163	300 μ m	5305 λ	3/4	focus test	set just a bit cool.	
								1			
								5			
~600	3"	11.2	MO					6	{V ₄₅ } RV	some thin cloud here. 200 over	
								7		V ₄₅ 242, co-add to last night's?	2 cols.
								1			
								2			
								8			
763	3"	10.9	MO					9	{V ₄₅ } RV	V ₄₅ 245, clear, moon up high	500
								10			
								1			
								11			
180 after 600s then spec. controller crash closed shutter	3"	11.3	MO					12	{V ₄₅ } RV	V ₄₅ 499, clear, moon still up	
								13		a bit late, spec controller needed	
								1		resetting.	

" pg#2

Date 1996 March 27/28

Observers

EVS/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.
CC39538	COMP							Fair clear	30
39	AC+38 28746	09 30 07	+37 58 38	22 32 28		1 49 W			2800
40	COMP							"	30
41	BIASx4			23 22					0
42	COMP							"	30
43	BD-09 3070	10 20 15	-09 43 25	23 32 00		1 44 W			1810
44	COMP							"	30
45	BIASx4			00 05					0
46	COMP							"	30
47	BD+01 2447	10 23 49	+01 21 36	00 09 41		2 09 W			1300
48	COMP							"	30
49	COMP							"	30
50	HD95735	10 57 54	+36 38	00 39 27		1 48 W			300
51	COMP							"	30
52	BIASx4			00 46					0
53/54	INBOARD/OUTBOARD					0 ^h 0 ^m	+36 ^o	"	25/30

Spectr. Temp. -100 °C
 Focus 6.96
 Spectr. Temp.

Dome Temp./Hum. $-4.5^{\circ}\text{C}/59.0\%$
 Dome Temp./Hum.

Transparency Conditions \dots clear, moon going down ¹²
 FANS OFF
 420 0 50 1024 4 1 ccd/fmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	max Air Quality since V _{ys}
1000V no filter				CASS CED	1800 l/mm G=5163	306μ	5305A	14			
948	3"	11.0	M0					15	{V _{ys} } RV	done last night, too cloudy V _{ys} 549, clear, 1 st quarter moon 2.5" W @ start.	480
								16			
								1			
								18			
1118	3.4"	10.2	M0					19	{V _{ys} } RV	V _{ys} 579, a bit hazy.	250 over 2 cols
								20			
								1			
								23			
1210	4"	9.65	M2					24	Marcy std vel	V _{ys} 127, a bit hazy	550
								25			
								26			
2080	4"	7.48	M2					27	Marcy std vel	V _{ys} 594, clear	
								28			
								1			
								314	focus test		

Spectr. Temp. -100.2°C
 Focus 6.93
 Spectr. Temp.

Dome Temp./Hum. $+0.2^{\circ}\text{C}/52.9\%$
 @ focus test
 Dome Temp./Hum.

Transparency Conditions $\text{partly cloudy } 15^{\text{th}} \text{ } 1/4 \text{ moon } 19$
 $\sim 1^{\text{st}} \text{ east}$
 N FAW ON
 420 0 56 1024 4 1 ccd faint

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADU Quality above b/g
1000 ✓ no filter				CASS CCD	1800 λ/mm G=5163	30 μm	5305A	3/4	focus test	set very slightly cool, in perfect focus @ row 690.	
								1		sum of 4 biases.	
								5			
1755	4"-5"	7.97	M1					6	Marcy std vel	b/g probably high due to cloud & moon.	1.1K
	\pm turbulent.							7			
								8			
1014	3"	10.9	M0					9	{Vys} RV	close to 1 st $\frac{1}{4}$ moon b/g okay.	500
								10			
								11			
875	3"	11.3	M0					12	{Vys} RV	dune last night co-add?	3000+ 2 cols.
								13			
								14			
1338	3"-4"	10.58	M2					15	{Vys} RV	brighter wave clear	800
								16		pre controller failure: late.	

Spectr. Temp. -100.....

Dome Temp./Hum. -1.2°C/56.7%

Transparency Conditions clear, 1st & moon ~2^h @ start
N FAN ON & prof.

Focus 6.93.....

Spectr. Temp.

Dome Temp./Hum.

420 0 50 1024 4 1 cedant

Exp. Mtr. 1000 ✓	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADU Quality over bin
no filter 444	3"	~11		CASS CCD	1800 λ /mm G=5163	30 μ m	5305A	17	{Vys} RV	no card. showed H α emission on April 15/1995. about the arcmin E of Vys 530A	250
								18			
								1			
								18			
~900	3"	10.64	MZ					19	{Vys} RV	field checks out. within star to SE.	400
								20			
								23			
1208	4"	9.65	MZ					24	Marcy std vel	Vys 127.	600
								25			
								1			
								26			
813	3-4"	11.5	MO					27	{Vys} RV	east one of close pair SP14 ST-4 autoguided with B off of slits	230 over 2 cols.
								28			
824	3"	11.6	MO					29	{Vys} RV	west one of close pair.	
								30		cloud @ very end.	

Spectr. Temp. -100.7°C
 Focus 6.91
 Spectr. Temp.

Dome Temp./Hum. $+2.5^{\circ}\text{C}/49.9\%$
 @ focus test
 Dome Temp./Hum.

Transparency Conditions *clear, bright moon 1st east*
 @ start
 FANS OFF

420 0 50 1024 4 1

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	mat. QV Quality above 61g
1000V no filter				CASS CCD	1800 Å/mm G=5163	30µm	5305A	3/4	focus test	set slightly cool	
								1		sum of 4 biases.	
								5			
1020	3"-4"	9.9	M2					6	{V _{ys} } RV	V _{ys} 110	580
								7			
								1		attempted one far West and +20° but clouded up there by the time I reversed.	
								8			
1025	4"	10.58	M2					9	{V _{ys} } RV	V _{ys} 550A, brighter and w	570
								10			
685	4"	~11	M					11	{V _{ys} } RV	V _{ys} 550B fainter and E 1 guess. SB didn't autoguide very well at all. Went to manual for the last 15"	200
								12			
712	4"-5"	10.58	M2					12	{V _{ys} } RV	V _{ys} 550A, again for symmetry.	400
								13			
								1			
								14		telescope on E side	

Spectr. Temp. -100 °C Dome Temp./Hum. $+0.2$ °C / 62.9% Transparency Conditions *clear*
 Focus 6.91 FANS OFF
 Spectr. Temp. Dome Temp./Hum. 0.1 °C / 62.9%
 @ seeing test. 420 0 50 1024 4 1

Exp. Mtr.	Seeing	V _{mag} Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	max. Air Quality above obj
1450	4"	10.64	M2	CASS CCD	1800 Å/mm G=5163	30 μm	5305 Å	15	{V _{ys} } RV	telescope on E side of pier V _{ys} 120, field checked. AUTOGUIDER worked very well once X-relay was inactive.	800
								16			
								1			
								18			
502	4"	11.0	M0					19	{V _{ys} } RV	telescope on E side still. V _{ys} 105, field doesn't look familiar but deltas look okay for here. and spectrum is definitely M-type.	
	4"	6.95	K0 III	EEV CCD TV GUIDER		above 30 μm		-	SEEING TEST	Dome SW, light SE wind, clear.	
	3"-4"	"	"	"				-		turbulent air but small image.	
								1			
								23			
2490	3"-4"	7.48	M2					24	Mancy std vel.	V _{ys} 594	1600
								25			
								26			
1030	3" but turbulent.	9.5	M2					27	{V _{ys} } RV	V _{ys} 46A, much brighter than B	750
								28			

CCD
Spectr. Temp. -100.28
Focus 6.85
Spectr. Temp.

Dome Temp./Hum. +25.92/52.98
@ focus test
Dome Temp./Hum.
ca

Transparency Conditions ..partly cloudy.....
N FAN ON
420 0 50 1024 x 1 ccd/ft.

Exp. Mtr 1000 ✓	Seeing	F6 Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
CG 560 filter				CASS CCD	1800 l/mm G= 536 5947	306µ	6400 Å ± 5 Å	3/4 1 5	focus test Rm pppm	set slightly cool. average of 4 biases.	
3150	3"-4"	B 7.9-8.8	F6 -G1					6 7 8	Rm pppm	AW Per. sky is a bit bright	5K 34K
3250	3"-4"	B 6.5-8.0	F7.5ab -K1Iab					9 10 11	Rm	T Mon	7.4K
3020	3"-4"	✓ 7.30 -8.07	F6Ib -G2Ib					12 13 14	Rm	RX Cam, a bit for w	7K
1220	3"-5"	✓ 7.94	G8III					15 16	std vel	Seeing blew up @ the end.	3K

Spectr. Temp. Dome Temp./Hum. $+1.3^{\circ}\text{C}/54.4\%$ Transparency Conditions *a bit of thin cloud*
 Focus *6.85*
 Spectr. Temp. Dome Temp./Hum. $+0.9^{\circ}\text{C}/55.2\%$ N FAN ON
 @ focus test 420 0 50 1024 4 1 ccdfrnt.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
CG 560 FILTER				CASS CCD	1800 λ mm G=5947	30 μ m	6400A	2			11.5K
								1			
BG 39 FILTER				CASS CCD	1800 λ mm G=4590	30 μ m	4465A $\pm .5\text{A}$	3/4	focus test	set slightly cool	
								1			
								18			
30300	3"	\checkmark 5.09	B5V					19	Bln	saturated 1st 400 p Aur, rows!!! of strongest column (21)	
								20			
15.8K	"	"	"					19	Bln	[SD] 300/1 s/n overcompensated the bad centering from the last 7.3K p Aur, one. co-treatment 28/29.	
								20			
								20			
14.6K	4"	\checkmark 2.98	G1II					21	std vel	close to waxing gibbous moon.	9K
								22			
								1			
								23			
10.3K	3"-4"	\checkmark 4.79	F6IV					24	std vel	even closer to moon. [265/1 s/n]	6.2K
								25			

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Pg # 3

SAT/SUN

Date 1996 March 30/31 Observers [Bin]/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.
CC39676 →84	FLAT x 9					0 24 W	+19°	Tang clear	13
85	Comp							F&A Clear	60s
86	HD120315	13 4336	+49 4845	22 4232		2 45 E			46
87	Comp							n	60s
88	Comp							n	60s
89	HD103095	11 4713	+38 2610	22 5447		0 17 E			1405
90	Comp							n	60s
91	BIAS (4)	↙ name edited ↘		23 22					
CG804 ¹⁸ / ₂₁	HD103095 x4	11 4713	+38 2610			0 08 E	Alt 83°-84°		1067
CG804 ²⁰ / ₂₃	" x2	"	"		23 25	0 09 E			133
CC39692	Comp							F&A Clear	60s
93	HD154528	17 0054	+77 4800	23 3656		4 27 E			2078
94	Comp							n	60s
95	HD154528	n	"	00 1626		3 41 E			2444
96	Comp							n	60s
97	BIAS (4)			01 00					

Spectr. Temp.
Focus 6.94
Spectr. Temp. - 100.2 °C

Dome Temp./Hum. +0.5°C/57.5%
Dome Temp./Hum. +0.5°C/57.5%
CA

Transparency Conditions clear, bright waxing gibbous.
moon just past meridian.
NFAN ON
420 0 50 1024 4 1 CCD stat

Exp. Mtr. 1080 ✓	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800λ/mm G=4590	30μm	4465Å	26			12.5K
								5		☉	2.3K
220K		✓ 1.86	B3V					6	Blu pgrm	2 350/1 S/N	9.2K
								7			
								8			
4.7K	4"	✓ 6.45	G8Vp					9	std vel	increasingly cloudy	1.8K
								10			
								11/2		DOME Facing SW light NE wind	
	3"-4"	✓ 6.45	G8Vp	ALT=83°	ABOVE 300μ SLIT				Seeing test	"	
		"	"						" "		
								11			
8.350	3.5"	✓ 6.66	A0					12	SB2 Blu	[230/1 S/N] occasional cloud	
								13			
2000	3"	"	"					15	"	Repeat for so adding? purposes	
								16			
								11/2			

Exp. Mtr. 1000V
Spectr. Temp. -100.3°C

Dome Temp./Hum. $+0.5^{\circ}\text{C}/52.5\%$

Transparency Conditions *mostly cloudy, thin clouds*
N FAN ON \rightarrow cleared up quickly

Focus 6.94

Spectr. Temp.

Dome Temp./Hum.

420 0 50 1024 4 1

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
B6 39 FILTER				CASS CCD	1800 R/mm G=4590	300 μ m	4465 \AA	18			
15.4K	4"	B 5.09	A5V		S/N > 360:1			19	Bln A-shell	increasing cloud here, most of signal in short bursts	9.5K
								20			
								23			
15.5K	4"	B 4.30	B8V					24	Bln dbl line SB	clear now, cloud @ end.	7.5K air 2 clams.
								25			
								26			
15.1K	3-4"	V 5.52	A5V					27	Bln A-shell	clear here for now. S/N > 310:1	8.5K
								28			
								1			
								29			
17.3K	3-4"	B 4.46	A1V					30	Bln dbl line SB	hazy here. no obvious dbl lines	> 9K
								31			
								5			
15.3K	3"	B 5.19	B3V					6	Bln SB4		9K
								7			

CCD Spectr. Temp. -100.0°C

Dome Temp./Hum. $+00.7^{\circ}\text{C}$ $59.0\% \text{H}$

Transparency Conditions $\text{OK} \rightarrow \text{clear except in N}$ ³⁴

Focus 6.94

N FAN ON

Spectr. Temp.

Dome Temp./Hum.

420 0 50 1024 4 1 ccd/fat.

C 2

Exp. Mtr.	Seeing	B Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
				CHSS CCD	1800 m/mm G=4590	306 μ	AA65A	8			2AK
15K	3"	640	FOV					9	SB2 Bl		9K
								10			
								11/2			
								11			
12.6K	3.4"	669	B8					12	SB Bl		
								13			
								14			
15.5K	4"	566	A8V					15	A stell/Bl	S/N 7320:1	7.5K
								16			
								1		Topped up CCD dewar after this! CCD Temp = 98°C and warming	
								18			
15.5K	4.5"	5.36	ATIV					19	Bl Astell		9K
								20			
								23			

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Mon/Tues
1941

Date 1946 Apr. 1/2..... Observers [Rm.] / Tn / Smt.....

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E. S. T.	Ending Time E. S. T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 39737/38	In board low board					20 0	-40°	Fair Clear	30/30
39	BIAS(4)							"	0
40	BIAS(4) BIAS(4)			19 44				"	60
REBOUT FAILED	HD 44990 Comp	06 19 49	+07 08 25	19 26 48				"	4yr 60/1
CC 39741	Comp							Fair Clear	60 ₃
42	HD 44990	06 19 49	+07 08 25	19 48 11		1 56 W		"	438
43	Comp							"	60
44	Comp							"	60
45	HD 25361	03 56 42	+58 23	20 02 41		4 41 W		"	1106
46	Comp							"	60
47	Comp							"	60
48	HD 30782	4 41 06	+36 32 00	20 28 25		4 26 W		"	1200
49	Comp							"	60
50	BIAS(4)			20 53					

Spectr. Temp. - 101.5 °C
Focus 6.86
Spectr. Temp.

Dome Temp./Hum. +11.6°C/49.1%
@ focus test
Dome Temp./Hum.

Transparency Conditions Fine
FANS OFF
420 0 50 1024 4 1 ccdmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06 500 FILTER				CASS CCD	1800 K/min G=5947	30µm	6400A	3/4	Focus		
								1/2			
								3 1		re-done	
3333	4"	6.5 -80	B	F7Iab -K1Iab	/	/	/	6	Rm Cepheid	T Mon	/
								7			
								3			
3200	4.6"	6.5 -80	B	F7Iab -K1Iab				4	Rm Cepheid.	T Mon	5K
								5			
								6			
2.5K	4.7"	7.30 -807	V	F6Ib -G2Ib				7	Rm Cepheid	RX Cam.	
								8		DRIVE OFF	
								9			
3375		7.9 -88	B	F6 -G1				10	Rm Cepheid	AWPer	
								11			
								1/2			

CCD
 Spectr. Temp. -101.7°C
 Focus .6.86 / 6.91
 Spectr. Temp. -100.3°C

Dome Temp./Hum. +0.3°C / 58.5%
 Transparency Conditions clear, almost full moon
 FANS OFF close to meridian (still)
 Dome Temp./Hum. -0.3°C / 62.1% @ focus test
 c. Kambda 420 0 50 1024 4 1 credit

1000V Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
CG 580 FILTER				CASS CCD	1800 λ /mm G=5947	306 μ	6900 \AA	12			
2365	5"	7.94	G8 III					13	std vel.		4K
								14			
								15			11.8K → 11.3K
								1			
				CASS CCD	1800 λ /mm G=4590	306 μ	4465 \AA	3/4	focus test	in focus right now. ACR & Meridian reset.	
								3			
3.4k m.p. filter ? 350sec	6"	5.09	B5 V					4	Blu	cut short due to accidental movement of rack.	3.5K
B6 39 FILTER								5			2.1K
14K	6"	5.09	B5 V					6	Blu		5.8K
								7			
								1/2			
								8			
7K	5"	6.95	G8 Vp					9	std vel		2K
								10			

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Mon/Tues

Emulsion Batches:

Date 1.9.96 Apr. 1/2 Observers [Blk.] / J.S. / 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.
CG 804 ^{24/27}	HD 103095 x4	11 4713	+38 26 10			0 05 E	ALT +84°		1067
	" x2								137
CC 39775	Comp							FeAr clear	60
76	HD 120315	13 4336	+49 4845	23 3319		1 47 E			50
77	Comp							"	60
78	Comp							"	60
79	HD 154528	17 0054	+77 4800	23 4153		4 09 E			2400
80	Comp							"	60
81	BIAS (4)			00 26					0
82	Comp							"	60
83	HD 172187	18 3342	+43 0812	00 32 29		5 04 E			2031
84	Comp							"	60
85	Comp							"	60
86	HD 136202	15 1412	+02 0837	01 0206		1 20 E			624
87	Comp							"	60
88	BIAS (4)			01 35					

Spectr. Temp. Dome Temp./Hum. -1.8°C 55%RH Transparency Conditions Fine, but getting gusty 44
 Focus ... 6.91
 Spectr. Temp. Dome Temp./Hum. 420 050 1024 41 CCD FWH

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				CAS CCD	1800 l/mm G=4590	306 μ	4465A	23			24K
16.4K	7"	^B 4.30	B8V					24	dbl Line SB Bln		8K
								25			
								26			
16.4K		^B 5.19	B3 IV					27	SB4	P= few days	75K
								28			
								29			
11.3K	6"	^B 6.64	B8					4	SB Bln	P= 35-21 d	4.7K
								5			
								1			
								8			
13.9K	5"	^B 6.40	F0V					9	Bln SB2	P= 1.31 d, 2nd one tonight because of short period.	7.5K
								10			
								11			13.4K → 12.7K
								1			

CCD
 Spectr. Temp. -100.1°C
 Focus 6.88
 Spectr. Temp.

Dome Temp./Hum. $-2.6^{\circ}\text{C}/55.9\%$
 @ focus test
 Dome Temp./Hum.

Transparency Conditions $\text{clear, increasingly cloudy}$
 FANS OFF
 46
 420 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 λ /mm G=5065	30 μ m	6400 \AA I.5 \AA	3/4	focus test	in focus.	
06560 Filter								5			
3080	4"	\checkmark 6.19	F6I -IIb					6	Rm Cepheid	V473 Cyg	5.3K
								7			
								8			
3300	4"	\checkmark 5.8 -5.9	F2					9	Rm Cepheid	V1334 Cyg	
		blew up in gusts						10			
								11			
1990	4"-6"	\checkmark 8.40	~G0Ib					12	Rm Cepheid	Z Lac, <small>count rate cut on $\frac{1}{2}$ @ ~600s mark.</small>	4K
								13			
								1			
								14			
2000		\checkmark 6.19	K2					15	Rm std	for Z Lac	4.5K
								16			

CCD
Spectr. Temp. ... 100.3°C
Focus ... 6.93
Spectr. Temp.

Dome Temp./Hum. ... -2.2°C / 60.0%
@ focus test
Dome Temp./Hum.

Transparency Conditions ... clear, well, a few thin clouds
FANS OFF hazy.
420 0 50 1024 4 1 ccdfoot

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1800 Å line G=5155	30µm	5303 Å ± 1 Å	3/4 1 5	focus test	set just abit cool.	max AVU above bly
533	5"	✓ 11.34 1	M0		arbitrary though - grading not homing or setting consistently			6 7 0 8	{Vys} RV	Vys 564, hazy.	200
977*	5" last spec. center with 2" to go.	✓ 9.9 ref'in	M0					9 10 11	{Vys} RV	sky lines. lots of bright Hα	350
1260	5-6"	✓ 9.65	M2					12 13 1 14	Mary std vel	full moon rising now. some thin cloud to the south	450
1111	5-6" & very furbulent	✓ 10.6	M0					15 16	{Vys} RV	very bright sky bly	240 over 2 cols

451

pg #2 [Good Friday (Holy Saturday)]

Date 1996 April 5/6 Observers E. V. S. / S. T.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
CC39858	BIAS x4			23 58					0
59	COMP							FeAr clear	30
60	HD 95735	10 57 54	+36 38	00 05 33		1 50 W			360
61	COMP							"	30
62	COMP							"	30
63	BD+49 2126	12 16 11	+49 17 23	00 20 55		1 29 W			2455
64	COMP							"	30
G80 20-33	HD 120245 x4	13 43 12	+38 23						.067
94/35	" x2				01 11	0 06 W	Alt 84°		.133
CC39865	BIAS x4			01 12					0
66-68	FLAT x3					0 14 W	+38°	Tung clear	1
69/70	INBOARD/OUTBOARD							FeAr clear	30/30

CCD
 Spectr. Temp. -101.9°C ... Dome Temp./Hum. $-3.3^{\circ}\text{C}/66.2\%$ Transparency Conditions *some thin cloud to south* 52
 Focus 6.93 ... FANS OFF *full moon is up.*
 Spectr. Temp. ... Dome Temp./Hum. $-3.2^{\circ}\text{C}/69.7\%$ @ focus test
 420 0 50 1024 4 1

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1800 l/mm G=5.55 (today).	30 μ m	5303A	1			max ASD above 6 μ
								17			
2050	4"	7.48	M2					18	Mary std vel	Vys 594, <i>full moon in E, star in W.</i>	1100
								19.			
								20			
1001	4"	10.5	M0					21	{Vys} RV	Vys 640, <i>lots of sky, hot in spectrum</i>	350 over 2 cols.
								22			
	4"	6.95	K0 III	EEV CCD TVG UI 00R		above 30 μ m		-	seeing test	<i>very lite</i> Dome SW, SE wind, full moon up clear above, cloudy to S	
								1			
								23			7.8K → 7.5K
								24/25	focus test		

53 pg#1

Mon/Tues

Date 1996 Apr 8/9

Observers [Hml] ... f. Stefan. E. A. + 220 students 1hr

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 119 ^{05/} 106	In board / out Board		HORTmann	19 52		02 50 E	+38°	T/Ar	3/3
07	BIAS(4)			19 59					
08	Comp							T/Ar	1s
09	HD 91889	10 31 34	-11 43 36	20 30 36		0 41 E			1882
10	Comp							T/Ar	1s
11	HD 91889	"	"	21 03 21		0 08 E			1912
12	Comp							T/Ar	1s
13	HD 91889	"	"	21 36 23		0 23 W			1800
14	Comp							"	1s
15	BIAS(4)			22 07					
16	HD 91889	"	"	22 09 26		0 58 W			1902
17	Comp							T/Ar	1s
18	HD 91889	"	"	22 42 30		1 30 W			1800
19	Comp							T/Ar	1s
20	HD 91889	"	"	23 13 28		1 58 W			1648
21	Comp							T/Ar	1s

Spectr. Temp. $\sim 101.0^\circ\text{C}$ Dome Temp./Hum. $+1.1^\circ\text{C}$ 70% H Transparency Conditions PART Clear, but snowing... 54
 Focus $\dots 2.30$ Unchange since last echelle run MAR18. Sure not getting any warmer! Then increasing cloud
 Spectr. Temp. Dome Temp./Hum. \dots

Exp. Mtr.	Seeing	Phy. Mag.	Sp.	Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD 18.13	0300 l/mm 60u W 0.5683 * correct setting	6520A	112		CCDFMT 0 0 128 102 4 81	Slit W = .277 = 60u Slit Pos'n = .175 the usual	1.3K
				unchanged since MAR18	But unchanged since MAR18 work	400u W 400u Height = .225	5685 x setting noted.			Slit H = .225 0 0 256 1024 4 1 CCDFMT	
				1320 Volts * and Rebalanced a few 1st 500 sec				3			
	≈ 600 est	5"	5.68	F7V				4	Hml pgm	some cloud [$\approx 150/1$ SN]	
								3			max 1.29
	970	4.6"	"	"				5	"	≈ 24 photons \rightarrow [150/1 SN]	
								3			
	1010	5"	"	"				6	"	25 k photons	max 1.0K
								3			
								1/2			
	1250	4.5"	"	"				2	"	25 k photons	1.3K
								3			
	1150	5"	"	"				4	"		1.3K
								3			
	1130	"	"	"				5			1.3K
								3			

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *Hazy, part cloudy*

Focus *2.30*

Spectr. Temp. *100.5°C* Dome Temp./Hum. *107°C 79% H*

0 0 256 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	P/Mag.	Sp.	Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>1320 volts</i>				<i>Echelle CCD 18.13</i>	<i>0300 In/mm 5683</i>	<i>60u 400u</i>	<i>6520A</i>	<i>1/2</i>			
<i>700</i>	<i>5"</i>	<i>5.68</i>	<i>F7V</i>					<i>6</i>	<i>Hml pgn</i>	<i>Should now have 400/1 SN Total coadding</i>	
								<i>3</i>			
						<i>600u H flats</i>		<i>2</i>			<i>74K</i>
						<i>400u H</i>		<i>7/8</i>	<i>focus test</i>	<i>CCDFMT 0 0 128 1024 8 1</i>	

CCD
Spectr. Temp. -102.3°C

Dome Temp./Hum. +1.8°C 66% H

Transparency Conditions Clearing PARTIALLY 58

Focus 230

Dome Temp./Hum. +1.0°C 72% H
C2

Then SW only clear spot

MAX
40%

Exp. Mtr.	Seeing	F ₀ Mag.	Sp.	Inst. <i>eckelle</i>	x Grating/ Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
1320V				CCD 18.13	0300h/mm 0.5683	60u W 400u H	6520A	7/8		0 0 178 1024 8 1 CCD-FIT	
								1/2		0 0 256 1024 9 1 CCD-FIT	
								3			
1130	2.5"	5.77	F2V					4	Hml pgm	(228K photos) cloud at end	15K
								3			
440	3.4"	"	"					5	"	not too dense	
								3			
								1/2			
								1/2			
						600u H FOR FLATS		2			6.4K
								1/2			

CCD Spectr. Temp. ... -9.9.5°C ... Dome Temp./Hum. + 3.9°C ... 54.88% Transparency Conditions . Fine 60

Focus ... 230 ... Unchanged from last night

CCD Spectr. Temp. ... -101.3°C ... Dome Temp./Hum.

0 0 256 1024 4 1 credit.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	x Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320 volts Balanced too.				Echelle ccd 18.13	0300 in/mm Tilt 5.683	600 μm 400 μm	G520A	1/2			
Note, Previous night has two frames of same star.				Focus not changed or tested in order to allow untested Co addition.				1		Restart completely after GPIB error.	
1700	3"	5:77	F2V					2	Hml pgrm	> 40k photons 7200/1 SH	2.7K
								3			
1730	3.5"	"	"					4	"	> 40k photons again I can see its companion to NE. 6" and hml 6.5	2.7K
								3		According to old BAT star cat.	
1430	4"	"	"					5	"	≈ 40k photons	
								3			
725	4.5"	"	"					4	"	≈ 18k photons	
								3			
								1/2			
								3			
2490	5"	5.57	F2V					6	Hml	60k photons	
	but turbulent.							3			
2275	5"-4"	"	"					4	Hml		
								3			

Spectr. Temp. -100 Dome Temp./Hum. $+2.2^{\circ}\text{C}/58.3\%$ Transparency Conditions *clear* 62

Focus 0.230

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1 ccd/fit.

Exp. Mtr. 1320V	Seeing	Mag.	Sp.	Inst. ECHELLE	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2250		5.57	F2V	18.13 CCD	0.600 μm 0.5683	60 μm 400 μm	6520A	5	Hml	50k photons	MAX AD4
								3		Total S/N of 3 expts $\approx 100/1$	
								1			
								3			
2180	4-7"	5.22	G0V					6	Hml pgrm	80k photons	3.9K
								3			
2150	5-6"	"	"					4	" "	60k photons	2.7K
								3			
2650	5"	"	"					5	"		3.4K
								3			
								1			
								3			
795	" with 6 refn	5.47	F8V					4	Hml	$\sim 25\text{K}$ photons S/N > 150:1	1.3K
								3			
848	5"	"	"					5	Hml		

63
Pg # 3

Date 1996 April 10/11 Observers [Hml]/Tu/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.
CE11989	COMP							ThAr	1
90	HD143333	15 54 43	-16 14 20	02 05 35		0 18 E			2034
91	COMP							"	1
92	HD BIAS(4)			02 40					0
93	HD143333	"	"	02 42 45		0 22 W			2220
94	Comp							"	1
95	HD143333	"	"	03 21 04		0 54 W			1827
96	COMP							"	1
97	HD143333	"	"	03 52 53		1 26 W			1804
98	COMP							"	1
99	BIAS(4)			04 24					0
CE12000	Comp							ThAr	1
01	HD 187013	19 42 38	+33 29 41	04 29 47		1 42 E			1942
02	Comp							"	1
03-12	FLAT x 10					2 29 W	+ 23°	Tung	1
13/14	INBOARD/OUTBOARD							ThAr	3/3

CD Spectr. Temp. -100.5°C

Dome Temp./Hum. +1.8°C/63.7%

Transparency Conditions ... clear, some thin cloud...

Focus ... 0.230

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr. 1320V	Seeing	Mag. Mag.	Sp.	Inst. CD	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				ECHELLE 18.13	300.2/min .5683	60μW 400μH	6520 Å	3			
1040	4"-5"	5.47	F8V					6	Hml	> 25 K photons.	
								3			
								1			
770	"	"	"					4	Hml	some cloud. 20K photons	
								3			
650	4"-6"	"	"					5	Hml	some cloud still	
								3			
822	5"-8"	"	"					6	Hml		
								3			
								1			
								3			
3360	3"-4"	4.99	F7V					4	Hml		
								3			
								2			
								7/8	focus test	clock drive off.	8K

60μW
600μH for flats only
400μH again

CCD
Spectr. Temp. -100.4°C
Focus 0.240
Spectr. Temp.

Dome Temp./Hum. 7.5°C/.66.6%

Transparency Conditions mostly c. cloudy
difficult flat for scattered light!

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				ECHELLE 18.60	300.21mm 0.5795	60µW 400µH	6300 Å	7/8	focus test	T=7.7°C good focus. 0 0 128 1024 8 1 0 0 256 1024 4 1	
								1			
								3			
310	3"-4"	1.93	A0IV					4	KK	some cloud	3.7K
								3			
305	"	"	"					5	KK	some more cloud.	"
								3			
303	"	"	"					6	KK	very thick cloud.	3.5K
1320V now.								3			
								3			
2750	4"	v2	F8Ib					4	KK	very thick cloud here, too.	4.2K
								3			
3100	3"-4"	"	"					5	KK	cloud has moved on, mostly	4.7K
								3			
1460	"	"	"					6	KK	thick cloud again.	2K
								3			

69 pg #1

Emulsion Batches:

Date 1996 April 14/15 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.
CE12041/42	INBOARD/OUTBOARD							ThAr	2/2
43	BIAS(4)								0
44	COMP							"	2
45	HD47105	06 31 56	+16 29 05	21 32 09		4 19 W			400
46	COMP							"	2
47	HD47105	"	"	21 40 22		4 26 W			340
48	COMP							"	2
49	HD47105	"	"	21 47 39		4 34 W			370
50	COMP							"	2
51	BIAS(4)			22 04					0
52	COMP							"	2
53	HD79210	09 07 42	+53 07	22 07 06		2 41 W			1800
54	COMP							"	2
55	HD79211	"	"	22 40 39		3 25 W			2450
56	COMP							"	2
57	HD79210	"	"	23 23 53		3 W			1504

CCD Spectr. Temp. -101.7°C

Dome Temp./Hum. $+4.0^{\circ}\text{C}/74.2\%$
@ focus test

Transparency Conditions *cleared up* 70
→ some more than clouds passed through and returned

Focus 0.235

Spectr. Temp.

Dome Temp./Hum. C

Exp. Mtr. ✓	Seeing	V.M. Mag.	Sp.	(C) Inst.	Grating/Tilt	Slit	Emulston	P.H.	Program	Remarks	Quality
no filter				ECHELLE 18.60	300 R/min .5795	60μW 400μH	6300Å	7/8	focus test	in focus 0 0 128 1024 8 1 0 0 256 1024 4 1	
								1			
								3			
2940	4"	1.93	A0 IV					4	KK	γ Gem getting clouded out here	3.4K
								3			
3170	4"	"	"					4	KK	no cloud now.	4K
								3			
3170	5-6"	"	"					4	KK		4K
								3			
								1			
								3			
247	3-4"	7.64	M0 V					5	KK Vis Bin	A057251A, west one.	600
								3			
120	"	7.74	M0 V					6	"	B, east one, thick cloud here.	420
								3			
123	"	7.64	M0 V					5	"	A again, less cloud now	

71
pg #2

Date 1996 April 14/15 Observers [KK]/Smt

Emulsion Batches:

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Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle		Declination		Comparison	
		1900	1900	1900	1900	E.S.T.	E.S.T.	E.S.T.	E.S.T.	End		Type/Filter	Exp.		
CE12058	COMP												Th Ar	2	
59	BIAS(4)					23 50							"	0	
60	COMP												"	2	
61	HD90839	10 24 14	+56 29 36	23 56 45				3 22 W						2885	
62	COMP												"	2	
63	BIAS(4)					00 41							"	0	
64	COMP												"	2	
65	HD8890	01 22 34	+88 46 26	00 45 32				11 49 W						300	
66	COMP												"	2	
67	HD8890	"	"	00 51 58				11 55 W						360	
68	COMP												"	2	
69	HD8890	"	"	00 58 33				11 57 E 12 03 W						341	
70	COMP												"	2	
71	COMP												"	2	
72	HD(66751)	07 59 54	+70 00 00	01 13 37				6 30 W						470	

Spectr. Temp. Dome Temp./Hum. $+1.7^{\circ}\text{C}/76.3\%$ Transparency Conditions *partly cloudy* 72
 Focus 0.235
 Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320 ✓				ECHELLE 18.60	300 Å/mm .5195	80 μW 400 μm	6300 Å	3		no cosmic rays !!	
								1			
								3			
2190	3"-4"	4.84	F8V					4	KK std vel	some cloud	3K
								3			
								1			
								3		telescope on E side.	
3000	4"	~2	F8 Ib					5	KK	α UMi	3K
								3			
3100	4"	"	"					5	KK		3K
								3			
3200	5"	"	"					5	"		3K
								3			
								3			
8	4-5"	6.48	F8					6	KK	VERY WEAK, cut short due to cloud.	20.

75
pg #1

Date 1996 April 17/18 Observers [KK]/Smt

Emulsion Batches:

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Plate No.	Object	R. A.		Declination		Starting Time		Ending Time		Hour Angle		Comparison	
		1900	1900	1900	1900	E. S. T.	E. S. T.	End	Declination	Type/Filter	Exp.		
CE12084/85	INBOARD/ OUTBOARD											ThAr	2/2
86	BIAS(4)					19 42						"	0
87	COMP											"	2
88	HD47105	06 31 56	+16 29 05	20 03 17				2 57 W				"	110
89	COMP											"	2
90	HD47105	"	"	20 06 39				3 00 W				"	120
91	COMP											"	2
92	HD47105	"	"	20 10 14				3 03 W				"	100
93	COMP											"	2
94	BIAS(4)			20 14								"	0
95	COMP											"	2
96	HD50635A	06 49 00	+13 18 18	20 21 38				3 04 W				"	440
97	COMP											"	2
98	HD50635B	"	"	20 30 53				3 58 W				"	3130
99	COMP											"	2
CE12100	HD50635A	"	"	21 25 17				4 06 W				"	333

CCD Spectr. Temp. ... -1.00 .5 °C ... Dome Temp./Hum. +5.9 °C / 49.9% Transparency Conditions ... Clear 76
 Focus 0.235 @ focus test
 Spectr. Temp. Dome Temp./Hum. ch

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320V				ECHOLEE 18.60	300 2/um .5295	60um 400um	6300 9	7/8	focus test	strengths not matched, in focus 0 0 128 1024 8 1 0 0 256 1024 4 1	focus
								1			
								3			
3.9K	2" 3"	1.93	A0 IV					4	KK	γ Gem	3.8K
								3			
3.6K	3"	"	"					4	KK	γ Gem	~3.8K
								3			
4.0K	2"	"	"					4	KK	γ Gem.	
								3			
								1			
								3			
1080	3"	4.74	F0 Vp					5	KK Vis Bin	brighter NW one.	1.1K
								3			
365	3"-5"	7.68	G6 V					6	KK Vis Bin	fainter SE one, well separated above, despite bad seeing	350 above seeing
								3			
484	5"	4.74	F0 Vp					5	KK Vis Bin	bright again	350 possible

77
pg #2

Emulsion Batches:

Date . 1996 . April . 17/18 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.
CE12101	COMP							ThAr	2
02	BIAS(4)			21 33					0
03	COMP							"	2
04	HD99028	11 18 43	+11 04 49	21 41 10		0 00			780
05	COMP							"	2
06	HD99028	"	"	21 55 54		0 13 W			700
07	COMP							"	2
08	HD99028	"	"	22 09 04		0 28 W			809
09	COMP							"	2
10	BIAS(4)			22 34					0
11	COMP							"	2
12	HD79210	09 07 42	+53 07	22 38 53		3 16 W			1300
13	COMP							"	2
14	HD79211	"	"	23 04 45		3 47 W			1620
15	COMP							"	2
16	HD79210	"	"	23 33 42		4 19 W			1800

CCD
 Spectr. Temp. ... -100.42 ... Dome Temp./Hum. 3.5°C/49.2% Transparency Conditions ... clear 78
 Focus ... 0.235 ...
 Spectr. Temp. ... Dome Temp./Hum. ...
 0 0 256 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				ECHELLE 18-60				3			
								1			
								3			
3050	4"	4.03	F2 IV					4	KK		4K
								3			
3065	3"-4"	"	"					4	KK		"
								3			
3350	4"	"	"					4	KK	a bit stronger.	"
								3			
								1			
								3			
350		7.64	MO V					5	KK Vis Bin	A057251A, W one.	1.2K
								3			
357	3"-4"	7.74	MO V					6	"	B, F one.	1.3K
								3			
360	3"-4"	7.64	MO V					5	"	A, W one.	1.3K

Spectr. Temp. Dome Temp./Hum. $+2.5^{\circ}\text{C}/54.5\%$ Transparency Conditions .. clear 80

Focus 0.235

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320 ✓				ECHELLE 18.60	300 l/cm -595	60µm 40µm	6300 Å	3			
								1			
								3			
1200	4"	4.84	F8V					4	std vel		2.2K
								3			
1250	"	"	"					4	"		2.4K
								3			
1260	"	"	"					4	"	GPIB error during shifts LOST!! reset ACER8 Muerikon.	
								2	KK	telescope on E side	6K
3550	~2	F8Ib						3			
4300	~2	"						4	KK		7.5K
								5			
4350	"	"						6	KK		6.5K
								5			

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. $+2.1^{\circ}\text{C}/56.3\%$ Transparency Conditions *clear, dome closed* ⁵²

Focus 0.235

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320V				ECHELLE	300 l/mm	60 μ w	6300A	1			
				18.60	.5795	60					
						600 μ H for flats only		5			13.3K
						400 μ H		7/8	focus test	0 0 128 1024 8 1 end of night.	

Date 1996 April 18/19 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
CE12141/42	INBOARD/OUTBOARD					2 43 W	+20°	ThAr	3/2
43	BIAS(4)			22 54				"	0
44	COMP							"	2
45	HD90839	10 24 14	+56 29 36	23 05 05		2 28 W		"	1200
46	COMP							"	2
47	COMP							"	2
48	HD8890	01 22 34	+88 46 26	23 35 23		10 56 W		"	265
49	COMP							"	2
50	HD8890	"	"	23 42 32		11 04 W		"	333
51	COMP							"	2
52	HD8896	"	"	23 50 24		11 12 W		"	340
53	COMP							"	2
54	BIAS(4)			23 57				"	0
55	COMP							"	2
56	HD137909	15 23 42	+29 27 01	00 05 53		1 38 E		"	600

CCD
 Spectr. Temp. $\approx 100.5^{\circ}\text{C}$ Dome Temp./Hum. $7.6^{\circ}\text{C}/46.9\%$ Transparency Conditions *cloudy S. of 0° , clear⁸⁴ elsewhere, creeping northward*
 Focus 0.235 @ focus test
 Spectr. Temp. Dome Temp./Hum. CD

Exp. Mtr.	Seeing	Obj. Mag.	Sp.	CCD Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320 V				ECHELLE 18.60	300 l/mm .5795	60um W 400um H	6300A	7/8	focus test	very good, perhaps cool 0 0 128 1024 8 1 0 0 256 1024 4, 1 average of 4 biases	
								1			
								3			
517	3"-4"	4.84	F8IV					4	std vel	getting quite cloudy here.	800 above obj
								3			
								3			
3240	5"	~ 2	F8Ib					5	KK		4.7K
								3			
3180	5"-6" in gusts	"	"					5	KK	getting cloudy here now. Seeing exploded!	4.6K
								3			
3130								5	KK	seeing is better, cloud moving off.	
								3			
								1			
								3			
3310	8"	3.66	F0p					6	KK	bad seeing but improving B CBr	4.5K

CCD
Spectr. Temp. - 100.5°C

Dome Temp./Hum. 6.9°C/50.2%

Transparency Conditions ... very hazy, awful seeing⁵⁶
in bursts.

Focus 0.235

Spectr. Temp. Dome Temp./Hum. 4

0 0 256 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	Grating/ Tilt	Slit	Emulston	P.H.	Program	Remarks	Quality
1320 V				ECHELLE 18.60	300 Å/mm .5745	60µm 400µm	6300 Å	3			
3100	~5"	3.66	F0p					6	KK		3.8K
								3			
3390	6"	"	"					6	KK		4.0K
								3			
						60µm 600µm	for flats	2			14.3K! →14.1K
						60µm 400µm	again.	7/8	focus test	0 0 128 1024 8 1	

CD
Spectr. Temp. -100.5°C
Focus 0.245
Spectr. Temp.

Dome Temp./Hum. 15.1°C/48.0%
@ focus test
Dome Temp./Hum. cl

Transparency Conditions was clearing, ~~was~~ cloudy
by the time I was set up.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	(CC) Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320V				ECHELLE 18.60	0300.26 5795	600W 400W	6300A	7/8	Focus test	focus @ 0.250 from focus test set too warm so focus changed to 0.240 0 0 128 1024 8 1 0 0 256 1024 4 1	
								1			
								3			
61	4"	~2	F870					4	KK	clouded out.	
								5			
						600W for flats only		1			139K
								1			
								1			

CCD
Spectr. Temp. -100.58.....

Dome Temp./Hum. 11.0°C 58.36H

Transparency Conditions PART. CLEAR 90

Focus 9.238.....

Spectr. Temp.

Dome Temp./Hum.

MAX
ADY

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320U still				CCD eckelle 18-60	0.300/mm 1.5795	80u W 400u H	6300A	7/8 1/2			
								3			
5120		1.93	A0IV					4	kk pgm		AK
								3			
5150	3"							5			
								3			
5200								6			
								3			
								3			
570	3"	6.48	df8					4			
								3			
								1/2			
								3			
4475		12	F8II					5			
								3			

Spectr. Temp. Dome Temp./Hum. $+10.5^{\circ}\text{C}$ 61.5%H Transparency Conditions *Mostly clear* 92

Focus 238

Spectr. Temp. Dome Temp./Hum. $+10.0^{\circ}\text{C}$ 62.5%H MAX

Exp. Mtr.	Seeing	F Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5.2K					03001/mm • 5745	60x 400x	W 63008	5	kk pgm		
		2	F8I6					3			
5.6K	3"							5			
								3			
								3			
1,900	3"	484	F8V					2	std vel		2K
								3			
1675								2	std vel		
								3			
1900								2	std vel		
								1		Restored after EP1B error	
2340	2-3"	4.03	F2IV					2	kk pgm		3.5K
								3			
3000								4			
								3			

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pg#3

Sun/Mon

Emulsion Batches:

Date 1996 Apr 21/22 Observers [JK]/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.
CE12215	HD99028	11 18 43	+11 04 49	22 10 36		0 42 W			63
16	Comp								
17	BIAS(4)			22 21					
18	Comp							ThAr	2
19	HD 122742	13 58 36	+11 16 34	22 31 38		1 16 E			1800
20	Comp							"	2
21	HD 122742	"	"	23 04 14		0 44 E			1800
22	Comp							"	2
23	HD 122742	"	"	23 35 24		0 13 E			
24	Comp							"	2
25	BIAS(4)			0 07					
26	Comp							"	2
27	HD 137107	15 19 04	+30 38 56	0 12 27		1 12 E			874
28	Comp							"	2
29	H 137107	"	"	0 32 02		0 49 E			1024

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions slightly hazy 9V

Focus ... 23.8

Spectr. Temp.

Dome Temp./Hum. +8.2°C 71% H

MAX

Exp. Mtr.	Seeing	Flt. Mag.	Sp.	Inst. <i>excellent con</i>	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2700	3"	403	F2IV	1860	0300h .5795	60u W 400u H	6300A ^P	4ci	kk pgm		
								3			
								1/2			
								3			
715		621	G8I					5a		@can det	2.6K
								3			
670	3"	"	"					5			2.4K
								3			
525	3.5"	"	"					5		very slow readout	1.7K
								3		perhaps beginning of CCD3 / Acca problem,	
								1/2			
								3			
1300	4"	558	G2V					6	kk pgm	SAME	2.4K
								3			
1240	5"	558	G2V					2	Rebooted Acca	still effect Reboot NORMAL CAM controller	
								3	But D. did not Reset		

CCO Spectr. Temp. -100.6°C ...

Dome Temp./Hum. $+7.9^{\circ}\text{C}$ 70.5% H

Transparency Conditions *Some haze*.....

96

Focus $+238$

To increasing cloud.

CCO Spectr. Temp. -100.3°C ...

Dome Temp./Hum. $+8.0^{\circ}\text{C}$ 73.2% H

CCO FMT
0 0 256 1024 41

Exp. Mtr.	Seeing	P.V. Mag.	Sp.	Inst. Echelle	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320V				18.60	0300/1mm 5795	60u 400u	6300A	3			
1350		5.58	G2V					5	kk pgm		
								3			
								1/2			
								3			
1800	4.6	3.66	G8V					4	kk pgm		
								3			
2200		2	1					4			
								3			
								3i			14K
								H=600u = .205 for flats			
								H=400u H=.225	7/8 focus	CCO FMT 0 0 128 1024 8 1	
								1/2			

Wed / Thurs

Emulsion Batches:

Date 1996. Apr 21/25.... Observers [Vys. Ho.] Tm.....

FOR COMPARISONS ONLY
GG385 Fi Her

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
	1 NB09RD / OUTBOARD HARTMANN [no go due to specti control problem]					0 05W	730°	FeAr	
CC3987	Comp [in sporadic Manual Mode]							FeNe clear	? 25
72	BD+33 1646B	08 02 34	+33 06 25	20 59 29		3 18 W		FeNe clear	1800
73	Comp							FeNe clear	≈ 1.5
74	BD+33 1646A	"	"	21 32 49		3 26 W		FeNe clear	304
75	Comp [30 comp while manual fixing]							"	
76	BIAS (4)								
77	Comp							"	?
78	HD9 57 35	10 57 4	+36 38 00	22 38 30		1 35 W			187
79	Comp							"	?
80	BIAS (4)			22 44					
81/84	FLATS x 4					0	30°	TUNG ?	?

CCD Spectr. Temp. -104.0°C ...

Dome Temp./Hum. $+4.5^{\circ}\text{C}$ 70% H

Transparency Conditions $\text{Fine} - \text{Sudden, cloudy}$ ⁹⁸

Focus 6.90

CCD Spectr. Temp. -100.3°C ...

Dome Temp./Hum. $+2.5^{\circ}\text{C}$ 75% H

not well centered in ∇ this time.
~~Humidity~~
 385 0 50 1024 4 1 CCD FMT

MAX
APU

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V No Filter				CASS CCD	1200 l/mm	30 μ	6495A		Focus Test		
				G=4503							
								3c:			8K
325	2.4"	121	MO?					4c	dbl line?	H ₂ double on SW and fainter one.	1.2K
								5			58K
140	2.11"	MO?						6		then cloud	
								7			3K
								1/2			
								8			12K
560	4.6"	748	M2					9	Marcy Std,	some cloud	1.5K
								10			3K
								1/2			
								11, 12, 13, 14			3-6K
<p>now I find that ∇ not well set in CCD FMT.</p> <p>All comp and Tung exposures done in "Manual mode", which also causes aperture wheel to be in constant motion.</p>											

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. $+7.0^{\circ}\text{C}$ 49%RH

Transparency Conditions *partly cloudy* 100

Focus 6.90

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. 20

* note grating Re clamped in since last night, now centering in YOKO
* 385 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
1000V				CASS CCD	1200 $\frac{2}{\text{mm}}$ G=4503	306 μ	6494A	3/4			
								1/2			
								5			
1250	2-3"	7.48	M2					7	MARCY stel vel		
								8			
								10			
300	2-3"	12.1	MO?					11	{Vys} H α	fainter SW one. cloud at end	
								12			
								1/2			
	4 2-3"	11.0 +12.1	MO +MO?	EEV-CCD TV GUIDER		/		-		in Image Acquisition view in cloud	
						/		-	VERY WEAK	" " " " thick cloud.	
560		11.	MO					13	{Vys} H α	brighter NE Vys 250 A	
								14			
								15			
800	3-4"	8.5	M2					16	{Vys H α }	No obvious H α em PART Vys 142AB cloudy	
								17			

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pg#1 Wed 17hrs

Date 1996 May 1/2 Observers [Bin]/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.
CE12247 50	INBOARD/ OUTBOARD						~ 2 36 W	~ + 20°	ThAr 7/5
51	BIAS(A)								0
52	COMP							"	4
53	HD111604	12 45 26	+ 38 03 40	02 20 27			4 11 W		963
54	COMP							"	4
55	HD111604	"	"	02 38 13			4 28 W		900
56	COMP							"	4
57	HD111604	"	"	02 54 41			4 45 W		900
58	Comp							"	4
59	BIAS(A)			03 11					0
60	HD111604	"	"	03 12 49			5 03 W		900
61	Comp							"	4
62	HD111604	"	"	03 29 23			5 21 W		1000
63	COMP							"	4
64	HD111604	"	"	03 47 51			5 38 W		900

CCO
Spectr. Temp. -100.5°C
Focus 0.230
Spectr. Temp.

Dome Temp./Hum. -5.9°C/71.6%
@ focus test.
Dome Temp./Hum. ~ca

Transparency Conditions .. clearing → clouded in 100
→ clear again later on.

100µ slit width for = 26 K Resolution max

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	ADU above Quality 10/9/90
1320V blue filter				ECHELLE tilt = 17.50	600 21mm 0.4580	100µ W = 0.261 400µ H = 0.225	4480A	1/2	focus test	in focus, perhaps cool. 0 0 128 1024 8 1 0 0 256 1024 4 1	max middle rows stronger column
393	4"?	B 606	A4V				4519A Actual chip center	1 3			
				S/N of middle order			~50:1	4	Bln	VERY HARD TO SEE WITH 100 NO INTENSIFIER/NO INTEGRATION ON GUIDE CAM. off-blaze, too.	
								3			
432		"	"		S/N		~55:1	5	Bln.	4481 @ center @ Col 95	
								3		4471 @ Row 850 col 90	
410		"	"			S/N	~55:1	6	Bln.		
								3			
								1/2			
465		"	"					4	Bln		
								3			
463		"	"					5	Bln		
								3			
430		"	"					6	Bln		

CCD
Spectr. Temp. -101.0°C
Focus 0.230
Spectr. Temp.

Dome Temp./Hum. +1.7°C / 81.2%
Dome Temp./Hum. +1.6°C / 80.5%
i c d

Transparency Conditions .. mostly clear, some fog. 106

0 0 256 1074 4 1

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
1320V blue filter				ehello 17.50	600 μ m/mm 0.4580	100 μ m 400 μ m	AA80A	3			
255		B 6.06	AYI					6	Bm	sky getting bright @ end.	
255								3			
								1/2			
					FOR FLATS	600 μ m		2			5.7K →

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pp#1

Thurs/Fri

Emulsion Batches:

Date 1996 MAY 2/3. Observers [Bl.] / Tu. / Smt.....

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Plate No.	Object	R.A.	Declination	Starting Time	Ending Time	Hour Angle	Declination	Comparison	
		1900	1900	E.S.T.	E.S.T.	End		Type/Filter	Exp.
ce122 ^{81/82}	Inboard lower board Hartmann					2 36W	+15°	T6Ar	7/6
83	BIAS(A)			20 24					
84	Comp							T6Ar	45
85	HD111604	12 45 26	+38 03 40	20 30 08		1 39 E			800
86	Comp							T6Ar	45
87	HD111604	"	"	20 46 26		1 22 E			805
88	Comp							T6Ar	45
89	HD111604	"	"	21 01 24		1 07 E			
91	Comp							T6Ar	45
90	BIAS(A)			21 15 49					
92	HD111604	"	"	21 18 14		0 49 E			871
93	Comp							T6Ar	45
94	HD111604	"	"	21 34 53		0 34 E			804
95	Comp							"	45
96	HD111604	"	"	21 49 21		0 18 E			870

CCD
Spectr. Temp. -100.5°C
Focus 0.227
Spectr. Temp. -100.5°C

Dome Temp./Hum. $+10.0^{\circ}\text{C}$ $47\% \text{H}$
Dome Temp./Hum. $+10.4^{\circ}\text{C}$ $43.9\% \text{H}$

Transparency Conditions *Fine after sunrise*
some haze

MAX
ADU

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	X Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320V + Blue Filter				Echelle	19.80	100u W 400u H	AA80A	7/8	focus test		
								1/2			
								3			
1460	1.2"	B 6.06	AAV					4	B/n pgrm	$\approx 100/1$ S/N @ center <u>75/1 @ 4481 Å</u>	
								3			
1380		"	"					5	B/n pgrm		700
								3			6.5K
1220	1.2"	"	"					6	B/n pgrm		
								3			
								1/2			
1070	1.2"	"	"					2ci	B/n	increasing cloud	
								3			
870	2"	"	"					5	B/n pgrm		
								3			6.2K
855		"	"					6			

Spectr. Temp.

Dome Temp./Hum. 19.7°C/44.7%

Transparency Conditions . Partly Cloudy 110

Focus ... 227

Spectr. Temp.

Dome Temp./Hum.

c 2

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1320V + Blue filter				Echelle 19-80	0600 in 04580	100 μ = 1261	4480 Å	3			
680	<2"	606	AAV					4	Blu paper		
								3			
								1/2			
700	<2"	606	AAV					5	Blu paper		
								3			
560	1-2"	"	"					2	Blu paper	cloud at end	
								3			
500	<2"	"	"					6	"	cloud here.	
								3			
538	<2"	"	"					4	"		
								3		strange smudge across image that doesn't show up in bias (4) - light leak? reflector?	
								1			
538	<2"	"	"					5	"		
								3			

113

pg#1 Fri/Sat

Emulsion Batches:

Date 1996 May 3/4 Observers KK/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.
02321	Hartmann - IN							JhAr	10
12332	-OUT								10
33	BIAS(4)								
34 35	FLATS x5							JUNG	255
36	Comp								4
39	HD 34029	5:09:18	+45 54	20:13					
41	Comp								4
41	Comp							ThAr	5
42	HD 34029	5 09 18	+45 54	20 17 06		5 35 W			73
43	Comp							ThAr	5
44	Comp							JhAr	5
45	HD 34029	05 09 18	+45 54	20 22 52		5 54 W			989
46	Comp							n	5
A7-52	FLATS x5					5 56 W	+46°	JUNG	255
53	Comp							ThAr	5

Spectr. Temp. Dome Temp./Hum. $+10.0$ 54% Transparency Conditions ... *cloudy*
 Focus ... 0.227
 Spectr. Temp. Dome Temp./Hum. $+8.8^{\circ}$ 57% H
 CCD 1.30V at 0 0 256 1024 4 1 CCDFAST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG18 Blue Filter				echelle 19.50	0600 4580	100 μ W 400 μ H	by oversight 4480 called 4482			F = .227	
						Flats only 600 μ H 400 μ H					
465						60 μ		3			
2600		.8 0.88		G0 III + G8 III				4			
				echelle 18.00	0600 4580	60 μ 400 μ	4480	3		Other side of blaze	
3100		0.88		G0 III + G8 III				5		Exp Bulk just 2 mins, clear at end of exp	
								3		Telescope at Limit N Pier.	MAX
						600 μ H		2			6K
						400 μ H		3			

1.115 p9#2 Fri/SAT

Date 1996 MAY 31/4 Observers K.A./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.
CE12354	HD 47105	6 31 56	+16 29	20:52		35 W			131
55	Comp							ThAr	5
56	Comp							"	5
57	HD137909	15 23 42	+29 27 01	21 02 08		3 39 E			596
58	Comp							ThAr	5s
59	BIBS(4)			21 18					
60	HD137909	"	"	21 19 58		3 20 E			976
61	Comp							ThAr	5s
62	HD137909	"	"	21 37 38	21 49	E			709
63	Comp							ThAr	5s
64	bias (A)								
65	Comp							ThAr	5s
66	HD137909	"	"	22 02 03		2 49 E			318
67	Comp							ThAr	5s
68	HD137909	"	"	22 07 54					287

Spectr. Temp. Dome Temp./Hum. $+88^{\circ}\text{C}$ $57.5\% \text{H}$ Transparency Conditions *PARTIAL CLEARING* 116
 Focus *0.227*

Spectr. Temp. Dome Temp./Hum.
ca

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. <i>Echelle</i>	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
500				18.00	0600ml/mm .4580	60u 400u	24480A	7ci	KK ppm	<i>8 Gem</i> AT platform @ end	
								3			
								3			
2500	2-3	✓ 366	Fop					4c	KK ppm	B Cor Bor	
								3			
								1/2			
2510		✓ 3.66	Fop					5			1.2K
								3			
								6			
								3			
								1/2			
				<i>Echelle</i> 19.50	0600ml/mm .4580		4481	3		Other blaze side.	
2550		✓ 3.66	Fop					4			1.3K
								3			
2500								5			

117

Pg #3

Emulsion Batches:

Date .. 19.96. MAY. 31/4. Observers .. KK. / . Tor

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Plate No.	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 12369	Comp							ThAr	5
70	HD 137909	15 2342	+29 270	22 1627	2	2 33E			
71	Comp							ThAr	5
72	Comp							"	"
73	HD 102870	11 4529	+07 1942	22 3010		1 W			713
74	Comp							"	5
75	HD 102870	"	"	22 44 12					
76	Comp							"	5
77	BARS (A)			22 59					
78	Comp							ThA	5
79	MOON	15:27	-16:28	23 10 15		1 E			411
80	Comp							"	5
81	bins (A)								
82/86	FLATS x 5					0 12W +16°			
						0 12W +16°		TUNG	255
87/88	Inboard / out Board					0230W +13		ThAr	8/6

Spectr. Temp. Dome Temp./Hum. $+7.7^{\circ}\text{C}$ $62.5\% \text{RH}$ Transparency Conditions Hazy

Focus 227

Spectr. Temp. -100.0°C .. Dome Temp./Hum. $+7.3^{\circ}\text{C}$ $72\% \text{RH}$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ x Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				1950	0600 04580	60u 400u	<u>AA81A</u>	3			
2600		V 366	Fop					6	KK pgn		
								3			
								3			
2500	2-3	3.61	F9V					4	StdVel		
								3			
2500		3.61	F9V					5	StdVel		
								3			
								1/2			
								3			
								7		on Tycho	
								3			
								1/2			
								2			
								8/9	Focus		

was set at 200 = 600u H

T = 7.3°C set 227

400u H
Copied to m:\CCN\Ech\RK0305

CCD ENT
0 0 128 1024 8 1

10K

119

pg #1

2 Large TOURS saw m3 = 2 his

SAT/SUN

Date 1996 MAY 4/5 Observers K.K./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.
ce123 ^{89/90}	Inboard / out BOARD					2 W	+13°	THAT	7/5
91	BIAS(4)			22 39				"	5
92	Comp							"	5
93	HD102870	11 4529	+021942	22 4748		1 57W		"	1380
94	Comp							"	5
95	HD102870	"	"	23 1254		2 24 W		"	1491
96	Comp							"	5
97	BIAS(4)			23 40				"	5
98	Comp							"	5
99	HD137909	15 2342	129 2701	23 4616		0 48E		"	895
ce12400	Comp							"	5
0/05	FLATS x 5							TUNG	25
06	BIAS(4)								
07/11	FLATS x 5							TUNG	25
12	Comp							THAT	5

edit 7 to 4479 07-10 ✓

^{CCD} Spectr. Temp. — 100.6°C Dome Temp./Hum. — 7.0°C 56.88% Transparency Conditions Fine, but gusty ¹²⁰
 Focus — 0.227 But Full moon too
 Spectr. Temp. Dome Temp./Hum. ^{40u} increasing cloud ^{MAX}

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. e. helle	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
13.20V B&B Blue Filter				18.00	0600 <small>60u W</small> 0.4580	60u W 400u H	AA80R	1/2	focus	0 0 128 1024 81 set a bit for cooler	
								1/2		0 0 256 1024 41	
								3			
2400	4"	3.61	F9V					4	still vel		~ 900
								3			15.3K
2400		3.61	F9V					5	"		820
								3			
								1/2			
								3			
2400	3"	3.66 ^v	F0p					6	K/H p/m	Readout in 4ci	1.2K
								3			
						600u H = 1205		2			8K
				19.50			4479	1/2			
						600u H = 205		2			9K
						400u H		3			

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

Focus ... 0.227

Spectr. Temp. ... °C Dome Temp./Hum. ... 6.7°C 60% H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0148 2510	2-3	366	Fop	19-50	0600 1/4" mm 4585	60u 400u	4479A	4 3	KK ppm		
								1/2			
								6/7	focus	set for only slightly cooler	
										Copied to m:\ccd\Edelle\KK0405	
										to F drive	

T = +6.7°C

Copied to m:\ccd\Edelle\KK0405 to F drive

Spectr. Temp. -100.0°C Dome Temp./Hum. 7.9°C $37\% \text{H}$ Transparency Conditions *Fine* 124
 Focus 6.88 , 7.05 ? check Apr 28/29 \approx outside it's 40% on catwalk
 Spectr. Temp. Dome Temp./Hum. 7.7°C $36\% \text{H}$
 385 0 50 1024 41 CCD/FMT

Exp. Mtr.	Seeing	PV Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000 Volts no filter	2-3"	6.45	G8Kp	CASS CCD ALT = 80° 6 unchanged from April 28/29 presumption	1200h/min G-5303	306	649A ^B		Seeing test	SKY seems quite dark Dome SW, no wind.	MAX ADK
								1/2			
								3/4	focus test		
								5			
3000	1-2"	6.45	G8Kp					6	std vel		1K
								7			
								8			
1830	1 1/2"	7.48	M2					9	max, std		8K
								10			
								11			
210	2"	12.1	M3					12	Vys pgrm	H _d broader than H _d of 'A' But not quite dbl Vys 250B Fainter SW ore conts 400 Above Bias Cont = 65/1 S/N	10.3K
								13			
360	2"	11	M0					14	" "	Vys 250A	2.3K
								15			

wrong tilt entered
 It was likely
 4503 T_n
 may 96

CCD Spectr. Temp. -100.5°C

Dome Temp./Hum.

Transparency Conditions Fine 126

Focus 6.88

CCD Spectr. Temp. -100.4°C

Dome Temp./Hum. $+7.8^{\circ}\text{C}$ 38.9% H

Exp. Mtr.	Seeing	Pl [✓] Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
240	2	12.1	M3	CAESCCD	1200 m/μ	306 μ	649A	16	Vys	fainter SW one	1.3K
					G=5303			17		still just sl broad	3.1K
					Actually 4503			1/2		maybe sl dbl	
360	2.3"	11	M0					18	Vys		
					headers wrong tool			19			
					In May 96						
215	2.3"	12.1	M3					20	Vys 250B	Hd maybe dbl now	1K
								21			
	2"		M3		Image	Apn View		22			
1310	1.2"	8.78	M1					23	Marcy Std Vel		5.5K
								24			
								1/2			
								25			
1340	1.2"	10.11	M0e					26	Vys 740,	[on Hvy List not done before e 14 d]	Hd em 10.5K
								27		yes.	
										Almost got a ddb	

Spectr. Temp. Dome Temp./Hum. $\pm 7.8^{\circ}\text{C}$... 39.5°H Transparency Conditions ... *Fine* 128

Focus ... 6.88

Spectr. Temp. ... 100.3°C Dome Temp./Hum.

For AC182777, HD 29329 @ $+76^{\circ}$ used
to get RA error of -5.5sec

Exp. Mtr.	Seeing	Plg/ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CAS CCD	12004	30u	6494A	28		$\Delta 2 - 00 \ 01 \ 07$ $\Delta 5 - 00 \ 01 \ 27$ used $\Delta 2000$	
190	3"	11	M10	[Late, anyway, No H α em]				6	Vys 105	used 0413 50 For encoders +8255 10	
				(Spectrum looks like Vys 250A except for H α em)				7		Tel east side	
				And field checks out.				1/2			
								2			9K
T=	7.8 $^{\circ}$	set 6.88						3/4			
<p><u>Found Filter in Aperture Stop to be not in position.</u> Such was perhaps the case all night.</p>											
<p>G= 5302, wrong. It was <u>4503</u> edit headers,</p>											

129
Pg #1

Sun/Mon

Date 1996 May 12/13... Observers [Vys. Hra] / Tn / Smt...

Emulsion Batches:-

GG 385 FILTER IN COMP TRAY

Plate No.	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 39962/63	INBOARD/ OUTBOARD							FcAr clear	40/40
64	BIAS (4)			20 15				"	0
65	COMP							"	40
66	H095735	10 57 54	+36 38	20 19 03		0 26 W		"	186
67	COMP							"	40
68	COMP							"	"
69	BD+33 1646A	08 02 34	+33 06 25	20 28 48		3 39 W		"	631
70	COMP							"	40
71	BD+33 1646B	"	"	20 43 06		4 07 W		"	1474
72	COMP							"	40
73	BIAS (4)							"	
CG 80448 → 51	BD+33 1646A & B	"	"		21 13	4 11 W		"	133
74	COMP		?					FcAr clear	40
75	BD+21 2763	15 17 (55)	+21 20 06	21 33 06		2 34 E		"	389
76	COMP							"	40
77	FLATS x 7					0	+38	TOMB	25

Spectr. Temp. -100.0°C Dome Temp./Hum. $+5.6^{\circ}\text{C} / 34.3\%$ Transparency Conditions mostly clear..... 130

Focus 6.88.....

FANS ON.

Spectr. Temp. Dome Temp./Hum.

385 0 50 1024 4 1 cd/mt.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission- CX	P.H.	Program	Remarks	Quality
1000 V no filter				CASS CCD	1200 Bl/mm (6=5303)	300 μm	6494 Å	3/4	focus test	in focus - unchanged! Same setup as previous run	
					<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Actually 4503 edit headers </div>			1			
								5			
1450	2-3"	7.48	M2					6	Mary std vel	Vys 594, sky still bright.	
								7			
								8			
465	~2"	11	M0(e)					9	Vys H α -TnKk	Vys 250 A, brighter and NE, sky a bit bright.	
								10			
246	2"	12.1	M3(e)					11	"	Vys 250 B, fainter SW sky dark enough H α em narrow, not dbl	
								12			
								11/2			
				EEV CCD TV GUIDER		none		-		Image Acquisition view, Done w	
				CASS CCD	...			13			
185	2-3"	10.11	M0e					14	Vys H α (Tn)	close to Vys 740 1st attempt Vys 740, $\alpha = -30^{\circ}$	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> @ Hα Ex cont. 740 </div>
								15			
								16			8K

Spectr. Temp. -100.4°C Dome Temp./Hum. $+4.0^{\circ}\text{C}/42.3\%$ Transparency Conditions *mostly clear* 132
 Focus *Hx. 6.88 / 6.88 @ 4461* @ focus test. N FAN ONLY NOW

Spectr. Temp. Dome Temp./Hum. *cd*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CASS CCD	1200 mm G = 5303	30um	6494A	160		no filter.	8K
					<i>edit</i> → 4503			1		385 0 50 1024 4 1 cd/fmt	
1000V B6 39 FILTER				CASS CCD	1800 mm G = 4586	30um	4461A	3/4	focus test	415 0 50 1024 4 1 cd/fmt. in focus still.	
								1			
								17			
21.6K		✓ 1.86	B3V					18	Bln	trailed quickly.	7.5K
								19			
								20			
15.4K	3-4°	^B 5.09	A5V					21	Bln Astell	seeing deteriorating > 300/1 S/N	
								22			
								23			
14.2K	3-5°	✓ 5.52	A5V					24	Bln Astell.	~ 300/1 S/N	7.7K
								25			
								1/2			
								26			

133

pg#3

Sun/Mon

Emulsion Batches:

Date 1996 May 12/13 Observers [Bin]/Tn/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.
CC39999	HD154528	17 00 59	+77 48 00	23 17 08		2 18 E			867
CC40000	Comp							FeAr Clear	60s
10	FLATS X9					0	-3°	TU Clear	15
10	COMP							FeAr Clear	60
11	HD154528	"	"	00 29 02		0 35 E			2650
12	COMP							"	60
13	BIAS(4)			01 17					
CG80457/55	HD 144579	16 01 30	+39 24 00	01 24				4x	67ms
CG80456/57	"				01 26	0 29 W		2x	133ms
CC40014	COMP							FeAr Clear	60
15	HD144579	"	"	01 29 26		0 44 W			683
16	COMP							"	60
17	COMP							"	60
18	HD 158352	17 23 44	00 24 42	01 48 01		0 13 E			1126
19	COMP							"	60
20	BIAS(4)			02 11					

Spectr. Temp. 101.9°C Dome Temp./Hum. $+3.5^{\circ}\text{C} / 44.9\%$ Transparency Conditions \dots some cloud \rightarrow clear ¹³⁴Focus 6.88 Spectr. Temp. 100.5°C Dome Temp./Hum. $+2.3^{\circ}\text{C} / 51.7\%$ - Then much cloud
Rain/snow (a wee bit)

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
^{filter} 2A00K		\checkmark 6.66	AO	CASS CCD	1800 \AA / G=4586	306 μ	446/A	27c	Blu SB2	4.90 Δ period, weak	
								28			2K
								29c		dome closed	11.5K
								30		open again.	
11.9K	3"-4"	\checkmark 6.66	AO					31	Blu SB2	clear here now. SW \sim 300:1	
								5			
								1/2			
	5'	\checkmark 6.66	dG8	ALT=83°				-	seeing test	Dome WSW 13 km/hr NW wind	
	4'-5"							-	"	clear, no moon.	
								17			
2.8K	4'-5"	\checkmark 6.66	dG8					18	std vel		1.3K
								19			
								20			
13.9K	4'-5"	^B 5.66	A8V					21	A shell open		
								22			
								1/2			

\rightarrow looks ~~away~~ later, lots of lines
no other stars in vicinity

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions . *PART. cloudy* 136Focus *6.88*Spectr. Temp. *-100.3°C*Dome Temp./Hum. *+1.8°C 52.2% H*

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1500 μ /mm G=4586	306 μ	AA61A	23			3.7K
14.9K	4.6"	^B 4.46	A1V					24	SB Blu	Not obviously doubled Some cloud at start	
								25			
								26			
18.8K	5.9"	^B 4.30	B8V					27	SB Blu		8.3K
								28			
								29			
14.8K		^B 5.19	B3V					30	SB 4		
								17			
								1/2			
								20a			
13.6K	4.25"	^B 6.40	F0V					21	SB2 Blu	P = 1.3/day	6.3K
								22			
								23			
8K	4.5"	^B 6.64	B8					24	SB Blu	P = 35.21 day. sky getting brighter	3.2K
								25			

pg#1 Mon / Tues

Date 1996 MAY 13/14... Observers [K.K. (Vasa)] / J.M. / Smt..

New Old, 51 yr old sim

Emulsion Batches:

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 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.
CC400 ^{10/41}	In board / out board		HARTMANN			24 15 W	33 ⁰	Felt clear	40/40
42	Comp ✓			20 55 40				Felt clear	40s
43	BD+33 1646 B	08 02 34	+33 06 25	20 57 57		4 27 W			1550
44	Comp							"	40s
45	BD+33 1646 A	"	"	21 27 51		4 40 W			552
46	Comp							"	40
47	BD+33 1646 B	"	"	21 39 56	edit ✓ done	5 00 W			1038
48	Comp							"	40
49	BD+33 1646 A	"	"	22 01 43		5 14 W			550
50	Comp							"	40
51	BIAS (4)			22 15					
CG804 ⁵⁹	BD+33 1646 A/B	"	"	22 15					67ms
52	BD+33 1646 B	"	"	22 16 20		5 35 W			899
53	Comp					5 W		"	40
54	BIAS (4)			27 38					

CCD
 Spectr. Temp. ... -100.3°C
 Focus ... 6.88
 Spectr. Temp.

at 19:57
 Dome Temp./Hum. ... 77.3°C 36.8%
 Dome Temp./Hum. ... 75.6°C 38.8%
 CA

Transparency Conditions ... Mostly clear
 increasing cloud
 385 0 50 1024 4 1 CCDFWT

140

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
T-606 No Filter 1000 V		F=6.88		1200 In/mm G-N/A Tilt 2 41°30'	1300nm Problems with "G" Tilt change	306a	6467 ± 15Å	3/4 5ci		encoder T@ 19:57 -6°C Had to set grating tilt by hand	
285	2-3	121	M3(e)					6ci 7ci	Vys 250B	fainter SW one Red peak weaker one good dbt of Hd	1.5K Hd max
326	1-3	11	M0(e)					8ci 9	Vys 250A		1.5K Hd max
185	2	121	M3(e)					6 12	250B Vys 250B	Hd dbt more obvious Red out in 6ci, not 10	
260	2-3	11	M0(e)					13 14 1/2			
130	2-3	121	M3(e)					15 16 1/2	Image Acquisition of Vys 250AB Vys 250B	some cloud	

CCD Spectr. Temp. -100.5°C
 Focus ... 6:88 / 6:88s
 Spectr. Temp.

Dome Temp./Hum. $+5.6^{\circ}\text{C}$ / 33.7% Transparency Conditions ... Part. cloudy 142

Dome Temp./Hum. $+5.2^{\circ}\text{C}$ / 41.1% RH
 @ seeing test FANS OFF
 385 0 50 1024 4 1 (CCD) MAX

Exp. Mtr.	Seeing	Ap. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000V				CASS CCD	1200 μ /mm Tilt 41.8 $^{\circ}$	306 μ	6467A ⁰	17			
900	1.2"	7.48	M2					18	Mary Std Vel		AK
								19			
								2			
								1/2			
B639 FILTER				CASS CCD	1800 μ /mm G=45.8 $^{\circ}$ Actual Tilt = 42.7 $^{\circ}$	306 μ	4462A ⁰	3/4	focus test	415 0 50 1024 4 1 CCD FWT in focus, set a bit cool maybe.	
								1			
								20			
29K	2.3"	1.86 ^V	B3V					21	Bln	trailed.	7.3K
								22			
	2"	6.7 ^V	F2	EDV CCD TV GUIDER		above 306 μ		-	seeing test	Dome NW medium W wind, partly cloudy, clear here, good seeing	
								-	"		
								23			
13.5K	3" →5"	4.30 ^B	B8V					24	Bln dbl-lined SB	seeing getting bad. some cloud.	7.0K
								25			

Spectr. Temp. Dome Temp./Hum. $4.8^{\circ}\text{C}/41.6\%$ Transparency Conditions .. mostly cloudy but it's thin ¹⁹⁹⁷

Focus 6.88

Spectr. Temp. ^{cep} -100.3 °C Dome Temp./Hum.

415 0 50 1024 4 1

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS ^{ced}	1800 μm G=4586	306 μ	4462A	26			MAX
4470	~3" ^v	5.06	F8IV-V					27	std vel	some cloud here.	
								28			
								1			
								29			
13K	4-5" ^B	5.19	B3IV					30	Bln SB4	a bit less cloud here @ start, then thick.	
								31			
								20			
12.6K	2.4" ^v	6.66	A0					21	SB2	> 300/1 S/H 490 d Period	10K
								22			22K
								1/2			
								23			
11.6K	2-3" ^B	6.40	FOV					24	SB2	S1 300 /1 S/H P=1.31 day	67K
								25			
								26			

145

Pg #4

Mon / Tues

Emulsion Batches:

Date 1996 MAY 13/14 Observers [Blu] / Tu / 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.
CC40092	HD180316	19 11 00	+2746 00	02 14 03		01 03 E			2691
93	COMP							FeAr clear	60s
94	BIAS(4)			03 00					0
95	COMP							*	66
96	HD192518	20 10 08	+2823 30	03 06 36		01 34 E			1200
97	COMP							"	68
98	COMP							"	60
99	HD210459	22 05 33	+3241 15	03 33 22		03 01 E			1343
CC40100	COMP							"	60
01	BIAS(4)								0
02/10	FLATS x9					0 01 W	+23°	Tung clear	15
11/12	INBOARD / OUTBOARD					"	"	FeAr clear	40/70

CCD Spectr. Temp. -100.4 °C

Dome Temp./Hum. +33.8°C/45.4%

Transparency Conditions mostly clear → mostly cloudy esp. to S.

Focus 6.88

Spectr. Temp. -100.2 °C

Dome Temp./Hum. +33.5°C 47.2%
CD

MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
11.2K	3.4"	B 6.64	B8	CASS CCD	1800 lines/mm G=4586	306μ	4A62A	27c 28 1/2 29	SBPh	SB. P=3521 day	5.8K
13.2K	3.5"	B 5.36	A7III					30 31 20	Bln Ashell	getting cloudy	7.3K 6.3K
9950	5"	B 4.75	F5III					21 22 1/2 2 3/4	Bln Ashell	cloudy here, cut short	4.6K 10.8K
										focus test	end of night.

147 pg#1 Tues/Wed

Emulsion Batches:

Date 1996 May 14/15..... Observers [Kirk (Veg)] / T.n.....

GG 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.
CG401 ^{13/14}	In board / out board							FeAr Clear	40/40
15	BIAS(4)			20 18 53					
16	Comp							FeAr Clear	40s
17	BD+33 1646 B	08 02 34	+33 06 25	20 30 25		3 48 W			667
18	Comp							"	40s
19	BD+33 1646 A	08 02 34	+33 06 25	20 45 25		4 05 W			781
20	Comp							"	40s
21	BD+33 1646 B	08 02 34	+33 06 25	21 02 08		4 27 W			1076
22	Comp							"	40
23	BIAS(4)			21 28					
CG804 ^{6/71}	BD+33 1646 A/B								4x 67ms
72/73	" "			21 27		24 34 W			2x 133ms
74/75	DARKS x 2								2x 133ms
CG804 ^{76/79}	DARKS x 4								4x 67ms
24	BD+33 1646 A	08 02 34	+33 06 25	21 32 56		4 54 W			854
25	COMP							FeAr	40

Filter in Dark pos'n

CCD Spectr. Temp. -100.8°C Dome Temp./Hum. $+11.1^{\circ}\text{C}$ 4006H Transparency Conditions *Hazy clear* 148

Focus *6.72*
 CCD Spectr. Temp. -100.5°C Dome Temp./Hum. $+10.2^{\circ}\text{C}$ 3946H
 ED 385 050 1029 41 CCD Fmt

Exp. Mtr.	Seeing	N Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulst ⁿ	P.H.	Program	Remarks	Quality
1000V No Filter				CASS CCD	1200 l/mm Tilt = 41 $^{\circ}$	30 μ	6481 Å $\pm 0.5 \text{ Å}$				
								1/2			
								6			
* 300	2	121	M3(e)					7	Vys 250B	FWHM H α \approx 8 pixels + some sky counts	2.2K 875H α
								8			
467	<2	11	M0(e)					9	V ₀ 250A		\approx H α 2.5K
								10			
200	2-3	121	M3(e)					11	V ₁ s 250B	FWHM H α on \approx 8 pixel cont S/N = 55/1	
								12			
								1/2			
Image Acquisition View									Like seeing	Test methods	
									" "	" "	
400	2-3	11	M0(e)					13	V ₁ s 250A		
								14			

149 pg #2

Tues/Wed

Emulsion Batches:

Date 1.7.96..M.H.G./A.H.S. Observers [K.K./V.G.S.] / J.T.R.....

F.A. Comp
G. 3.85 F. 1/2

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC40126	BD+331646B	08 0234	+33 0625	21 5001		5 17W			1/96
27	Comp							FEAR CLEAR	40s
28	Comp							"	40s
29	HD 95735	10 5754	+36 3800	22 1727		2 33W			1/61
30	Comp							"	40s
31	BIAS(4)			2223					
32	Comp							FEAR	40s
33	AC+82 779	✓ 04 1350	+82 5510	22 3400		10 06W			
34	✓ Comp							"	40s
35	Comp			23 1858					40s
36	AC+72 3338			23 1858		8 13W			1/331
37	Comp							"	40
38	BIAS(4)			23 45					
39	Comp								
40	HD 119850	13 4036	+15 27	23 5501		1 34W			5/6
41	Comp								

J 2000

J 2000 Approx from Fid

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *Hazy → OK* 150Focus *6.92*Spectr. Temp. *100.5°C*Dome Temp./Hum. *+9.0°C 40.2% H*
Exp. Meter Rebalanced, was slightly falling before

not. then Exp. Mtr.	Seeing	Pr Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000 V											
180	<i>2.4</i>	12.1	M3(e)	<i>CASSCO</i>	<i>1.200 in/mm T.H. 41.6</i>	<i>306μ</i>	<i>6481A</i>	15	<i>Vys 250B</i>	<i>H2 looks more narrow 27 Pix FWHM</i>	
								16			
								17			
900		7.48	M2					18	<i>marcy std vel</i>		4.3K
								19			
								1/2			
								20			
440		11.0	M0					21	<i>Vys 105</i>	<i>Tel East side $\Delta\alpha$ -00 01 33 $\Delta\delta$ +00 00 42</i>	
								22			
								23			
215	<i>1.2"</i>	11	M0					24	<i>Vys 238</i>	<i>Tel East side $\Delta\alpha$ -00 00 46 $\Delta\delta$ -00 00 09</i>	
								25			2.2K
								1/2			
								26			
690								27	<i>marcy std vel</i>		2.9K
								28			

Spectr. Temp. ^{CD} ~~-10.16°C~~ Dome Temp./Hum. Transparency Conditions *some cloud* 152

Focus 6.92

Spectr. Temp. Dome Temp./Hum. *18.9°C 40.2% H*

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSCO	1200 μ /m	306 μ	648A	29			
				Tilt	41.8°						HL Em
320	1.2"	10/11	MOe					30	Vys 740		2.7k
								31			
								6			
960		666	68V					7	Std Vel (IAU)		
								8			
								10/12	focus test		
	1.2"			A/2 85°		Above 306 μ			Seeing test	Dome S/W no wind	
TRY	Use	Darks	taken	earlier					n.	F=102 H	
								2			8k
								1/2			

Wed / Thurs
 Date ... 1996 MAY 15/16. Observers [K.K. Uga] / T.a.....

FOR Comp & FLAT
 G.G. 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.
CC40162	Comp			21 14				FeAr Clear	40
63	BD+33 1646 A	08 02 34	+33 06 25	21 21 06		4 39 W			466
64	Comp							"	40s
CC40160/59	In board / out board	Dope and wpt.	Herbst	21 10				"	40/
65	BD+33 1646 B	"	"	21 31 28				"	450
66	Comp							"	40
67	BIAS (4)								
68	BD+33 1646 B	"	"	21 44 04		5 03 W			466
69	Comp							FeAr Clear	40
70/72	FLATS X 3					5 08	TUNG	AP 1/4	25
73	BIAS (4)			22 04					
74/75	In board / out board	by Smt,		20 52	1996 MAY 18/19				no observing

^{CCD}
 Spectr. Temp. ... -100.2°C ... Dome Temp./Hum. ... +11.3°C 47% H₂O ... Transparency Conditions ... Mostly cloudy ... 154

^{CCD}
 Focus ... 6.84 ...
 Spectr. Temp. ... -99.5°C ... Dome Temp./Hum. ... +11.2°C 51% H₂O ...

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
1000V no filter				CASS CCD	1200 h/m Tilt 41.7	306	6481A	6			
103	2"	11	M0(⊙)					7	Vys 250A	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> H₂O em 50ADU above cont cont ~ 30/1 SN </div>	2.1K
								8			
								3/4	focus	very slightly set for cooler @ Hd	
34			121 M3(⊙)					9	Vys 250B Hd	Only 20 ADU above continuum	
								10			
								11/2			
103								15	Vys 250B	↓ unstable to see and offset guide on A	
								16			
								2			7.6K
								11/2			
					1200 h/m Tilt 41.7	306	6475A				

Spectr. Temp. -100.3°C Dome Temp./Hum. $+23.8^{\circ}\text{C}$ 60.7%Transparency Conditions *mostly clear* 156Focus 6.70 *increasing haze/cloud*Spectr. Temp. -100.5°C Dome Temp./Hum. $+23.5^{\circ}\text{C}$ 61.5%

385 0 50 1024 4 1 CCD UNIT

Exp. Mtr.	Seeing	P/V Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
100V no filter				CASSCO	1200 $\frac{1}{2}$ /mm G=4503	306 μ	6475A	3/4	Focus		
					Tilt = 41.7° That's what's in Headers			1/2			
									5		
1120	1.2"	7.48	M2						6	marcy std vel	
								7			
								8		Some fireworks in the AREA	2K
190	2"	12.1	M3e)					9	Vys 250B	The faint SW one nice double H α 100AD4 above bias. 211 pixels FWHM	
								10			
220	2.4"	11	M0e)					11	Vys 250A	brighter one, but cloudy	
								12			
80		12.1	M3e)					9	Vys 250B	Too cloudy	
								13			
								1/2			
								14			
600	4"	8.48	M1					15	marcy std vel		
								16			

pg#1 Tues/Wed

Date 1996 MAY 21/22 Observers [K.K. (Vegs)] / 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.
CC402 ^{04/05}	In board (out board)					0	+44°	Kear (clear)	40/49
CC402 06	BIAS(4)								
^{07/13}	FLATS x 7					0	+44°	TUNG NO Filter	25
14	Comp								
15	HD95735	10 57 54	+36 38 00	20 23 15		1 06 W			186
16	Comp								
17	Comp								
18	BD+33 1646 A	08 02 34	+33 06 25	20 32 28		4 15 W			486
19	Comp								
20	BD+33 1646 B	"	"	20 43 01		4 30 W			755
21	Comp								
22	BD+33 1646 A	"	"	20 58 54					719
23	Comp								
24	BD+33 1646 B	"	"	21 17 48		5 11 W			1115s
25	Comp								
26	BIAS(4)			21 40					

CCD Spectr. Temp. -100.5° Dome Temp./Hum. $180^{\circ}C$ 49% H Transparency Conditions *Mostly clear* 160

Focus *6.73*

Spectr. Temp. Dome Temp./Hum. *385 0 50 1029 4 1 CCD-FIT*

Exp. Mtr.	Seeing	P/Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSID	1700ln G=450	306 μ	6475A	3/4	focus test	just slightly far cooler	
								1/2			
								2			
								5			
1400	1.2 μ							6			
								7			
								8			
660	1.3'	11	M0e					11	Vgs 250A	Brighter NE component Bright sky still.	
								12			
280		121	M3e					9	Vgs 250B	good single H α line < 5 pixel FWHM @ H α	
300								11			
								12			
180								9			
								10			

pg#2 Tues/Wed

Date 1996 May 21/22 Observers [Vys]. / T.a.....

Emulsion Batches:

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..... GG.385 for Comp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc40227	Comp							Felt Clear	40
28	HD 95735	10 5754	+36 3800	21 5431		2 40W			54 304 284
29	Comp							"	40
30	Comp							"	40
31	HD 119850	13 4636	+15 2700	<u>22 1038</u>		0 17W			5/4
32	Comp							"	40
33	Comp							"	40
34	Vys 734	14 5816	^{S2000} +59 3456	<u>22 3838</u>		0 20E			9/6
35	Comp							"	40
36	B/45 (A)			2307					
CG80A ^{86/89} 90/91	BD+33 1646 A+B n	080234	330625	221		25 W			4x 67ms 2x 133ms
				Note, done earlier					
				110 DARKS done though.					

163
Pg #1

Wed/Thurs

Emulsion Batches:

Date 1996 Mar 22/23... Observers [Kk/Vgs]/Tn/Swt... + [Bin] setup

..... GG 385 filter for
..... comparisons

Plate No.	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#0237 138	INBOARD/ OUTBOARD							Fed clear	40 / 40
39	COMP							"	40
40	BD+33 1646 A	08 02 34	+33 06 25	20 53 41		4 42 W			500
41 42	COMP COMP							"	40
43	BD+33 1646 B	"	"	21 15 23		5 05 W			650
44	COMP							"	40
45	BIAS(4)			21 30					6
46	COMP							"	40
47	#H095735	10 57 54	+36 38	21 36 55		2 28 W			400
48	COMP							"	40
49→56	FLATS x 8						GG 385 F: Her Removal	Tung 4 Ap	2
57	BIAS(4)			22 07					0
58	BIAS(4)			22 25					0
59/60	INBOARD/ OUTBOARD							Fed clear	40/70
61	BIAS(4)			22 40					0

Spectr. Temp. -100°C Dome Temp./Hum. $16.0^{\circ}\text{C}/60.6\%$ Transparency Conditions *mostly cloudy* 164

Focus 6.75

@ focus test

Spectr. Temp. -104.3°C

Dome Temp./Hum. $14.0^{\circ}\text{C}/60.0\%$

385050 1024 x 1 CCD test

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000 V no filter				CASS CCD	1200 λ/mm G=4503	30 μm	6475A ^o	3/4	focus test	Set for very slightly cooler at H ₂	
238*		11	M0c					5			
								6	KK/8453	*lots of clouds, 650 Hz 500 cont'n sky brightish too	
								7			
150 *		12.1	M3 (e)					8	"	*more cloud. than for A.	
								10	H ₂	The fainter SW one well doubled.	
								1			
								12			
740 *		7.48 ^V	M2					13	Marcy stel vel	*lots of cloud, got star during holes.	
								14			
								15		done after closing dome. OK	
								1/2		reduced	
								1			
BG 39 FILTER				CASS CCD	1800 λ/mm G=4587	30 μm	4461A ^o	3/4	focus test	3850 50 1024 x 1 4150 50 1024 x 1 in focus, outboard stronger for spectra	
								1			

165
Pg #2 Wed/Thurs

Date 1996 May 22/23 Observers [Bin]/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.
CC40262	Comp							FeAr Clear	60s
63	HD 154528	17 00 54	+77 48 00	22 50 06		1 55 E			1430
64	Comp							FeAr Clear	60s
65	HD 154528	17 00 54	+77 48 00	23 19 30		1 14 E			2138
66	Comp							FeAr Clear	60s
67	BIAS(4)			00 00					0
68	Comp							"	60
69	HD 138629	15 28 12	+41 14 19	00 05 16		0 28 W			425
70	COMP							"	60
71	COMP							"	0
72	HD 148283	16 21 50	+37 37 18	00 24 25		0 04 W			1030
73	COMP							"	60
74	Comp							"	60
75	HD 152614	16 49 17	+10 19 48	00 49 17		0 12 E			279
76	Comp							"	60
77	BIAS(4)			00 57					

Spectr. Temp. Dome Temp./Hum. $+13.2^{\circ}\text{C}$ / 59.1% H Transparency Conditions ... Part Cloudy ¹⁶⁶

Focus ... 6.75

Spectr. Temp. Dome Temp./Hum. $+12.3^{\circ}\text{C}$ / 61.5% H
CJ 415 0 50 1029 41 CDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter				CASSCO	1800h/mm G45B7	306 μ	9A61A	16			MAX
3400	3.5 μ	666	A0					17ci	SB2 Blu	P=4.90day some clouds at end of exp	1.7K
								18			
12K	4 μ	666	A0					19	SB2 Blu	Trans clear again	8K
								20			
								1			
								22			
13.3K	3 μ	B 5.09	ASI					23	Ashell Blu	done last week, centered clear still on col 28	8.5K
								24			
								25			
13K	4 μ	5.52	ASI					26	Ashell Blu	some cloud now	7K
								27			
								28			
14.4K	3.4 μ	B 4.30	B8V					29	dbl line SB		8.3K
								30			
								1			

Spectr. Temp. Dome Temp./Hum. 12:2°C / 62.4% Transparency Conditions .. O.K 168

Focus ^B 675

Spectr. Temp. - 101.2°C

Dome Temp./Hum.

4150 501024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSCSD	1800/1mm	306u	4A61A	5			
14K	4.5 ^B	566	A8K		G 4587			6	A shell Bl _n		6K
								7			
								10			
14K	4 ^B	4.46	A1V					11	dbl Line SB		72K
								12			
								13			
3K		5.06	F8IV-V					14	Std Vel		
								15			
								16			23K
14.7K		5.19 ^B	B3IV					17	SB 4 Bl _n		
								18			
								1			
								22			
12.5K	2.3 ^B	6.40	F0II					23	SB2 Bl _n		8K
								24			

169
pg # 4

Date 1996 May 22/23 Observers [Blr]/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.
CC40294	COMP							FeAr clear	60
95	HD180316	19 11 00	+27 46	02 33 13		0 16 E			2253
96	COMP							"	60
97	B/H5(A)								
CG80492/95	COMP HD176894			03 20				FeAr clear	67ms
CG80496/97	"				03 22	0 09 W		2	133ms
CG80498-503	DARKS					0 ^h			4x.007s 2x.133s
CC40298	Comp							FeAr clear	60
99	HD192518	20 10 08	+28 23 30	03 28 04					475
CC40300	COMP							"	60
01	Comp							"	60
02	HD 210459	22 05 33	+32 41 15	03 43 18		2 33 E			300
03	Comp							"	60
04 → 12	FLAT. x9					2 20 E	+33°	Tung clear	14
13	BIAS(4)			04 02					0
14/15	INBOARD/OUTBOARD							FeAr clear	40/60

Spectr. Temp. Dome Temp./Hum. 12.4°C/61.3% Transparency Conditions .. mostly clear 170
 Focus 6.75 N FAN ON
 Spectr. Temp. ^{CCD} = 101.8°C Dome Temp./Hum. 11.8°C/62.2%
 @ focus test. 415 0 50 1024 4 1

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800L/mic G=45RT	30µm	4461A	25			
12.2K	3"	B 6.64	B8					26	Bln SB		GA
								27			
								1			
		V 6.65	M2III	86° ALT	Above 30µ slit			-	Seeing Test	Dome west, no wind	
				FEW TV GUIDER				-	" "	no moon, perhaps a bit of sky bly twilight.	
								-			
								28			
12.2K		B 5.36	ATIVm					21	Bln A shell		5.3K
								22			
								25			
14.0K	4"	B 4.75	F5III					26	Bln A shell	sky getting bright.	8K
								27			
								28			11K
								1			
								3/4	focus test	fired outboard late (wrong source initially)	set a bit warmer now.

CCD Spectr. Temp. -10.60°C

Dome Temp./Hum. $12.0^{\circ}\text{C}/77.1\%$

Transparency Conditions... just cleared, some clouds ¹⁷⁸ lingering

Focus 6.70

Spectr. Temp.

Dome Temp./Hum.

415 0 50 1024 4 1 CCD/FMT

Exp. Mtr. 1600 V	Seeing	F. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06560 FILTER				CASS CCD	1800 λ mm G=5960	30 μ m	6400λ $6398 \lambda \pm 5$	3/4	focus test	set the finest bit w/ max ADU	MAX ADU
2515	5"	$\langle V \rangle$ 6.19	F6I -IIb					5			
								6	Rm Cepheid	doesn't seem bright enough = seeing spectrum looks fine. & cloud.	5.2K
								7			
								80			
3.8K	5"	5.8 -5.9	F2					11	Rm Cepheid	VI334 Cgg, some cloud.	6.6K
								12			
								13			
3K	6"	5.11	F8V					14	std vel		
								15			
								1			
								16			
1040	?	9.1 -9.8	G2 Ib					17	Rm Cepheid	MW Cgg	1.7K
								18			

Spectr. Temp.

Dome Temp./Hum. 9.6°C/65.6%

Transparency Conditions clear.....

Focus 6.70

Spectr. Temp. - 101.5°C

Dome Temp./Hum. 8.7/64.5% H

415 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG 560 FILTER				CASS CCD	1800 l/m G=5960	306μ	6398 Å	1			
								20			
1.9K	5"	<v> 8.40	vG0Ib					21	Rm Lepheid Z Lac.	Δλ +115 Δδ -1'45"	3.4K
								22			
								24			3.4K
3K	6"	6.19	K2					25	Rm stel for Z Lac		5.0K
								27			
								1			
								2			10K
								3/4	focus test		

Date 1996 MAY 24/25 Observers KK / Tn

.....
..... FOR. Comparison
..... GG. 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.
CC403 5/52	Inboard / out Board					0	+40°	FEAR CLEAR	40/44
53	BIHS(4)			20 30				"	40
54	Comp							"	40
55	HD 95735	10 5754	+36 3800	20 3942		1 36W			212
56	Comp							"	40
57	Comp							"	40
58	BD+33 1646B	08 0234	+33 0625	20 5344		4 55W			910
59	Comp							"	40
60	BD+33 1646A	"	"	21 1245		5 W			860
61	Comp							"	40
62	BD+33 1646B	"	"	21 3039		W			1140
63	Comp							"	40
64	BD+33 1646A	"	"	21 5211		W			1038
65	Comp							"	40
66	BIHS(4)			22 20					

CCO
Spectr. Temp. - 100.7°C

Dome Temp./Hum. +11.3°C 42.4%RH

Transparency Conditions . Fine 182

Focus 6.80

Spectr. Temp.

Dome Temp./Hum. +9.0°C 45.5%RH
e 2

385 0 50 1024 91 CCOFaint

Exp. Mtr.	Seeing	P _v Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
No filter					1200h/mm G=4503	306e	6470A	3/4	Focus test		
Exposure meter Balance checked OK								1			
								5		Telescope East Side	
1240	4"	748	M12					6	M12ncy Std vel	Bad guiding?	2K
								7			
								7			2.7K
235	5"	121	M3e					8	Vys 250B	Fainter SW one Sky slightly bright	
								9		8 a -00 00 24 -00 01 15	
400	4-6"	11	M0 e					10	Vys 250A		
								11			
185	5"	121	M3e					12	Vys 250B		
								13			
280	4-6"	11	M0e					14	Vys 250A	Brighter NE one	
								15		Long gap before comp fired sp control failure	
								1			

183

pg 42

Fri 1 SAT

Emulsion Batches:

Date 1996. MAY. 24/25. Observers K.K. / J.A.

For Comparison

G.G. 386 F110n

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC40 367	BD+33 1646B	08 02 34	+33 0625	22 2725		16 20W			1257
368	Comp							FEAR CLEAR	40
369	BIAS (4)			23 10					
370	Comp							n	40
371	BD+47 2415B	16 55 06	+47 30 55	23 49 55		201 E			735
372	Comp							"	40
373	BD+47 2415A	"	"	00 0614					149
374	Comp							"	40
75	BIAS (4)								
76	BD+47 2415B	"	"	00 1918					404
77	Comp							n	40
76/84	FLATS x 7					0 32E	+47°	Tung Ap 1/4	2
<p>+ piggyback images ST60001 - ST60003 PTS unable (mechanically) to reach focus</p>									

Spectr. Temp. Dome Temp./Hum. $+8.9^{\circ}\text{C}$... 4468 Transparency Conditions... Hazy..... 184

Focus 6.8D

Spectr. Temp. ^{CCD} -100.3°C Dome Temp./Hum. $+8.0^{\circ}\text{C}$... 48.8% H
 385 0 50 1024 4 1 CCD FIT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
190	6"	12.1	M3e	CASS CCD	1200 h/mm G 4503	306 μ	6476A	12	Vys 250B	Faint SW cap,	DRAY HDC1
								13			
								1/2			
								15			
390	5"	11.2	K8					16	Vys 887B	Faint one close guided	
								18		Very closely guided To keep SAT A off.	
504	"	8						19		26 cal	1.7K
								20			
								1			
		11.2	K8					21	Vys 887B		
								22			
								24		Again, left GG 386 filter in probably no problem though	8K

CCD Spectr. Temp. -100.4 °C

Dome Temp./Hum. +13.6 °C

Transparency Conditions ... Clearing gradually 186
Dewar Topup from Ambient

Focus 6.80

Spectr. Temp.

Dome Temp./Hum.

385 0 50 1024 4 1 CCD/FIT

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
no 6.16n 1000 V				CASS CCD	1200 n/ram G=4503	306u	6470A	3/4	focus test	still set for only slight cooler	MAX ADU
								7		Telescope East side of piers	2.1K
210	3"	12.1	M3(e)					8	Vys 250B	nice OB @ the em. some cloud Blue sl. stray	
								9			
330		11	M0(e)					10	Vys 250 A	Bright NE one	
								11			
210	3.4"	12.1	M3(e)					12	Vys 250B		
								13			
								1			
Image Acquisition View									Vys 250 A/B images		
350	4"	11	M0(e)					10	Vys 250A		
								11			
								12	Vys 250B	bx - 23"	
								13		1 ← - 2'	

Date 1996 May 26/27 Observers [Vgs] / 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.
CC40400	Comp							Fair dark	40s
01	HD95735	10 5754	+36 3800	22 4503		3 48W		"	183
02	Comp							"	40s
03	BIAS(4)			23 47					
04	Comp							"	40s
05	Vgs 728	14 5733	⁵²⁰⁰⁰ -06 1942	00 0826		1 41W		"	1582
06	Comp							"	40s
07	BIAS(4)			00 44					
08/12	FLATS x 5			No GG386 Filter for flats		0	30°	TUNG Ap 1/4	2
GG805 ^{15/18}	DARK FOR EEV			4 01 55				Ax	67ms
19/20	"	"						2x	133ms

CCD Spectr. Temp. -99.6°C Dome Temp./Hum. $+11.5^{\circ}\text{C}$ 428H

Transparency Conditions *Fine*

Focus 6.80

ESD Spectr. Temp. -100.2°C Dome Temp./Hum.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CFSS CCD	1200 μm G=4503	306 μm	6470A	5			
1400		748	M2					6			
								7			
								1			
								15		Topup @ 00 EST	
330	5"	11/2	M10					16	Vys p9m	Fld checks out well	
								17			
								1			
								2			9K
<p>Intensified set to approx value of earlier frames Park (It would of course be at default box center, not necessarily Image box center.) This is useless — all conditions must be identical</p>											

189 pg #1

KK piggyback/ST-6 tests beforehand.

Date 1996 May 28/29

Observers

KK / {Vas.Ha} / Smt. + {Vas}(RV) @ 6470A

Emulsion Batches:

CG 385 filter for comps only
 } not stellar
 } not flats

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
40413	BIAS(4)								0
14	COMP							Fehr clear	60
15	80+33 1646 B	08 02 34	+33 06 25	21 01 17		~5 20 W			900
16	COMP							"	60
17	80+33 1646 A	"	"	21 20 38		5 34 W			670
18	COMP							"	60
19	BIAS(4)			~ 21 35					0
20	COMP							"	60
21	HD95735	10 57 54	+36 38	21 42 10		2 53 W			159
22	COMP							"	60
23 → 27	FLATS x5					3 ^h W	+36°	Tung K440	2
28/29	INBOARD/OUTBOARD							Fehr clear	40/44
30	BIAS(4)			22 01					0
31/32	INBOARD/OUTBOARD					0 ^h	+36°	Fehr clear	60/40
33	BIASx4			22 48					

CCD
 Spectr. Temp. $-1.00 \dots$
 Focus $6.80 / 6.75$
 Spectr. Temp. $-1.61 \dots$

Dome Temp./Hum. $14.1^\circ C / 53.7\%$ Transparency Conditions \dots clear \rightarrow some \dots
 FAN ON bright moon on meridian
 Dome Temp./Hum. $13.0^\circ C / 56.8\%$
 @ 2nd focus test
 385 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter 1000V				CASS CCD	1200 λ mm G=4503	30 μ m	6470A	1			
				setup unchanged from May 24/27				7			
304	2.2"	12.1	M3(e)					8	KK/EVysH α 3	Vys 250B farther SW	H α 650 cont. 430 by 150
								9			
339	2.2"	11	M0(e)					10	KK/EVysH α 3	Vys 250A brighter NE	
								11			
								1			
								5			
785	3.4"	7.48	M2					6	Marcy std vel	a bit of cloud near end of exp.	2.6K Custom per 2 cols
								7			
								2			
								3/4	focus test	in focus, perhaps a bit cool T=14.0°C F=6.80	
								1			
no filter 1000V				CASS CCD	1800 λ mm 47.8"	30 μ m	5300A	3/4	focus test	in focus. T=13.0°C / F=6.75 415 0 30 1024 4 1	
					flt done manually			1		Sum of 4 images 410 0 50 1024 4 1	

191 pg #2

Date 1996 May 28/29 Observers E.V. & S.B. / Smt

Emulsion Batches:
no. filters at all.

Plate No.	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 40434	COMP							Fehr clear	60
35	HD95735	10 57 54	+36 38	22 56 35		4 11 W		"	400
36	COMP							"	60
37	COMP							"	"
38	AC+40 512-31	12 07 25	+40 14	23 12 39		3 53 W		"	2500
39	COMP							"	60
40	BIASx4			23 58				"	0
41	COMP							"	60
42	BD+21 2763	*estimated. 15 17 30	+21 20 06	00 07 33		1 27 W		"	1800
43	COMP							"	60
44	COMP							"	"
45	HD119850	13 40 36	+15 27	00 46 13		3 25 W		"	765
46	COMP							"	60
47	BIASx4			01 01				"	0
48/49	INBOARD/ OUTBOARD					0 40 W	+44°	"	50/60

ccd
Spectr. Temp. -100.2°C
Focus 6.75
Spectr. Temp.

Dome Temp./Hum. +13.1°C/53.0% Transparency Conditions ... clear, bright moon ¹⁹² 2^W
→ a few clouds.
Dome Temp./Hum. 11.8°C/51.5% @ focus tests
410 0 50 1024 4 1

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter 1000V				CASS ccd	1800 μ m 47.8° tilt	30 μ m	5300A	5			
2000	3"	7.48	M2		(set manually)			6	Marcy std vel	V45 544 high prop. ⁵ a bit far W now.	1.0K
								7			
								8			
650	3"	11.4	M0					9	{V45} RV	V45 637, lots of sky	2x b/g
								10			
								11			
1120	3"	10.11	M0e					12	{V45} RV	* card info is wrong V45 740	
								13			
								14			
1220	4"	8.48	M1					15	Marcy std vel	V45 308 high prop. ⁵ motion SE	500 above b/g.
								16		Some cloud cover here.	
								1			
								3/4	focus test		

195
Pg #1

Date 1946 May 29/30... Observers [Kk / Evans H. B.] / 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.
(40450/51)	INBOARD/OUTBOARD							Fed Clear Ap	40/44
52	BIAS(4)							66585 FILTER	0
53	COMP							"	40
54	BD+33 1646 A	08 02 34	+33 06 25	21 00 31		5 17 W			620
55	COMP							"	40
56	BD+33 1646 B	"	"	21 13 27		5 40 W			1200
57	COMP							"	40
58	BIAS(4)								0
59	COMP							"	40
60	HD95735	10 57 54	+36 38	21 41 50		2 58 W			230
61	COMP							"	40
62	HD95735	"	"	21 53 51		3 07 W			81
63	COMP							"	40
64 → 68	5x FLAT					0 ^h	+36°	1 umg K ₂ Ap, no filter	2
(A)	BIAS(4)			22 15					0

CD
Spectr. Temp. ... 100.4°C

Dome Temp./Hum. 11.8°C/46.1%

Transparency Conditions ... clear ... bright moon 196

Focus ... 6.78

@ focus test

Spectr. Temp.

Dome Temp./Hum.

385 0 50 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter 1000V				CASS CCD	1200 Shim G=4486	306 μ	6420A $\pm .5A$	3/4	focus test	in focus	
					(from 4503 with short horns)			1			
								5			
380	3"-4"	11	M06					6	KK/3Vys H α	brighter NE Vys 250A, bright sky	cast/m 750 H α 1000
								7			
300	4"	12.1	M3(e)					8	"	fainter SW Vys 250B, sky ok	650 H α
								9			
								1			
								10			
1200	3"	7.48	M2					11	Mancy std vel	perhaps too strong to be useful.	4.5K
								12			
400	3"-4"	"	"					13	"	weaker, closer to Vys 250 exposures.	1.5K
								14			
								2			
								1			

197
pg #2

Date 1996 May 29/30 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.
CC40470/1	IN BOARD/ OUTBOARD							Felt clear no filter	60/65 0
72	BIAS(4)			22 52				"	60
73	COMP							"	60
74	HD120315	13 43 36	+49 48 45	23 04 20		1 33 W		"	36
75	COMP							"	60
76	COMP							"	60
77	HD226868	19 54 36	+34 56	23 20 12		4 08 E		"	910
78	COMP							"	60
79	BIAS(4)			23 39				"	0
80	HD226868	"	"	23 40 15		3 26 E		"	2180
81	COMP							"	60
82	HD226868	"	"	00 22 16		2 48 E		"	1940
83	COMP							"	60
84	BIAS(4)			00 59				"	0
485-504	20 x FLAT					2 35 E	+35°	Tung 14 Ap	6

CCD Spectr. Temp. - 100.4°C

Dome Temp./Hum. 9.7°C / 49.2%

Transparency Conditions .. clear, bright moon 188

Focus 6.76

@ focus test

Spectr. Temp.

Dome Temp./Hum.

405 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
CG 560 FILTER				CASS CCD	1800 Å/mm G=6163	300µm	6604 Å ± 1 Å	3/4 1	focus test	set a tiny bit cool on purpose	
								14			
6500		✓ 1.86	B3I					15	B/n	trailed	5.5K
								16			
								17			
466	5"							18	B/n Cyg X-1	short test exposure	680
								19			
								20			
1120	4"-5"				S/N ~ 160 : 1			18	"	readout in wrong cycle EDIT TIME OBS. DONE.	
								19		hot pixel in middle of the line	
1158								20			1.9K
								21			
								21			
								2			12K →

199
PJ #3

Date 1996 May 29/30 Observers [Blw]/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.
cc40505	COMP							Fel clean	60
06	HD211211	22 10 32	+42 27 28	01 24 06		4 24 E			630
07	COMP							"	60
08	COMP							"	60
09	HD211287	22 11 01	+08 03 08	01 45 00		4 02 E			750
10	COMP							"	60
11	BIAS(4)			02 00					0
12	COMP							"	60
13	HD186205	19 37 54	+08 59	02 08 38		0 35 E			2415
14	COMP							"	60
CG80533→36	HD176844 x4	18 57 03	+40 32 36						.067
37→40	DARK x4								"
41/42	HD176844 x2	"	"						.133
43/44	DARK x2				03 10	0 25 W	84° Alt		"
cc40515	BIAS(4)			03 03					0

Spectr. Temp. Dome Temp./Hum. $8.3^{\circ}\text{C}/52.4\%$ Transparency Conditions .. clear, bright moon ²⁰⁰ ..
 Focus 6.76 close to setting, gusty
 Spectr. Temp. 1.01.6°C Dome Temp./Hum. $7.7^{\circ}\text{C}/55.6\%$ @ seeing test
 Seeing. 405 0 50 1024 4 1

Exp. Mtr.	Seeing	✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
CG 560 FILTER				CASS ccd	1800 Å/mm G=6103	30µm	6604 Å	22			
2975	<6" >	5.68	AZSnm					23	Telluric std.	large air mass ~ 1.5 @ 42° dec	5K
								24			
								25			
1610	<7" >	6.21	AZSnm					26	"	larger air mass ~ 2.4 @ 8° dec.	2.2K
								27			
								1			
								28			
1160	6"	8.43	BZV					29	Bln He star	air mass ~ 1.3 @ start	
								30			
	4"	6.65	MZIII	EDV CCD TV GUIDER		above 30µm		-	seeing test	Dome W, light S winds, haze, 1 ^h from dawn, NO FANS.	
				"				-	"		
	"	"	"	"		"		-	"		
				"				-	"		
				CASS CCD again.				1		one cosm. ray.	

CCD
Spectr. Temp. -100.4°C
Focus $6.7b$
Spectr. Temp.

Dome Temp./Hum. $7.6^{\circ}\text{C}/56.8\%$ Transparency Conditions $a \text{ bit of haze}$ 202

Dome Temp./Hum. 405 0 50 1024 4 1

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
06 560 FILTER				CASS CCD	1800 λ/mm G=6103	30 μm	6604A ⁶	31			
2950	3"-4"	5.77	B8Vn				$\pm 1 \text{ \AA}$	32	Telluric std.	@ zenith.	6.4K
		5A						33			
								5			
468*	3"-4"	8.96	B2.5Jb					6	Bln SB	H α emission! field defcs 2.5K μ (not a surprise, just exclamation) 750 cont.	
								7		* bright sky	
								10			
8560	?	2.72	K3II					11	std vel	very bright sky down very close.	8K
								12			
								1			
								3/4	focus test	end of night.	

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pg #1

Date 1996 May 30/31 Observers ~~JB~~ Bln/Smt

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 40528/29	INBOARD/ OUTBOARD							Feltn Clear.	30/45
30	BIAS (4)			20 39					0
31	COMP							"	30
32	HD149757	16 31 39	-10 21 53	20 50 48		3 23 E			140
33	COMP							"	30
34	HD149757	"	"	20 59 13		3 11 E			300
35	COMP							"	30
36	HD149757	"	"	21 08 11					310
37	COMP							"	30
38	HD149757	"	"	21 17 14		2 55 E			300
39	COMP							"	30
40	HD149757	"	"	21 27 29					479
41	COMP							"	30
42	BIAS (4)			21 42					0
	HD 149757	16	11					30	

CCD Spectr. Temp. $\sim 100.4^\circ\text{C}$ Dome Temp./Hum. $+13.5^\circ\text{C}/39.7\%$ Transparency Conditions *clear, some thick haze over Toronto.* 204
 Focus 6.82 @ focus test
 Spectr. Temp. Dome Temp./Hum. λ 3650 701024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ba 39 FILTER				CASS CCD	600 $\mu\text{mm}^\circ\text{C}$ G=2687	250 μ	4303 \AA $\pm 1 \text{\AA}$	3/4 1 5		set cool intentionally	
10K	4" 2.56	09.5V						6 7	B/n	S Oph, test exposure	
20K	"	"						8 9	B/n	S Oph, saturated col 34 trailed poorly	
23.5K	"	"						10 11	"	S Oph, trailed better	
25K	"	"						12 13	"	S Oph, saturated 1st 100 rows of col 35	
43K	"	"						14 15 1	"	S Oph, more signal in wings but dest in centre of profile. 13K	
								16			

Spectr. Temp. Dome Temp./Hum. *12.2°C/41.7%* Transparency Conditions *clear & dry, moon*
 Focus *6.82* *is close by*

Spectr. Temp. Dome Temp./Hum. *365 0 70 1024 4 1*

Exp. Mtr.	Seeing	V. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCO	600/1mm ^{1/2} G=2687	250 μ	4303A	18			
33K	4"	2.56	09.5					18	Blu		
								18			
28K	"	"	"					19	"		
								20			
35K	"	"	"					21	"	one 1/2 only got one pass, other got 2 trails.	
								22			
35K	"	"	"					23	"	saturated col 35, BAK reset ACER, hung CCD3 with	"
								24		late due to reset.	
29K	4"	"	"					25	"	trailed okay, centre peak still too high relative to wings.	
								26			
39K	"	"	"					27	"	trailed much better although choppy	13K
								28			
35K	"	"	"					29	"	trailed better but stronger towards higher columns.	13K
								30			

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pg #3

Date 1996 May 30/31 Observers Bln/Smt

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC40559	COMP							Fel Clear	30
60	HD149757	16 31 39	-10 21 53	22 57 14					358
61	COMP							"	30
62	HD149757	"	"	23 06 47					297
63	COMP							"	30
64	HD149757	"	"	23 14 45					286
65	COMP							"	30
66	HD149757	"	"	23 23 11					260
67	COMP							"	30
68	HD149757	"	"	23 31 02		0 42 E			271
69	COMP							"	30
70	HD149757	"	"	23 38 23		0 34 E			291
71	COMP							"	30
72	HD149757	"	"	23 46 41		0 26 E			260
73	COMP							"	30
74	HD149757	"	"	23 54 24		0 19 E			266

Spectr. Temp. Dome Temp./Hum. *11.6°C/44.2%* Transparency Conditions *clear, nearly full moon* ²⁰⁸
 Focus *6.82* meridian
 Spectr. Temp. Dome Temp./Hum.
365 0 70 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	600 μ m ²	250 μ m	4303A	5			
39.5K		2.56	0.95					6	Bln	saturated red end of col 34 and bit of col 33.	
								7			
35K		"	"					8	"	5 Oph, best trailing so far.	13K
								9			
35.7K	3"	"	"					10	"	" trailing fine	13K
								11			
40K	2"3"	"	"					12	"	" train passed by, very choppy	
								13			
35.5K		"	"					14	"	" choppy	
								15			
36.5K	3"	"	"					16	"	"	13.5K
								17			
35K		"	"					18	"	" trailed by set motion saturated cols 32-33.	
								19			
35K								20	"	" redout wrong cache	16K

CCD
Spectr. Temp. -100.4°C

Dome Temp./Hum. 11.1°C/45.4%

Transparency Conditions . clear, near full moon ²¹⁰

Focus 6.82

Spectr. Temp.

Dome Temp./Hum.

365 0 70 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
B439 FILTER				CASS CCD	600nm G=2687	250 μ m	4303Å	19			
								1			
								19			
33.6K	2 ⁴ / ₃	2.56	09.5V					20	B/n	trailed ok	15K
								21			
33K	"	"	"					22	"	saturated col/33 get again	
								24			
35.5K	"	"	"					25	"	trailed well	
								26			
36K	"	"	"					27	"	best best one so far	13K
								28			
35.4K	"	"	"					29	"	triple peaked, oops.	
								30			
35.8K	"	"	"					31	"	best one so far	15K
								32			

CCD
Spectr. Temp. -100.4°C
Focus 6.82
Spectr. Temp.

Dome Temp./Hum. 9.7°C / 49.2% Transparency Conditions ... Clear, bright moon.
@ focus test, too. ~2" w.
365 0 70 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	600 lines "G=2697"	25µm	4303A	7			
								5			
35K	3"-4"	2.56	0.95					6	Bln	5 Oph pretty good	
								7			
38K	"	"	"					8	Bln	5 Oph	
								9			
								2			
								3/4	focus test		
								1			
				"	"	"	"	1			12.7K → 11.9K
								3			
830								4	Bln Cyg X-1	SN MAX ~ 120:1	
								5			
836	2"							6	"		1.7K
								7			

Spectr. Temp. Dome Temp./Hum. $9.5^{\circ}\text{C}/49.4\%$ Transparency Conditions *clear, moon almost down.*²¹⁴
 Focus 6.82 @ focus test. N FAN ON
 Spectr. Temp. -100.5°C Dome Temp./Hum.
 400 0 50 1024 4 1

Exp. Mtr.	Seeing	Fig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
B6 39 FILTER				CASS CCD	600 l/mm "C" G=2687	250 μ	4303 Å	1			
993	2"							8	Bln Cyg X-1	S/N MAX ~ 150:1	2.1K
								9			
								2			13.0K → 11.8K
								1			
				CASS CCD	600 l/mm "C" G=2755	250 μ	~4680 Å	1/12	focus test.	in focus F=6.82 still.	
								13			
545*								14	Bln Cyg X-1	* bright sky	
								15			
								1			
								2			9.4K → 9.1K
								1		but all biases with 400 0 50 1024 4 1 format can be used. corrected erroneous redflat in bias headers.	

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pg #1

(Fri / Sat)

Date 1996 May 31 / June 1 Observers Bln / Smt

Emulsion Batches:

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Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle End	Declination	Comparison	
		1900	1900	1900	1900	E.S.T.	E.S.T.	E.S.T.	E.S.T.			Type/Filter	Exp.
CC 40638/39	INBOARD/OUTBOARD											Fair clear	40/70
40	BIAS (4)					20 36						"	0
41	COMP											"	60
42	HD112028	12 48 23	+83 57 24	20 47 21				0 33 W				"	800
43	COMP											"	60
44	COMP											"	"
45	HD154528	17 00 54	+77 48	21 10 50				2 43 E				"	2400
46	COMP											"	60
47	BIAS (4)					21 53						"	0
48	COMP											"	60
49	HD138629	15 28 12	+41 14 19	22 00 46				1 01 E				"	440
50	COMP											"	60
CG80545 → 48	HD128718 x4	14 33 24	+48 39	22 24									0.067
49 → 52	DARK x4												"
53/54	HD128718 x2												0.133
55/56	DARK x2							22 59	0 14 W 22 59		85° Act		"

CLD
Spectr. Temp. -100.5 °C

Dome Temp./Hum. 16.5 °C / 40.9% Transparency Conditions clear, full moon. 216

Focus 6.75

Dome Temp./Hum. 15.3 °C / 43.9% @ seeing test
FANS OFF
420 0 50 1024 4 1

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B6 39 FILTER				LASS CCD	1800 λ um G=4585	30 μ m	4464A $\pm 1A$	3/4 1	focus test	410 0 50 1024 4 1 set cool intentionally 420...	
								5			
13.7K	2.3"	5.2	AO stell					6	Bln A shell	sky still sort of bright southern & sl. brighter of close pair	
								7			
								8			
13.8K	2"	6.66	AO					9	Bln SB2	good seeing.	14K!
								10			
								1		a cosmic ray.	
								#8			
13.8K	2.2"	5.09	A5V					12	Bln A-shell	S/N ~ 315:1	
								13			
	2.2"	6.7	F2	EEV CCD TV GRIDER		above 30 μ m		-	seeing test	Dome W, no wind, some haze FULL MOON, great seeing!	
								-	"		
								-	"		
								-	"		

CCD
 Spectr. Temp. -101.7°C Dome Temp./Hum. $14.9^{\circ}\text{C}/43.9\%$ Transparency Conditions *some haze, full moon* 218
 Focus 6.75
 Spectr. Temp. Dome Temp./Hum.
420 0 50 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 l/mm G = 4585	300 μ	4464A	15			
13.6K	<2"	^V 5.52	A5V					16	Blu Ashell		
								17			
								1			
								17			
14.4K	2"	^B 4.30	B8V					18	Blu dbl line SB	getting close to full moon	9K
								19			
								19			
14.0K	2"	^B 5.66	A8V					20	Blu Ashell		8.5K
								21			
								22			
14.3K	2"	^B 4.46	A1V					23	Blu dbl line SB	double lines not obvious right now but perhaps they are there.	
								24			
								25			
14.1K	<2"	^B 5.19	B3V					26	Blu SB4		
								27			

CCD
Spectr. Temp. -101.7°C
Focus 6.75
Spectr. Temp. -100.4°C

Dome Temp./Hum. $14.6^{\circ}\text{C}/44.6\%$ Transparency Conditions . some haze down low, full moon ²²⁰
Dome Temp./Hum. $12.6^{\circ}\text{C}/49.2\%$ after fluts.
420 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800l/mm G=4585	30u	4464A	1			
								28			
13.9K	2"	^B 6.40	FOV					29	Bln SBZ		13K
								30			
								5			
14.9K	2-3"	^B 5.36	A7IVn					6	Bln Asstell		9.5K
								7			
								1		Overwrote 74 with a bracket 74 was 73 written again.	12K 71K ↓
								2			
								8			
13.1K	3"	^B 6.64	B8					9	Bln SB		7.5K
								10			
								11			
								11	Bln He star		
2520	3"	^B 8.48	B2V					12			
								13			

CCD
Spectr. Temp. -100.5°C
Focus 6.75
Spectr. Temp.

Dome Temp./Hum. 14.8°C / 43.9%
@ focus test
Dome Temp./Hum.

Transparency Conditions . partly cloudy
FANS OFF
420 0 50 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 lines G = 4713	30µm	4688 Å	3/4	focus test	set a bit cool.	
								1			
								5			
1004		~9	~0?					6	Bln Cyg X-1		
								7			
1000		~9	~B?					8	"	S/N ~ 70:1	
								9			
								1			
1080		~9						10	"	grazing cosmic ray right through the abs. line in centre of spectrum!!!	
								11			
								12			
								1			
				CASS CCD	1800 lines G = 2685	250µm	4300 Å ± 1 Å	13/14	focus test	375 0 50 1024 4 1 done @ 6.79, set to 6.82 before observing.	
								1			
								15			

Date 1996 June 3/4 Observers [Blm]/J.n./Sost.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
440749/50	INBOARD/ OUTBOARD							Feds clear	30/45
51	FLAT							Tung clear	3
52	BIAS(4)							Feds clear	
53	COMP							Feds clear	30
54	HD149757	16 31 39	-10 21 53	21 33 37		2 19 E			320
55	COMP							"	30
56	HD149757	"	"	21 45 40		2 03 E			800
57	COMP							"	30
58	HD149757	"	"	22 02 10		1 42 E			1052
59	COMP							"	30
60	BIAS BIAS(4)			22 23					0
61 - 60 ⁶⁹	9 x FLAT						-10°	Tung clear	4
70	BIAS(4)			22 53					0

CCD
Spectr. Temp. -100.7°C

Dome Temp./Hum. $82+15.8^{\circ}\text{C}$ 82% H

Transparency Conditions *Hazy*..... 228

Focus 6.82

Dome Temp./Hum. $+15.4^{\circ}\text{C}$ 84% H

Then fog & cloud
MAX
ADU

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B6 39 FILTER				CHSS CCD	600 μ /mm G=2685	250 μ	4300A	3/4	focus test	375 0 56 1024 4 1	
								2	for focus test	Aperture extract	
								1		(330 0 70 1024 4 1)	
								3			
18.2K	5"	2.56	09.5V					4	Bln	test exposure, weak, 3 peaks	
								5		a 800/1 S/N estimated	
35.3K	"	"	"					6	"	some cloud now, variable one half of slit is weaker. $\approx 1025K$	
								7			
6.4 K	"	"	"					8	"	too much cloud, peak in center, though	2.4K
								9.		fog rolling in, dome closed.	***
								1			
								10			11K
								1			

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pg#1

Wed / Thurs

Emulsion Batches:

Date 1996 June 5/6... Observers B/n./Tu..... SC abit for EEV
Problem

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC4071/72	Inboard/outboard					0	40°	Felt clear	30/15
73	BIAS FLAT for focus								
74	BIAS(4)			21 55 58					
75	comp							Felt clear	30
CC40776	HD 149757	16 31 39	-10 21 53	22 15 28		1 30 E			
77	comp							✓	
78	HD 149757	"	"	22 27 50		1 15 E			529
79	comp							✓	30
80	HD 149757	"	"	22 41 35					596
81	comp							✓	30
82	BIAS(4)			22 58					
83	HD 149757	"	"	23 01 08					667
84	comp							Felt clear	30
85	HD 149757	"	"	23 17 16					431
86	HD 149757	"	"	23 29 57					579

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. 15.7°C Transparency Conditions *Hazy* 230

Focus $G: 82$

Spectr. Temp. Dome Temp./Hum. $C: \text{Grating removed, then set to same G Value 1st}$

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				CASS CCD	600h/mm G=2685	250 μ	4300A	3/4		(Focus CCD FMT) 375 0 50 1024 41	MAX R04
								2		"	
								1		(observing CCD FMT) 330 0 70 1024 41	
								3			
30000	2"	256	09.5V					4	Blk ppm	TRAILED with higher peak in center.	12.4
								5			
35000								6			9.5
								7			
42,900								8			14.8K
								9			
								1		CCD = -101.6°C	
75,300								10			
								11			
4608								12		middle peak saturated	
44,670								13		2 IK cnts for peak	10K

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p4#2

Emulsion Batches:

Date 1996 June 5/6 Observers Bln./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.
cc40787	Inboard COMP							ReAr Clear	30
88	FLAT HD149757			23 400		0 0 E			588
89	BIAS (4) HD149757			23 5511		0 12 W			628
90	Comp							"	30
91	HD149757	163/39	-10 21 53	00 09 09					544
92	"	"	"	00 19 28					506
93	Comp							"	30
94	BIAS (4)			00 31 29					
95	HD149757			00 33 35 ✓					539
96	"			00 44 20 01 01 W ✓		01 01 W			506
97	Comp							"	30
98/	FLATS x 9								455
99/	BIAS (4)								-
08	BIAS (4)	Next ccd FMT							
09/10	Inboard/out BOARD					01 55 E	+35	ReAr Clear	80/45

Spectr. Temp. Dome Temp./Hum. $+11.4^{\circ}\text{C}$ $75\% \text{H}$ Transparency Conditions *some cloud* 232

Focus *6.82*

Spectr. Temp. Dome Temp./Hum. *cd*

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
8639 Filter				CASSCO	600 $\frac{1}{4}$ / min G 2685	250u	4300A	14			
44000								15	Blu	(14K peak cuts)	
50A50	3"	2.56	09.15E					16		330 0 70 1024 4 1	
								17			
52,500								18		Back yet 1K mid peak	14.8K
56,000								19		Perfection	14.8K
								20			
								1			
50,500								21			
50335								22		note unit OK	
								22			
								23			
using 100 t scale								1		still \rightarrow 370 0 70 1024 4 1	
								1		375 0 50 1024 4 1	
								3/4	focus		

T = 13.4°C str/1 6.82 OK

Date . 1.9.96. June 5/6. Observers .. Blh. / 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.
CC40811	Comp							Fair Clear	30s
12	HDE 226868	19 54 36	+34 56 00	01 25 59					1809
13	Comp			01 59 35				"	30
14	HDE 226868	19 54 36	+34 56 00	02 02 39		0 42 E			1838
15	Comp							"	30s
25	BIAS(4)	done after FLATS		02 42					
16/24	FLATS x 9							Fair Clear	5s
26/27	Inboard lowT BOARD							Fair Clear	30/40
26	Comp							Fair Clear	30s
29	HDE 226868	19 54 36	+34 56	02 56 22		0 11 W			1805
30	Comp							"	30
31	HDE 226868			03 29 50		0 29 W		849	1805
32	Comp							"	30
33	BIAS(4)								
34/35	FLATS x 2	CC40834/35						Fair Clear	
35	BIAS(4)			3 59					

Spectr. Temp. Dome Temp./Hum. $\approx 13^{\circ}\text{C}$ 75% H Transparency Conditions ... some cloud! 234

Focus 6.82

Spectr. Temp. Dome Temp./Hum. 12.0°C 87.2% H
375 0 50 1024 41 CCD UNIT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter 100				CA55 CCD	600 n/mm G=2685	250u	A300A ^o	5			1.5K
825			$\sim 9 \sim B?$					6 ✓		Add Obj to handle obj = Fe Ar	
								7			
777	2.3"							8		Dewar -100.4 @ 02:30	1.4K
								9			
								1		Dewar CCDT = -100.8°C	
								2			1.5K
BG39 Filter 100					600 n/mm G=2755	250u	A680A ^o $\pm 10?$	3/4	focus	still 6.82 and OK	
								10			
780	2.3"		$\sim 9 \sim B$					11	Bln pgrm	$\approx 140/1$ S/N	3K
								12			
A20								13	"	Dewar caught me by surprise. some solar maybe	
								14			
								1			
								2			
								1			
3 secs with 100+ scale											

Tests on guide camera

Emulsion Batches:

Date 1996 June 11 Observers KK, [KK/Esus3]/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.
cg8057-60	artificial star								
61-65	artificial star after attempts to sharpen focus								
66-69	darkes								
70-74	flats off sheet of paper at focus; illuminated by secondary cover								
cc40837/8	INBOARD/OUTBOARD							Fed Clear	30/40
37	BIAS(4)			20	59				0
	COMP								
	1996 June 13/14			[Bl.]	Tn/Smt				
cc40839/40	INBOARD/OUTBOARD							"	30/50

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pg #1

Fri / SAT

Date .. 1996 June 14/15.. Observers [K.K. / Vqs] / T. co.....

Emulsion Batches:

.....
..... G.G. 385 For Comp
..... U. Flats

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC40844	✓ BIASCA			20 24					
42/43	Inboard / outboard							Felt clean	30/40
44/49	✓ FLHTS x 6 ✓							Tung Ap/4	25
50	✓ Comp							Felt clean	40
51	HD 45735	10 5754	+36 3800	20 0148		3 20W			187
52	✓ Comp							"	40
53	✓ Comp							"	40
54	✓ BD+33 1646B	080234	+330625	21 1221		6 33W			666
55	✓ Comp							"	40
56	✓ BD+33 1646A	"	"	21 2559		W			707
57	✓ Comp							"	40
CG 80576	BD+33 1646A/B					6 53W		4x	67ms
80	83 DARKS					6 56W		4x	67ms
CC40858	✓ Comp							Felt clean	40
59	✓ HD 45735	10 5754	+36 3800	21 5920		4 18W			203
60	✓ Comp							Felt	40

Spec^{ed}tr. Temp. -101.8°C Dome Temp./Hum. 72.1°C $52.2\% \text{RH}$ Transparency Conditions ... Fine 238

Focus ... 6.72

Spec^{ed}tr. Temp. $-$ $^{\circ}\text{C}$ Dome Temp./Hum. $+19.8^{\circ}\text{C}$ $53.0\% \text{RH}$
 C 2 @ Row 512 390 0 50 1024 41 CCD/FRT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CHSS CCD	1200h/min G=4474	306 μ	6475+3A	1/2			
								3/4	focus		
								2		Telescope East Side	SK
								6			
1280	2"	7.48	M2					7	marcy std	R.A. = $-00^{\circ} 00' 36''$ Dec = $-00^{\circ} 07' 24''$	7.6K
								8		slightly dbl	
								9		Blue component stronger	
350	3"	12.1	M3(e)					10	Vys Hz	R.A. $-00^{\circ} 00' 22''$ A. Dec $-00^{\circ} 01' 30''$	
								11		SKy just Dark enough	
	4"	11	M0(e)					12	Vys Hz	Brighter one	
								13			
								14			
1050	2"	7.48	M2					15	marcy std		
								16			

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

Slightly hazy 240

Focus 6.72

Spectr. Temp. ^{CCD} - 100.5 °C

Dome Temp./Hum.

CD

390 0 50 1024 4 1 CCD (Faint)

Exp. Mtr.	Seeing	F _v Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1200nm/100nm [Z=4A74]	306μ	6473A	1			
								17			
838	2.2"	11.2 11.2						18	Vys Hd	Faint one is west one. In June 23 C faint close companion	
								19			
1000		7.9	K8					20		Also HD 53557 Vys 887 ADS 10288B	
								21			
1080		7.88	K0					22		Vys 886	
								23			
830	3.4"	11.2						24		faint component	
								25		faint companion.	
								1			
								26			
580	4.6"	10.11	MOC					27	Vys Hd	Vys 740	
								28			
								28			

241

Pg #3

FRI/SAT

Emulsion Batches:

Date 1996 June 14/15... Observers [Vys. Hsu] / T. [unintelligible]

GG 385 F. 1/4p

Plate No.	Object	R.A. 1960	Declination 1960	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC40876	Vys 754	15 5654	+34 3324	00 31 59		2 06 W			693
77	Comp							Fear Clear	40
78	BIAS(A)								
Next night June 15/16 after TOURS ^{Tn} Very Hazy - Cloudy									
CC40879/80	Inboard/outboard -				+Mike (Gladders @ CITA, UTOPIA, CT)			Fear Clear	30/40
81	BIAS(4)								
82	Comp							Fear Clear	60
83	BD+47 2415 B	16 5506	+47 30 55	23 43 55		0 28 W			1181
84	Comp							"	60
85	BD+47 2415 A	16 5506	+47 30 55	00 07 13		0 38 W			367
86	Comp							"	60
87	HD 1535 25	16 5500	+47 30 00	00 17 46		0 55 W			731
88	Comp							"	60
89/92	FLATS x 4							JUNG Ap 1/4	6sec
93/94	BIAS(4) 2 done			00 40				GG 386 Filter out for FLATS	

Spectr. Temp. ^{COO} -100.5°C

Dome Temp./Hum. 718.3°C 77% H

Transparency Conditions ... Hazy - part cloudy ²⁴⁴

Focus ... G:7.4

Spectr. Temp.

Dome Temp./Hum. 717.4°C 71.6% H

418 0 50 1024 4 1 CCDPMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 F142				CHSS CCD	1500/14/mm G=4475	306 μ	4303A	3/4	focus		
11800	2"	B= 5.4	K516					6			
								7	MK std	> 100/1 S/N	
								8			
								1			
								11			124
								1			

245
Pg #1 (Th / Fr)

Emulsion Batches:

Date 1996 June 20/21 Observers Kok / Smt

Plate No.	Object	R.A.		Declination		Starting Time		Ending Time		Hour Angle		Comparison	
		1900	1900	1900	1900	E.S.T.	E.S.T.	E.S.T.	E.S.T.	End	Declination	Type/Filter	Exp.
CC40807/08	INBOARD/ OUTBOARD											FcAr clear	90/20
09	COMP											FcAr clear	60
10	HD197989	20 42 10	+33 35 44	23 13 16						-3 47 E			235
11	COMP											"	60
12	BIAS(4)												0
13/17	FLATS X 5											TUNG clear	255
18	BIAS(4)												0
19	COMP											FcAr clear	60
20	HD204848	21 26 12	-10 11	60 11 19						> 3 ^h E			1342
21	COMP											"	60
22	BIAS(4)			0 37									0
23	BIAS(4)			1 47									0
24	Comp											"	60
25	HD207687	21 45 42	-10 31	01 52 27						1 40 E			2056
26	COMP											"	60
CC40927	HD207687	"	"	02 31 01						1 08 E			1800

Spectr. Temp. Dome Temp./Hum. *19.1°C / 85.4%* Transparency Conditions ... *partly cloudy... clouds*
 Focus *6.74* @ focus test *EANS ON* *are very fast & low from*
 Spectr. Temp. Dome Temp./Hum. *415 0 50 1024 4 1*

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 λ /mm G=4474	300 μ m	4303A ^o I1A	3/4 5	focus test	done with heavy condensation on CCD window.	
2312	?	2.6	KOIII					6 7 1 2 1 8 9 10 1 1 11	Kok std	some done here, cut short due to clouds.	
1400		8	KOIII					9 10 1 1 11	Kok prgm	clear again, very heavy here & lots of refr'ns. cloudy again.	
3160		7.88	KOIII					12 13	Kok prgm		900 μ m above v/g
2835	3"	u	u					14	Kok prgm		800 μ m v/g

Spectr. Temp. -100°C Dome Temp./Hum. $17.2/85.2\%$ Transparency Conditions *hazy* 248
 Focus 6.74 N FAN ON
 Spectr. Temp. -101.6°C Dome Temp./Hum. 415 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 37 FILTER				CASS CCD	1800 l/mm G = 4474	30 μ m	4303 Å	15			
								1			
								16			
3170	3"-4"	8	KOIII					17	Kok	2nd exposure tonight	800 above 619
								18			
								1			
								3/4	focus test	down.	

249

SAT/SUN Two Large TOURS (M13 quite nice)

Emulsion Batches:

Date 1996 June 22/23. Observers [KK] vs. T.n.t. (Dave Charbonneau)

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.
CC409 ^{26/27}	Inboard/out Board							Fear CLEAR	30/40
38	BIAS (4)								
39	Comp. (HD 153557 entered coordinates)							Fear CLEAR	60s
40	BD+47 245 B	16 55 12	+47 30 00	23 31 54		0 44 W			1264
41	Comp							"	60s
42	HD 153557A	16 55 12 " "	+47 30 00 " "	00 00 18		0 56 W			307
43	Comp							"	60s
44	BIAS (4)								
45/46	FLATS x 4					0 0	G.G 385 Removed @ 40°	Tung Ap/4	6s
49	BIAS (4)			01 02					

CCD T -100.3°C
Spectr. Temp.

Dome Temp./Hum. 1.4°C 60.8H

Transparency Conditions ... Fine - snow cloud ²⁵⁰

Focus 6.7.7

Dome Temp./Hum. +1.4°C 60.8H
C.D.

Getting windy again

CCD T
Spectr. Temp. 101.5

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CHSS CCD	1700 lines/mm G-4474	306μ	6470B	3/4	focus	390 0 50 1024 2 / CCD FWH	
								1		415 0 50 1024 11 CCD FWH	
								3		ADS 10288C Vys 887	
1127	3-6"	112						4	Vys H ₂	Variable poor seeing Faint NE component	
								5		Lower column #	
940	5-8"	7.9	K8					6	Vys H ₂	ADS 10288B	
								7			
								1			
								2			

257

K#1 Tues / wed

Emulsion Batches:

Date 1996 June 25/26 Observers Kok / Smt / Tn / Kok rest of night

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC40950/51	INBOARD/OUTBOARD							Felt clear	40/70
52	BIAS(4)			21 43				"	0
53	COMP							"	60
54	CERES	16 08 00	19 12 30	21 23 53		0 27 E			1000
55	COMP							"	60
56	Comp							"	60
57	VESTA	14 47 04	-08 37 54	21 55 01		1 28 W			1160
58	COMP			22 18				"	60
60/64	FLAITS x5							TUNG clear	2558
65	BIAS(4)			22 25					
66/67	IN board / OUT BOARD		Нартинан			2 W -8°			30/45
68	BIAS(4)			22 48					
69	Comp							Felt clear	308
70	Vesta	14 47 04	-08 37 54	22 51 48		2 32 W			1560
71	Comp							Felt clear	308

Spectr. Temp. -101.5°C Dome Temp./Hum. $17.8^{\circ}\text{C}/52.4\%$ Transparency Conditions *partly cloudy, bright moon*²⁵²
on meridianFocus 6.77

Spectr. Temp.

Dome Temp./Hum.

415 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B6 39 FILTER				CASS CCD	1800 μm G=4474	30 μm	4304A	3/4	focus test		
								1		overwrote one done with CCD Temp @ -80°C	
								5			
1080	4.5 ¹²	Megastar 7.6	reflected G2V					6	Sp. std.	Megastar coords $16^{\text{h}} 02^{\text{m}} 55^{\text{s}}$ $-14^{\circ} 11' 53''$	2x b/g
								7			
								8			
4200	5 ¹⁴	Megastar 6.4	reflected G2V					9	Sp std	close to Moon but not a problem.	max 6.2K
								10			
								2			13.6K
								1			
					600 μm G=2685	250 μm	4304A I1A	3/4	focus Test	no Y change? this time? 415 0 50 1024 4 1	
								1			
								5			
7600	5 ¹¹	6.4	G2V					6	SP Std		7.6K
								7			
								8			

19#2
253

Tues / Wed

Emulsion Batches:

Date 1996 June 25/26. Observers .. Koko / 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.
CC40972	Comp							REAR Clear	30
73	HD197989	20 42 10	33 35 44	23 28 16	23	-3		"	60
74	Comp							"	60
75	HD197989	"	"	23 38 19				"	53
76	Comp	"						"	60
77	HD197989 comp							"	60
78	HD204848	21 26 12	40 11	00 47 56		3 13 E		"	1792
79	Comp							"	60s
80	BIAS(4)			00 21					
81	Comp							"	60
82	HD207687	21 45 42	40 31 00	00 25 28		2 53 E			1861
83	Comp							"	60s
84	HD207687	"	"	00 59 07		2 20 E			1843
85	Comp							"	60s
86	BIAS(4)			01 32					

Spectr. Temp. 1.01.5.C... Dome Temp./Hum. 16.0 / 57.6 Transparency Conditions ... clear, some cloud 254

Focus 6.72

Spectr. Temp. -100.50

Dome Temp./Hum. 15.2°C / 58.4%
415 0 50 1024 4 / CCD FWHM MAX

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter		B MAG			600/m G=2685	250µ		8			
7031	3"	348	KOIII					9	Std	Spectral std.	12.4K
								10			
7200		348	KOIII					11			14K
8800								12			
8800								13			
1260	4"	80 80	KOIII					14	Kok pgm	2100/1 S/N center	
								15			
								1			
								16			13K
1266	5"	7.8	KOIII					17	Kok pgm	> 100/1 S/N @ center	
								18			
1380	5"	7.8	KOIII					19	Kok pgm	130/1 S/N	
								20			
								1			

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *thin clouds* 258Focus *6.7.7*Spectr. Temp. *89.5°C* ^{warming?} .. Dome Temp./Hum. *71.45°C 59.26H*
 27 415 0 50 1024 4 1 CCBFWT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CA55000	600C 1/4mm 2685	2500	4304A	21			
1872	3"	B 8.0	KOIII					22	Kok pgm	170/1 S/N @ center	
								23			
1916	3.4"	8.0	KOIII					24	Kok pgm		
								25			
								1			
								26			
1630	3.5"	7.8	KOIII					27	Kok pgm		
								28			
								29			
2612	✓ 3.76"	8.96	BSIII					30	Kok pgm		
								31			
								2			13A
								1			

CCD Spectr. Temp. - 101.4 °C Dome Temp./Hum. +19.2°C 545% H Transparency Conditions Hazy / part cloudy 258

Focus 6.7A

Spectr. Temp.

Dome Temp./Hum. +17.9°C 580% H

CCDFMT
415 0 50 1024 41

MAX
AD4

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 37 filter T=1190	F=6.7A			CAS CCD	1800/1mm G=44.75	306u	A300A ⁶ I 1.58	3/4	focus test		
								1			
								5			1.7K
3,960	2"	6.6	GB V					6	Std Vel		
								7			
	2.4"	"	"	Image acquisition view			306u Star Image in perfect focus			(Slit / Field view focus frames)	
						Above 306u Slit					
										All with SAME Fat setting and Box	
										(Seeing Tests here are weaker than usual.	
										No wind, just NE FAN ON.	
						Above 306				Intens. hor & Box kept the same	210 AD4
						150u					
						Above Air Slit					Very weak 95 AD4
2430						150u Air Slit		8			
								9	Std Vel		
								10			

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. $+17.8^{\circ}\text{C}$ 59% H Transparency Conditions *Increasing Cloud* 260

Focus 6.74 Spectr. Temp. Dome Temp./Hum. $+16.5^{\circ}\text{C}$ 60.1% H
 415 0 50 1024 4 1 CCD UNIT MAX ADC

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B639 Filter				CASS CCD	1800 nm/mm G=4475	150 μ HiR	4300A	11			1A K
								1		$T = -100.5^{\circ}\text{C}$	
						306 μ		12			
2500	3.4"	6.4	G2 I					13	Sp Std	Moon very close can see sky (moon) Background on frame.	
								14			
								14		AFTER Topup	
15,900	1.2"	3.76	G9 III					15	Sp Std		7K
								16			
								17			
026 K	1.2"	3.48	KO III					18	Sp Std		
								19			
								1			
								20			
2880	3"	8	KO III					21	pym star	S/N = 90/1	
								22			

20 pages

Wed/Thurs

Emulsion Batches:

Date 1996..26/27..... Observers ..Kah. L. To.....

Plate No.	Object	R. A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc41031	Comp							Fehr clear	60s
32	HD207687	21 45 42	-10 31	00 39 51		2 29 E			228
33	Comp							"	60
34	HD207687	"	"	01 20 09		1 49 E		"	2169
35	Comp							"	60
36	BIAS(4)			01 59					
37	HD207687	"	"	02 00 07		1 35 E			636
38	Comp							"	60
39/43	FLATS x 5						1 18 E	Tung clear	25

Spectr. Temp. Dome Temp./Hum. Transparency Conditions ... *some cloud but ok* 262

Focus ... *6.74* ...

Spectr. Temp. - *100.5* °C Dome Temp./Hum. *+15.7°C 63.0% H*

A15 0 50 1024 41 CCDPMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
<i>BG39 Filter</i>				<i>CASS CCD</i>	<i>1800n/mm G=4475</i>	<i>306a</i>	<i>4300Å</i>	<i>23</i>			
<i>2940</i>	<i>3"</i>	<i>7.8</i>	<i>KOIII</i>					<i>24</i>	<i>Kok pgn</i>		
								<i>25</i>			
<i>3230</i>	<i>3"</i>	<i>7.8</i>	<i>KOIII</i>					<i>26</i>	<i>"</i>	<i>7100/1 5/N</i>	
								<i>27</i>			
								<i>1</i>			
<i>780</i>	<i>3"</i>	<i>7.8</i>	<i>KOIII</i>					<i>28</i>		<i>cloud</i>	
								<i>29</i>			
								<i>30</i>			

263

Pg#1 Thurs / Fri

Date 1996 June 27/28. Observers K.K. / J.A.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC410 ^{44/45}	Inboard / out Board	HARTMANN						Fair Clear	40/70
46	BIAS (4)								
47	Comp							Fair Clear	60
48	Vesta	^{CURRENT} 14 47 10	-08 50	21 11 04		01 00 W			1657
49	Comp							"	60
50	Comp							"	60
51	HD 181276	19 14 48	+53 11 02	21 50 33		03 16 E			123
52	Comp							"	60
53	BIAS (4)			22 02					
54	Comp							"	60
55	HD 197989	20 42 10	+33 35 44	22 07 34		04 29 E			76
56	Comp							"	60
CG806 ^{10/613}	HD 144579	16 01 30	+39 24					4x	67ms
614/617	DARK							4x	67ms
18/19	DARK							2x	133ms
60/71	HD 144579					0 28 W		2x	133ms

Spectr. Temp. Dome Temp./Hum. 120.4°C 64%²⁶⁶ Transparency Conditions *increasing cloud*

Focus 6.74

Spectr. Temp. Dome Temp./Hum. 490 0.50 1024 4 1 CCOFIT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCP	600 cl/mm G-2645	250 μ	4136A	17			
2048	1.2"	6.66	BSV					18	Std vel		
								19		A bit late due to sp control failure	
								20			
800	5"	8	KOH					21	Koh pgm	2 overwritten Nothing really?? not working	
								22		Keeping	
1430	5"	8	KOH					23	Koh pgm	some cloud 275/1 S/N + center	very weak
								24			
								25			
400	5"	7.8	KOH					26	Koh pgm	thick haze at end	
								27			
								28			
1180	4"	7.8	KOH					28	Koh pgm		
								29			
								30			

cep
Spectr. Temp. -100.4°C

Dome Temp./Hum. $12.4, 83$

Transparency Conditions... inc. aussy cloud again... 268

Focus..... 6.74.....

Spectr. Temp.

Dome Temp./Hum. $+17.1^{\circ}\text{C}$ 84% H

490 0 50 1024 41 CCDPMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BC 39 540	3"	8	KO14	CASS CEP	600nm 6-2645	250 μ	4136A	31		75/1 S/M e center	
								32			
								1/2		Dewar still -100°C approx but seen after warmup started.	

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. +26°C ... 76% H Transparency Conditions ... Hazy & PART. cloudy ... 272
 Focus ... (2706 ... may not be Read Right in Angle) Increasing cloud
 Spectr. Temp. Dome Temp./Hum. +25.5°C ... 74.5% H
 Telescope Focus 2030
 MAX AD9

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
No Filter				Echelle 19:00	600 X .3080	60u = .237 400u = .225	6300A	1/2	focus test	CCD FMT 0 0 128 1024 8 1	
						60u 600u = .205		3		CCD FMT 0 0 256 1024 4 1	9.8K
200	3"	3.6	Fop					4	kt prog		2K
								3			9.8K
								1/2			
								3			
770		4.5 2	F	(near Image focus)				5	"	U RA +00 15 17 Δ Dec -00 00 21 AB: + strong SATURATED AB+	15K
								3			
230	3"							6	"		10K
								3			8.2K
40	3"							5	"	VERY cloudy	1.5K
								3			7.8K
								3			8.1K
170	2.3"			K5D? +8?				4	B Egg A	TRIP brighten of pair	3.7K
								3			

273 P942 Wed 1 Thurs

Emulsion Batches:

Date 1996. Aug. 7/8. Observers [KK] J.T.G.

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
Ce12453	HD183912	19 26 41	+27 44 58	22 02 39		0 38E		T64	349
54	Comp								2s
55	HD183912			22 10 41		0 24 E			724
56	Comp								2
57	BIAS(A)			22 24					
58	Comp								2
59	HD187691	19 46 14	+10 09 55	22 30 27		0 20E			7027
60	Comp								2
61	Comp								2
62	HD186791	19 41 30	+10 22 10	22 51 57		0 04E			424
63	Comp								2
64	Comp								2
65	HD 204 867	21 26 18	-06 00 40	23 03 33		1 34 E			502
66	Comp								2
67/71	FLATS x 5					0 0 H + 7°		Tung	5
72	BIAS(A)			00 40					

CCP Spectr. Temp. -100.9°C ... Dome Temp./Hum. Transparency Conditions ... *cloudy, mostly* ... 274

Focus ... 2706

Spectr. Temp. -100.8°C ...

Dome Temp./Hum. $+25^{\circ}\text{C}$.. 74.8%

But skillfully avoiding clouds.
 [Buttonville @ 22 EST]
 [W SW 11 knts/hr] [101.78 ↑ Bar Press]

Exp. Mtr. <i>no filter</i>	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
72				Echelle 19.00	600 .308D	60u 600u	6300P	4	KK pg.	cloud ended exp	
								3		Note I see that All Acor "Harder" times ARE ~ 6.5 mins ahead of 00074 EST times. Ahs See Aug 5/6 note	
110	2.3							4			
								3			
								1			
								3			
27	5.3	5.11	F8V					5	std vel		700
								3			
								3			
160	3"	2.72	K3II					6	std vel	<u>Real cloud now</u>	38K
								3			
								3			
72	3.5"	2.91	G0I6					4	std vel		15K
								3			
								2			13.9K
								1			

275

pg #1

Thurs / Fri

Date . 1.9.96 . Aug. 8/9 Observers . [K.K.] / 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.
CE124 ^{73/74}	Inboard / OUTBOARD					≈ 3 W	≈ +20	ThAr	5/5
75	BIAS(A)			20 00					
76	Comp								3
77	HD8890	1 27 34	+88 46 26	20 20 25		9 20 E			269
78	Comp								3
79	HD8890	"	"	20 26 51					254
80	Comp								3
81	HD8890	"	"	20 32 40		9 07 E			305
82	Comp								3
83	Comp								3
84	HD137909	15 23 42	+79 27 01	20 47 35		2 27 W			841
85	Comp								3
86	HD137909	"	"	21 04 20		2 48 W			1018
87	Comp								3
88	BIAS(A)			21 23					

CCD Spectr. Temp. -100.8°C Dome Temp./Hum. $\pm 23^{\circ}\text{C}$... 70.2% H
 Transparency Conditions ... Clearing. nicely. no haze. 276
 Focus 2680
 CCD Spectr. Temp. -100.9°C Dome Temp./Hum. $\pm 21.2^{\circ}\text{C}$ 68.7% H MAX
ADY

Exp. Mtr.	Seeing	Pls. Mag.	Sp.	Inst.	Grating/ x Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				Eckelle	600	40u = 285				CCD FNT for focus	
e. set F to 2680 in Handlog				19.00°	.3080	400u H	6300A	1/2	focus	0 0 128 1024 8 1	
						40u		1		0 0 256 1024 4 1	
						600u = .205		3		↓	12K
270	3.4"	2	F					4	KK pgn	Δ 2+00 14 00 Δ 5-00 01 39	8K
								3			12K
310								5			8K
								3			
320								4			
(Exposure meter checked and was in balance)								3			
								3			
375	3.6"	3.66	Fop					6			3.3K
								3			
400	4"	"	"					6			4K
								3			
								1			

277
p9#2

Thurs / Fri

Emulsion Batches:

Date: 1996. Aug. 31. 9. Observers [KKG] / T. G.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CE12489	Comp							ThAr	3s
90	HD 183912	19 26 41	+27 44 58	21 29 42		0 54 E			764
91	Comp								3s
92	HD 183912			21 44 00		0 36 E			1025
93	Comp								3
94	Comp								3
95	HD 187691	19 46 14	+10 09 55	22 06 31		0 22 E			1723
96	Comp								3
97	BIAS (4)			22 36					
98	Comp								3
99	HD 186791	19 41 30	+10 22 10	22 46 35		0 05 E			391
CE12500	Comp								3
01	HD 186791			22 46 36		0 03 W			373
02	Comp								3
03/04	FLATS X 5					2 40 W +14°		Tung	5s

^{CCD} Spectr. Temp. -10.10°C Dome Temp./Hum. Transparency Conditions *Fine* 278
 Focus 2680 \rightarrow Prob. 2430 (Kaud wrong)? To Aug 12
^{CCD} Spectr. Temp. -10.18°C Dome Temp./Hum. $+20.0^{\circ}\text{C}$ 76% H ~ MAX

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Edelle 19.00	600lm/mm 3080	ADU W 600u H	6300Å				
275	4"		K50? +B					6c			6K
380								6			
								3			155K
								3			14K
50	4.5"	5/11	F8 II					4	std vel		
								3			
								1			
								3			
170	5.4?	2.72	K3 III					5	std vel for HD183912 primarily		3.3K
								3			
260	4"							5	"		
	Better Image Focus							3			
								2			12K

279

pg#1

Mon/Tues

Emulsion Batches:

Date 1996 Aug 12/13

Observers [H.A.] / T.N.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
ce125 ^{08/9}	In BOARD / out BOARD							ThAr	6/4
10	BIAS (4)			20 41					
11	Comp							ThAr	2
12	HD137909	15 2342	+29 2701	20 5816		3 02 W			1282
13	Comp								2
14	Comp								2
15	HD8890	01 2234	+88 46 26	21 2730		7 56 E			424
16	Comp								2
17	HD8890	"	"	21 3628		7 48 E			
18	Comp								2
19	HD 8890			21 4440		7 43 E			192
20	Comp								2
21	BIAS (4)			21 49					
22	Comp								2
23	HD183912	19 2641	+27 44 58	21 5715		0 15 E			551
24	Comp							ThAr	2

Spectr. Temp. -101.0°C Dome Temp./Hum. $+20^{\circ}\text{C}$ $80\% \text{H}$ Transparency Conditions \dots Hazy / part cloudy 280Focus \dots 4360

Noted that edelle focus was of .2430 at start

Spectr. Temp. \dots $^{\circ}\text{C}$ Dome Temp./Hum. $+19.5^{\circ}\text{C}$ $78.3\% \text{H}$

2 MAX

Exp. Mtr.	Seeing	P. Mag.	Sp.	Inst. Edelle	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
n = filter				19.00	0600 .3080	60u = W 77 400u H = .225 60u W 600u H = .205		1/2 1/2 3	focus test	Focus CCD FMT 0 0 128 1024 8 1 2047 Tel focus for edelle Acorn Time corrected	
325	2"-3"	366	Fop					4 3 3	KK pgm		2.5K
220	2 1/2"	2	F					5 3		$\Delta \alpha +00 17 44$ $LS -00 01 15$	4.2K 8.5K
242								5 3			5.1K 9.8K
266								5 3 1 3			
390	2"			K5 II? +B				6 3		Beta Cyg A	4.3K 10.6K

281

p902 Mon/Tues

Emulsion Batches:

Date 1996 Aug. 17/13..... Observers [KK]/Jn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CE12525	Comp							ThAr	2s
26	HD187691	19 4614	+100955	221107		0 13E			1037
27	Comp								2s
28	Comp								2
29	HD186791	19 4130	+102210	223217		0 03W			403
30	Comp								2
31	Comp								2
32	HD154906A	170315	+543607	224542		3 07W			992
33	Comp								2
34	HD154906B			230352		3 17W			515
35	Comp								2
36	HD154906A			231431		3 28W			522
37	Comp								2
38	BIAS(4)								
39/43	FLATS x 5					2 3 30W	+54°	Tung	5

Spectr. Temp. $\approx 120.5^{\circ}\text{C}$ Dome Temp./Hum. $\approx 20.5^{\circ}\text{C}$ 5-752H Transparency Conditions ... Fine ... increasing cloud... 284
 Focus 4360
 Spectr. Temp. Dome Temp./Hum. 9 PM DST @ Pearson (Wind West 4 Kms/hr) AIRPORT 101.60 \uparrow Kpresals) - ADU MAX

Exp. Mtr.	Seeing	Mag.	Sp.	Inst. Echelle	Grating/ x Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				19.00°	0600 .3080	60 μ W 600 μ H	6300	1			
								3			8.5K
300	3"	2	F					4	KK pgn	RA +00 13 21 AS -00 00 33	8K
								3			
380								4			6K
								3			
380								4			
								3			
								3			
56	3-4'	4.7A	G8V					5	KK Vis Bin	Brighter and SE of pair good separation	~750
								3			
52	3'	6.9D	K5V					6		fainter one	~780
								3			97
60	3"	4.7A	G8V					5		Brighten again	~750
								3			

^{ced} Spectr. Temp. — 100.8 °C Dome Temp./Hum. +19.0°C 60% H Transparency Conditions ... Fine ... (cloud in south) ... ²⁸⁶
 Focus +3.60
 Spectr. Temp. Dome Temp./Hum. +17.8°C 70% H _{c 2} MAX

Exp. Mtr.	Seeing	Pr. Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				Echelle	19.00°	0600 3080	60u 600u H	6300Å	1		
									3		11.8K
445	2-3"	3.66	FOP						2	KK pgm	
									3		
									3		
72	2-4"	5.58	GOV	** Very BROAD DBL Lines					4	Vis Bin	Brighter NE one great separation as expected But some cloud 700
									3		
74	3"	6.59	GIV	(Very narrow lines)					5	"	* Looks much later than in & out of cloud <u>Acog</u> 900
									3		
88	3"	5.58	GOV						4	"	** Big change in Broad Absorption lines <u>single now.</u>
									3		
									1		
50	2-3"	6.59	GIV						5a	"	
									3		
60	3-4"	5.58	GOV						2	"	
									3		

Speetr. Temp. ^{ced} ~100.8°C Dome Temp./Hum. Transparency Conditions *Fine* 288

Focus *4360*

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst. Echelle	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
120 F/112 61	3 ^v 4 ^u	5.58	GOV	19.00	0600 3080	60u W 60u H	6300	6c	Kis Km	4th exp Brighter one again	
								3c			
								"			
400	1 ^v 2 ^u		K5II + B?					5c	KK pgm		3.6K
								3c			
400	2 ^v 3 ^u							5	"		
								3			
								1			
								3			
130	3 ^v 4 ^u	5.11	F8V					2	std vel		1.5K
								3			
								3			
380	4"	2.72	K3II					1	std vel		5.8K
								3			12K
								3			

289 pg # 4 Tues/wed

Date 1996 Aug 13/14 Observers [KK] / 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.
ce12590	HD 201091	21 0225	+38 1527	00 3911		0 57 W			659
91	Comp							TBR	25
92	HD 201092	21 0226	+38 1514	00 5253		1 25 W			1449
93	Comp							"	25
94	HD 201091	21 0225	+38 1527	01 1925		1 41 W			830
95	Comp							"	25
96	BIAS (4)			01 35					
97	Comp								2
98	HD 209790	22 0054	64 08 ²⁶ 00	01 4035		1 00 W			527
99	Comp								2
ce12600	HD 209791	22 0654	64 08 00	01 5129		1 29 W			1626
01	Comp								2
02	HD 209790	"	"	02 2034		1 39 W			455
03	Comp								2
04/09	FLATS x 5			02 44		1 44 W	+64	TUNG	5s
10	BIAS (4)			2 47					

Spectr. Temp. ^{CO} -100.8°C

Dome Temp./Hum. +17.1°C 72.5%RH

Transparency Conditions Fine

290

Focus 4360.....

Spectr. Temp. -100.9°C

Dome Temp./Hum. +16.5°C 82.7%RH

Exp. Mtr.	Seeing	Pig Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
170	3"	5.22	K5V			60u W 500u H	6300A ³	5c	Vis Bin	Brighter NW one	1.7K
								3			
160	2.3"	6.04	K7V					1			2.2K
								3			
185	2"	5.22	K5V					5			
								3			
								1			
								3			
235	3"	4.80	A3m					2	Vis Bin	Brighter Eastone AB	1.8K
								3			
110	2.5"	5.30	dFF					4		"C" component	1K
								3			
910	3"	4.80	A3m					2			1.5K
								3			
						500u H		2			1.1K
								1			

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pg#1

Wed / Thurs

Emulsion Batches:

Date 1996 Aug. 14/15... Observers [J.H.K.] / J.K.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CE126 1/2	Inboard / outboard							ThAr	6/4
13	BIAS (A)			1949					
14	Comp							ThAr	2s
15	HD8890	012234	+884626	200045		8 56 E			1520
16	Comp								2
17	HD8890	"	"	202735		8 47 E			463
18	Comp								2
19	HD8890			203651					118
20	Comp								2
21	Comp								2
22	HD 137909	15 2342	+292701	204638		2 42 W			391
23	Comp								2
24	BIAS (A)			2053					
25	Comp							ThAr	2
26	HD 138918	15 3001	+105223	205910		2 49 W			403
27	Comp							ThAr	2

Spectr. Temp. $7. -100.8^{\circ}\text{C}$ Dome Temp./Hum. $+20^{\circ}\text{F}$ $68-92\text{H}$ Transparency Conditions *Part Cloudy* 292
 Focus $\cdot 1.360$
 Spectr. Temp. -101.6°C Dome Temp./Hum.
Thick near Polaris it seems.

Exp. Mtr.	Seeing	Plg Mag.	Sp.	Inst. Echelle	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				19.00°	0600 03080	600 W 400u H	6300A	1/2		(Focus CCD Em) 0 0 128 1024 81	
						600 uH		1			
								3			
180	(2.3°)	2	F				6300A	2	KK pgrm	Too cloudy here now. <u>not much 1st 10 mins</u>	2.7K
								3			
310								2			6.3K
								3			8.3K
300								2			
								3			
								3			
310	2"	3.66	Fop					4	KK pgrm		2.7K
								3			
								1			
								3			
164	$1.2-3$	4.20	F0 IV					5	Vis Bin	Brighter North one	1.4K
								3			

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pg#2

Wed/Thurs

Emulsion Batches:

Date ..1996. Aug. 14/15.... Observers [K.K.] / 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.
CE12628	HD138917	15 3001	+10 5219	21 07 55		3 18 W		1	1629
29	Comp							THA	2
30	HD138918	"	"	21 36 43		3 29 W			536
31	Comp								2
32	Comp								2
33	HD187691	19 4614	+10 09 55	21 52 02		0 21 E			1198
34	Comp								2
35	BIAS (4)			22 13					
36	Comp								2
37	HD186791	19 41 30	+10 22 10	22 19 19		0 04 E			305
38	Comp								2
39	Comp								2
40	HD183912	19 26 41	+27 44 58	22 29 40		0 27 W			322
41	Comp								2
42	HD183912	"	"	22 36 41					344

Spectr. Temp. Dome Temp./Hum. +19.6°C 80% H Transparency Conditions Hazy

Focus ... 4360

Spectr. Temp. ... Dome Temp./Hum. ... *EVE 9 kms/hr* *Bar pressure rising 10154 hrs* *MAXIMUM*

Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst. <i>Fokelle</i>	Grating/ x Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>nofilter</i> 155	2-3"	5.20		19.00°	0600h/mm .3080	60u 600u	6300A	6	Vis Bin	<i>fainter south one</i> <i>well separated</i>	2K
								3			
178	3"	4.20	F0IV					5	"		1.4K
								3			
								3			
130	2-3"	5.11	F8E					4	std vel		1.8K
								3			
								1			
								3			
325	2"	2.72	K3II					2	std vel		5.2K
								3			
								3			
360	2"		K5II+B					6	KK pgr		
								3			
430								6			4.9K

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pg#1

Thurs / Fri

Date 1996 Aug. 15/16

Observers

[KK] / Tn

Emulsion Batches:

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Plate No.	Object	R.A.		Declination 1900	Starting Time		Ending Time		Hour Angle End	Declination	Comparison	
		1900			E.S.T.		E.S.T.				Type/Filter	Exp.
CE12656	BIAS(4)				22 12							
57	Comp										TAH	2
58	HD137909	15 2342	129 2701		22 14 51				4 18 W			541
59	Comp										"	2
60	Comp											2
61	HD183912	19 2641	+27 4458		22 28 20				0 25 W			325
62	Comp											2
63	Comp											2
64	HD 187691	19 4614	+10 0955		22 38 29				0 31 W			1320
65	Comp											2
66	Comp											2
67	HD 186791	19 41 30	+10 2210		23 04 52				0 44 W			218
68	Comp											2
69	BIAS(4)				23 10							
70	Comp											2

for polaris over

CCD Spectr. Temp. -101.6°C Dome Temp./Hum. $+20.5^{\circ}\text{C}$ $75\% \text{H}$ Transparency Conditions *Clearing nicely* 298

Focus 4360

Spectr. Temp. Dome Temp./Hum. 0 0 256 1024 + 1 CCD FMT \rightarrow MAXIMUM

Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst. Echelle	Grating/ x Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
100 F/Her				1900°	0600 .3080	60u W 600u H	6300A	1			
								3			11.6K
370	3.4"	366	F0p					2	KK pgn		3.2K
								3			
								3			
500	3"		K5II + B?					4	KK pgn		6K
								3			10.4K
								3			
200	3"	511	F8V					5	std vel		
								3			
								3			
360	2.3"	172	K3V					6	std vel		5.8K
								3			
								1			
								3			

Spectr. Temp. ⁵⁰⁰ -10.15 °C Dome Temp./Hum. +19.7°C 7588H Transparency Conditions ... Fine 300

Focus 4360

Spectr. Temp. -10.17°C Dome Temp./Hum. +19.4°C 7688H

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

no filter 350	1.2	2	F	Echelle 1900	0600 .3080	60u 600u	6300B	2	kt pgn	Δ 00 1854 Δ S 00 00 09	35K
------------------	-----	---	---	-----------------	---------------	-------------	-------	---	--------	---------------------------	-----

								3			
--	--	--	--	--	--	--	--	---	--	--	--

450								2			47K
-----	--	--	--	--	--	--	--	---	--	--	-----

								3			
--	--	--	--	--	--	--	--	---	--	--	--

500								2			
-----	--	--	--	--	--	--	--	---	--	--	--

								3			
--	--	--	--	--	--	--	--	---	--	--	--

								1			
--	--	--	--	--	--	--	--	---	--	--	--

								1			
--	--	--	--	--	--	--	--	---	--	--	--

All to AUG 1596 sub dia of Echelle on M. drive. (with last nights)

FLAT
MAX HDU
15820 1st
15634 2nd
15637
15607
15579
Using FLAT 5-BAT
Repaired 5X

Date 19.9.6 Aug 16 Observers KK/Sc

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC41080	FeNe first light, new source assembly							no filter	FeNe 5
81	Fe Ar								FeAr 30 ^s
82	TiNe								TiAr 10 ^s
83	Tungsten								Tung 20 ^s
	Comp							no filter	FeAr 60s
	HD 187691	19 46 14		21 58 17	22 03 40	0 21 E			
	Comp			22 07 50					" 60s
	BiH 5 (4)								
	Up again with CCD2A							no filter	FeAr 60s

Pg#1 Fri / SAT

Date 1996 Aug 16/17 Observers WxL / Tm

Emulsion Batches:

must have set cgain 90
 noted Header CGAIN = 90
 Engineering..... In Aug 27

using CCD2A and separate

Plate No.	Object	R.A.	Declination	Starting Time	Ending Time	Hour Angle	Declination	Comparison	
		1900	1900	E.S.T.	E.S.T.	End		Type/Filter	Exp.
CC41087	Comp							FEA	60s
85	SV Equ	205719	+054852	221219	222419	from CSS	386		789
86	Comp			2230				"	60s
87	Comp			2243		from CSS	386	"	60
88	SV Equ			224745	233557				850
89	Comp			230340				"	60s
CC41090-93	BIAS (singles) x 4			0023					
94	Comp			00				"	60s
95	H021243			002401	003401	0025			60s
96	Comp							"	60s
97	Comp							"	"
98	AQ Psc	012104	+073621	004837	010436				
99	AQ Psc			010720	012253	0132 E			
cc41100	comp								60s
01	AQ Psc			012815	014325	0211 E			

Acer Time corrected (was 3 mins slow for = 2 hrs⁹)

Acer
Time
wrong

Spectr. Temp. -120.5°C Dome Temp./Hum. $+20^{\circ}\text{C}$ 73% H Transparency Conditions ... P.A.T. ... clearing 304

Focus ... 6.73

Spectr. Temp. Dome Temp./Hum. Approx c Jambela 390 0 50 1024 4 1 MAX HOLD

Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1800 h/km 470	306 μ	5160 \AA	1c		(Hot Pixel col # 34)	
350		9.0	A0					2c	DRL	clouds in	420
								3c			
								4c			460
400		9.0	A0					5c		clouds in 750/1 S/N	280
								6c			
								7	CCD Temp -101.7°C		
								8			
2000		4.9	F8					9	Std vel		17K
								10			
								11			
908	3"	8.9	F8					12		70/1 S/N	600
790								12			
0								13			
980								14			

305
19712 FRI SAT

Emulsion Batches:

Date 1996 Aug. 16/17 Observers Wxb./Tg.

still just using CCD2A

Plate No.	Object	R.A.		Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
		1900	2000						Type/Filter	Exp.
CCA1102	AQ Psc	012104		+073621	014344		155 E			933
CCA1103	Comp				202				FeA	60s
04	AQ Psc				020533	022033				
05	AQ Psc				022745	023600	120 E			
06	Comp				237				FeA	60s
07-10	BIAS (singles) x 4				2412					
11	AQ Psc				024212	025712				
12	AQ Psc				0258:12	03:10:12	044 E			
13	Comp				030816				1	60s
14	AQ Psc				03:15:16	03:25:16	029 E			
15	AQ Psc				25.50	03:31:48				
16	Comp								n	60s
17/19	BIAS (singles) x 3				hand credited to object = zero					Tg Sep 07
20	Comp			1900	^				n	60s
21	HD22484	33146		000504	0343	0353:30	216 E			557

Spectr. Temp. Dome Temp./Hum. $+16.3^{\circ}\text{C}$ 84.8H Transparency Conditions *part. cloudy* 305

Focus *6.73*

^{CD}Spectr. Temp. *-101.0* Dome Temp./Hum.

- ADU MAX

Exp. Mtr.	Seeing	P/B Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>no filter</i> A 880	<i>34"</i>	<i>8.9</i>	<i>F8</i>	<i>CASS CCD</i>	<i>1800/n</i> <i>470</i>	<i>306u</i>	<i>5160H</i>	<i>15ci</i>	<i>DRL</i>		
	<i>34"</i>							<i>16</i>		<i>Note that all headers</i>	
<i>870</i>								<i>17</i>		<i>Times are "Endtime"</i>	<i>600</i>
<i>920</i>								<i>18</i>		<i>UT</i>	<i>600</i>
								<i>19</i>		<i>And they are corrected</i>	<i>600</i>
								<i>20</i>		<i>now from the early</i>	
								<i>21</i>		<i>After time problems)</i>	
<i>920</i>								<i>22</i>			
<i>966</i>								<i>23</i>			
<i>900</i>								<i>24</i>			
<i>490</i>								<i>25</i>		<i>clouds in</i>	
								<i>26</i>			
								<i>7</i>			
								<i>27</i>			
<i>2500</i>								<i>28</i>	<i>std vel</i>	<i>cloudy</i>	<i>1.5 K</i>

Spectr. Temp. Dome Temp./Hum. $+15.5^{\circ}\text{C}$ 88% Transparency Conditions *cloudy* 308
 Focus ... *6.73* ...
 Spectr. Temp. Dome Temp./Hum. $+15^{\circ}\text{C}$ 92%

Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2500				CASS CCD	1800m 470	306 μ	5160A	26	st/vel		1.
								27			
								27			460
2300	<i>4.5</i>	<i>6.41</i>	<i>3K0</i>					28	st/vel		1.5K
								29			
<u><i>0.5 secs, using</i></u>			<i>100</i>	<i>scale</i>				30	<u>PRISM-T</u>	<u>end to -130</u>	<i>7.5K</i>
								31			
<p> <i>ALL to m:/ccd/CASS/Aug1696 & F₀</i> <i>All to Exaby to after last corrections Aug 27/96-T₀</i> <i>Left "Time-OBS" as (end time UT) File # 29</i> <i>+ Corrected Header version overcopied to F₀/Ta_CDROM</i> </p>											

309
18±1

SAT/SUN

Emulsion Batches:

Date .. 1926. Aug 17/18 Observers ... Koh./Ta

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC41134	✓ Comp			2333				FeAr	29s
	HD 197989	20 42 10	33 35 44	23 16 06	23 16 51				50s
CC41135	✓ HD 197989	20 42 10	33 35 44	233630	233659				30s
36	✓ Comp				23 38 07			FeAr	4
37	✓ Comp				23 50 55			"	4s
38	HD 2048848	21 26 12	-10 11 00	23 51 55	00 25 00			(Rewrite 5ci edited) ✓	32m
39	✓ Comp							"	4s
40	✓ Comp			00 34				"	4s
41	✓ HD 207687	21 45 42	-10 31 00	00 38 20	01 15	0 54 W			276
42	✓ Comp							"	3s
43/46	✓ BIAS (singles) x 4								
47	HD 207687	21 44 42		01 22 40	02 02 40	1 42 W			40m
48	✓ Comp								
49	✓ Comp								3s
50	✓ HD 181276	19 14 48	+53 11 02	02 16 18	02 17 28	4 31 W			71

CCD
Spectr. Temp. -10.0°C
Focus 6.73
Spectr. Temp.

Dome Temp./Hum. 19.1, +70.3
Dome Temp./Hum. 20

Transparency Conditions clear

MAX ADU

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASCCD	1800 40.20	250u	4000A	1		+450 prism	
10k								2		3.2K max	
10k		2.6	KOIII					2	spat MK std	170/1 S/N	700
								3			
								4			
no filter 6770	2"	8	KOIII					5	Carbon star pgm	45/1 S/N	320
								6			4K
								7			4.7K
BG 39 Filter 7650		7.88	KOIII					8	Carbon star pgm	40/1 S/N	
								9		Prism (F +500) good illumination whole slit	13K
								10			
2500	3"	7.88	KOIII					11	Carbon star pgm		
								12		great illum F 500	
								13		great F 500	14K
6100								14	mk std		10K

check, I don't believe it to

311 pg #2 SAT/SW

Emulsion Batches:

Date 1996 Aug. 17/18 Observers K. W. J. To

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
51	COMP						no filter	FeAr	3S
52/55	BIAS (singles) x 4				(CC411 53 +188 man 1437 ^h)		expected for 90 gain	Tu FeAr	3
56	Comp								3
CC411 57	HD 20648	21 26 12	-10 11 00	02 32 08	03 03	3 02W			
58	Comp							FeAr	2S
59	Comp							"	2S
60	HD 20630	03 14 07	03 00 B	03 13 89	03 16 08	02 31 W			
61	Comp							FeAr	
62/65	FLAITS x 5					3 22E	-2°	TUNG	12S
66/69	BIAS singles x 4								
CG 8062 ³ / ₂₆	HD 6314	0 58 59	+39 27 18	03		0	VK	4x	.067
27/30	DARK x 4							4x	.067
31/32	HD 6314	n	n			0 24W		2x	.137
CG 33/34	DARKS x 2							2x	.133

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Pg #1 Sun / Mon

Emulsion Batches:

Date 1996 Aug. 18/19 Observers ... k.o.k. / T.A.

Using CCD2A with 1000 f scale. decl. ... 2 obs. = 2 sec exp

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC411	70/78 BIAS (Singles) <u>x4</u>			20 07				no filter	
	74 Comp			20 12				Fetr	25
	75 HD 181276	19 44 48	53 11 02	20 15 38	20 17 30	1 27 E			
	76 "			20 18 55	20 22 30				25
	77 "			20 24 20		1 15 E			25
	78 Comp							Fetr	25
	79 Comp							"	25
	80 HD 197989	20 42 10	+33 35 44	20 38 20	20 41 25	2 32 E			182
	81 Comp	"	"	20 42 45	20 45 54	2 27 E			25
	82 Comp			CC411 82 20 48 40				"	25
	83 Comp							"	25
	84 HD 207848	21 26 12	-10 11 05	20 57	21 37 06	2 20 E			2385
	85 ✓ Comp							"	25
	86 ✓ Comp							"	25
	87 HD 207687	21 45 42	-10 31 00	21 48 54	22 30 10	1 47 E			
	88 Comp			22 35				"	15
CC411	89 Comp								

* Mean 20.6 all 4) Tn
 (cc41170-73)
 expected for 0 gain
 Acer Time still ok
 Lost
 exists, BUT very odd Tube found,

^{CCD}
 Spectr. Temp. $\sim 101.5^{\circ}\text{C}$ Dome Temp./Hum. $\sim 20.6^{\circ}\text{C} \cdot 54.9\% \text{RH}$ Transparency Conditions \dots Hazy 316
 Focus $\dots 6.68 \dots$
 Spectr. Temp. \dots Dome Temp./Hum. \dots -MAX

Exp. Mtr.	Seeing	Plg Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2800	2.4"			CASSID	1800 μm 4.1 $^{\circ}$	25 μ	4200 \AA	14	Carbon Star pgm		
								15		Note All 4200 \AA setis @ 0 gain	
								16		to and including cc 41187.	Odd result I guess? 14
								17		Then cca 1188 - Through 199 @ 50 gain	MAX 9.3K
					1800 μm 4.1 $^{\circ}$	306 μ	4800 \AA	18		PRISM + F 500 (illumination even) $\sim 150/154$	10K
3670	3"	7.88	KOII					19	Carbon star pgm		3.1K
								20			6.4K
								21		[For all comparisons PRISM + F 500 illumination uneven.]	
								22			
3100	2.4"	8	KOII					23	Carbon star pgm		26
								24		good illumination	11K
								25			
4000		3.76	G9III					26	MK std		6000 max
4070		"	"					27	"		
								28			

37 pg # 3

Emulsion Batches:

Date 1996 Aug. 18/19. Observers Kek. J. T. n

Plate No.	Object	R. A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
cc41214	Comp							feAr	• 4
15	HD 197989	204210	+333544	01 5235	01 5310				
16	"			01 5548	01 5630				
17	Comp								As
18/21	B/A S single x 4			02 02					
22	Comp								As
23	HD 20639	031407	03 0013	02 1104	2 1630	3 28E			
24	Comp							"	As
25	Comp							"	"
26	HD 204848	21 2612	-10 11 00	2 27	2 57	3 00 W			
27	Comp							"	"
CG 635/38	HD 3765	003553	+39 40					4 x	67ms
39/42	PARKS x 4							"	"
43/44	DHRKs x 2							1 x	133ms
45/46	HD 3765					0 11W		2 x	133ms

^{CCD}
 Spectr. Temp. - 100.6 C° Dome Temp./Hum. - 7.19.06, 76.53% H Transparency Conditions ... Thick Hazy
 Focus 6.68
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASSIO	1800/n 4490	306u	4800A	28		good written illum	10K
5.7K	1.2"	2.6	KOIII					29			7K
7.9K								29			10K
								30			10K
								2ci			
								3ci			
4300	3"	5.82	GSV					4	✓ MK std Carbon star pgm		3.6K
								5		nick = even	11K
								5ci		" "	11K
1970	4"	8	KOIII					6	Carbon star pgm		1.5K
								7			
				1.2"	7.36	dk5	AIT	86°	Seeing	No wind Dome west	

319

p9#4

Emulsion Batches:

Date 1946 Aug 18/19 Observers Kottl. Tu

100 tscy/k... used for source of

Plate No.	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 41228	Comp			3 25 10		W		Felt	.45
29	HD 3765			3 25 10		0 26 W			
30	Comp								.45
31	Comp								.45
32	BM Cas	00 48 36	+63 33	3 44	<u>3 51</u>	0 29 W			
33	Comp								.45
34	Comp								.45
35	HD 14386	2 14 18	-3 25 54	4 00 40	4 05	0 40 E			
36	Comp								.4
37/40	BIAS	x 4							
41/45	FLATS	x 5				0	+5°	TUNG	1.55

Spectr. Temp. Dome Temp./Hum. Transparency Conditions ... *slightly hazy* 320

Focus ... *6.68*

Spectr. Temp. ^{CCD} - *100.5°C* Dome Temp./Hum. *718.6°C 74% H*

Exp. Mtr.	Seeing	Pig/Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>no filter</i>				<i>CASS</i>	<i>1800^h</i> <i>1800</i>	<i>306_u</i>	<i>4200</i>	<i>8</i>			
<i>1730</i>	<i>1-2</i>	<i>7.36</i>	<i>dk5</i>					<i>9</i>	<i>std vel</i>		
								<i>10</i>			<i>11.1A</i>
								<i>11</i>			
<i>240</i>	<i>2^u</i>	<i>~9</i>						<i>12</i>			<i>480</i>
								<i>13</i>			<i>129K</i>
								<i>13</i>			<i>128K</i>
<i>360</i>	<i>2^u</i>			<i>M55^{III}e</i> <i>→ M9^{III}e</i>				<i>14</i>	<i>MIRA for RG</i>		<i>480</i>
								<i>15</i>			
								<i>16</i>			
								<i>17</i>		<i>FLAT maxima</i>	<i>MAX</i> <i>11.60</i> <i>11.63</i> <i>11.64</i> <i>11.67</i>

All to M's / Cass / TUBA / TUBA2

Readers all OK except Renoum glitches with (CC41188) → (41153 (2 exp))

Fix when awake. In (Rose Aug 24)

Spectr. Temp. -101.5°C
 Focus 6×63
 Spectr. Temp.

Dome Temp./Hum. $+21.8^{\circ}\text{C } 65\% \text{H}$
 Dome Temp./Hum.
 90C gain
 CD

Transparency Conditions *part cloudy* 322

390 0 50 1024 4 1 CCD FNT

Exp. Mtr.	Seeing	Prv Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06560 Filter				CHSS CCD	1800 in 56.2°	306 μ	6580A	5		Prism near F 500	2.4K
2050	2"	3.76	69TL					4	MK std		4.6K
								5		no prism movement needed	2.5K
								1		Average of 4 Bias	
								6			
4.8K	1.2"	26	K04					7	MK std		1.4K
								8.			9K
								9			
800		8	K04					10	Carbon star pgm		2K
								11			9.5K
								12			9.5K
270		7.88	K04					13	" " " cloudy		
								14			9.4K
								15			12K
								16	10i	(MIRAN)	
								16			9.4K

CCD Spectr. Temp. 100.7°

Dome Temp./Hum. +21.2°, 46.5% Transparency Conditions Partly Cloudy 324

Focus 6.63

Spectr. Temp.

Dome Temp./Hum. 22

390 0 50 1024 41 CCD FWHM

Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06560 St. 11				CASS CCD	1800L 5180	306 μ	5918A	16			4K
2785	3"	7.88	KOIII					17	Carbon Star pgm	-5890-96 NaD Lines-	5K
								18			4.6K
								19			4.9K
3156	2.3"	8	KOIII					20	Carbon Star pgm		6.3K
								21			4.7K
								1			
								22			
3900		3.76	G9III					23	MK Std		
		3.06	G9III					24	MK Std		
								24			
5449	2"	2.6	KOIII					25	MK Std		
								26			
								27			
								1			1028

CCD
Spectr. Temp. -100°C

Dome Temp./Hum. $+19.8^{\circ}\text{C}$ 74% H Transparency Conditions ... Partly cloudy / cloudy ... 3%

Focus ... 6.63.....

Spectr. Temp. -100.5°C

Dome Temp./Hum. 19.7°C 77% H

390 050 1029 41

MAX

Exp. Mtr.	Seeing	Plg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
06560 sti 11				CASS CCP	1800k/low A7.3	306u	5120A	4			
11K	2"							4	mk std.		13K
								5			
								6			4.4K
1626		8	KOIII					7	Carbon Star	pgm	
								8			3.4K
								9			
432		7.88	KOIII					10	Carbon star	pgm	
								11			
								12			

All to M: / CASS / TURB / TURB2 no Header edits needed. Oh, except
 All comparisons have "object" in type
 All also to F: / TOCPROM 9608 / CASS.
 In

327

pg #1

Tues/Wed

Emulsion Batches:

Date . 1996. Aug. 20/21. Observers . Kats. / T.G.

Using CCD 3 (Echelle) version as. sledge. (4. new. ND 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.
CC41299	BIAS(4)			2013					
CC41300	Comp					PRISM H PRISM F 500	Filter #2	F4E	35sec
01	HD181276	191448	+531102	203111					302
02	"			203732					215
03	Comp								35
04	Comp								35
05	HD181276	191448	+531102	205334		0 37E			3715
06	Comp								35
07	Comp								35
08	HD197989	204210	+333544	210931		1 53E			147
09	Comp								35
10	Comp								35
11	HD204848	212612	-1011	212059		1 50E			9345
12	Comp								35
13	BIAS(4)			2204					
14	Comp								35

(Note CC41304 maybe same as "03" : not quite Right Filter #2)

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. $+23.0^{\circ}\text{C}$ 76.4% H Transparency Conditions .. gradual clearing..... 328

Focus 6.70

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

396 0 50 1024 4.1 CCD FMT

Exp. Mtr.	Seeing	P/Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	1800k/mm 40.7	250 μ	4000	1			
								3			11.2K
~8K?	2"	376	G9III					4	mk std		1.8K
37K								5	"	Not quite blue enough	
								6			
9K	2"	376	G9III		1800k/mm 40.0		3999	8	mk std.	Just getting H&K in at blue end	(comp) 10.8K 2.3K 9.1K
								9			
								12			10.98K
11.9K	2.6	K0III						7	mk std.		2K
								14			9.8K
								15			10.9K
2,060	3"	8.0	K0III					16	Carbon Star	~ 50/1 S/N	
								17			9K
								1			
								18			

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pg#2

Tas/wed

Emulsion Batches:

Date Aug 20/21..1996 Observers ... Kok/. Tr.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC41325 4/315	HD 207687	214542	-1031	22 08 29	22 34	B1 34 E	Comp Filter # 2 For source	FeAr	15A
16	Comp							"	3s
17	Bias(4)	224659					source Filter wheel		
18/22	FLATS x 5			2310		0 50 E	clear	TUNG	603
23	Comp						clear	FeAr	3s
24	HD 207687	214542		232055		0 08 E			2400
25	Comp						clear	FeAr	3s
CC41326	BIAS (4)			0006					

Spectr. Temp. ^{CCD} -100.8 Dome Temp./Hum. +21.9, 78% Transparency Conditions Cloudy

Focus ... 6.70

Spectr. Temp. ^{CCD} -100.5°C Dome Temp./Hum. +20°C 93% H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter 302		7.8	KOIII	CASS CCD	1800ln/m 40.2	250μ	4000	19	Carbon stop gm		Vwert
								20			88K
								21			
								2			
								21			
1200	3.5"	7.88	KOIII					22	[35/1 S/H]	PRISM R 130 Really! after multiple fits No hunting and going to R 130 and environs	10K
								23			12K

All headers OK except for "Comp" in types as "objct" All to m: | TUBA3

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. 77.5°C $55\% \text{H}$ Transparency Conditions *Hazy* 332
 Focus 6.63
 CCD Spectr. Temp. -100.78 Dome Temp./Hum. 77.5°C $55\% \text{H}$
 90 c gain
 390 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
5.8K				CHSS CCD	1500 lines/mm 4.7°/C	306 μ	5184 Å $\pm 1.5 \text{ Å}$	1			7K
5.8K	0.04		A0V					3			7K
5.8K								4	Vega (A0 std vel use)		8K
5.9K	"							5	Vega		8.8K
								6			5.6K
								7			
exp meter Balance slightly ahead 220	2.3"	~11	G2V					8	DRL	[43/1 S/N] Hazy = 34 moon = 18° south	
238								9	"		
								10			3.6K
(exp meter in balance now)								11	DRL		
205	3"		G2V					11	DRL		
218								12		~40/1 S/N	
								13			37K
216								14			400 ADU
								15			
								16			3.4K

333

#2

Sun / Mon

Emulsion Batches:

Date .. 1996. Aug. 25 / 26. Observers .. WXL / J.G.

Plate No.	Object	R.A.		Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
		1900	2000						Type/Filter	Exp.
CC41343	V471 Agf	19 35 24	05 50 18		23 01 09				BA	
44	"				23 16 40				H3ND	
45	comp									35
46	bias(4)				23 36					
47	V471 Agf				23 37 28		2 21 W			1083
48	"				23 55 57					900
49	Comp								"	3
50	comp								"	3
51	HD187691			1900	00 20 44					94
52	Comp								"	3
53	Comp								"	3
54	BB Peg			2000	00 33 42					900
55	"	22 22 56	16 20 00		00 51 33					902
56	comp									
57	bias(4)				01 11					

Spectr. Temp. Dome Temp./Hum. $+21.0^{\circ}\text{C}$ 67.5/84 Transparency Conditions *some cloud* 334Focus ... *6.63*

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>no filter</i> 212			G2V		1500h	306	518A	17	DRL		
210								18			
								19			3.5K
								1			
230	3"	-11	G2V					20			
180								21			
								22		<i>A Blue comp line strongest</i>	3.6K
								23		<i>Note red st. Arcant Line is strongest (PAR Red comp Line)</i>	5.5K
1520		5.11	F8V					24	<i>st/vel</i>		2K
								25			
								26			7.2K
135		10.8	F8					27			
134								28			
								29			
								1			

CCD Spectr. Temp. -100.7° Dome Temp./Hum. $+19.8^{\circ}$ $760\%H$ Transparency Conditions $Hazy$ 336
 Focus 6.63
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pg/Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter					1820/n	306u	5184	3cs		(Red line strongest)	2K
1540	4.79	K011-12						4e	std vel		3K
								7e			6.5K
	2.4	7.45	K011	ALT 75°	(Above 306u Slit, TV guide default center)				Seeing Tests	Dome sky No Fans, Very light SW wind	
								10			
620	7.45	K011						11	std vel		
								12			
								13			6K
86	3"	10.8	F8					14		- 30/1 S/N	
104								15			
								16			

337

#4

Sun/Mon

Date .. 29/16 .. Aug. 25/26.

Observers

WxL/Tn

Emulsion Batches:

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Plate No.	Object	R.A.	Declination	Starting Time	Ending Time	Hour Angle	Declination	Comparison	
		1900	2000 1900	E.S.T.	E.S.T.	End		Type/Filter	Exp.
CC41369	BB Peg	22 22 56	16 20 00	02 45 47				1	1209
70	"			03 06 50				FeAr Filter #3 ND	1206 55
71	comp							FeAr #3 ND	35
72	BB Peg.	"	"	03 31 44					
73	comp							"	35
74	"							"	35
75	HQ Psc	01 21 04	+736 21	03 59 16		0 56W			899
76	"			04 15 01					900
77	comp							"	35
78	AQ Psc			04 34 27		1 26W			600
79	comp								35
80	Bras (4)								
81/85	FLATS x 5					1 35W		TUNG Filter #3	15
All Headers fine, All to m:/ccn/cass/wen and F: To_CDROM									

CCD Spectr. Temp. ... 100.7°C ... Dome Temp./Hum. ... 18.5°C . 76% Transparency Conditions ... Hazy ... 338
 Focus ... 6.63 ... 90 cc gain ... 17.5°C 85% H
 Spectr. Temp. ... Dome Temp./Hum. ...

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
No file, 108		10.8	F8	CASS CCD	1800h 471°	306u	5184A	16	DRL		
112	2.3"							17		~ 37/1 S/H	
								18			3-6
107								19			
								20			
								21			5.2K
638	3"	8.9	F8					22		~ 100/1 S/H	
645								23			
								24			
475								25			

1
 2 FLAT MAX ~ 8.5 K ADU
 New Rack, Prism and Filter. = "e shut" commands all worked fine
 Should be noted that throughout night, we didn't have to RE home and and Resol
 Pickup mirror for comparisons. 3sec FeAr strength varied as noted in Quality column.

339

#1

Tues/Wed

Emulsion Batches:

Date 1996 Aug. 27/28 Observers W.x.L./T.n. We still have Rack before each move. Not auto home yet.

Using CCD3LITE.EXE with auto MIRROR and FILTER. Hearing. For 1st. Time

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CC41386	BIAS(4)			20 53				FeAr ND43	
87	Comp		2000					"	3s
88	SV Equ	20 57 19	75 48 52	21 09 28		1 23 E			900
89	"	"	"	21 25 20					385
90	Comp							"	3s
91/95	FLATS x 5					1 05 E	+5 46	Tung FILTER #A	2sec
96	BIAS(4)			21 44				FeAr FILTER #3	3s
97	Comp								
98	V417 Agl	19 35 24	05 50 18	21 55 11					900
99	"	"	"	22 11 18					900
CC41400	Comp							"	3s
01	V417 Agl	"	"	22 31 09		1 20 W			899
02	"			22 46 28					900
03	comp								
04	V417 Agl			23 04 23					904
				23 20 05					

CCD Spectr. Temp. $-100.6 \text{ } ^\circ\text{C}$

Dome Temp./Hum. $18.8 \text{ } ^\circ\text{C}$ 80%

Transparency Conditions *Clearing fast* 340

Focus 6.66

90 cgain

Then Fast Low East cloud

Spectr. Temp.

Dome Temp./Hum. $18.8 \text{ } ^\circ\text{C}$

390 0 50 1074 4 1 CCDPMT

m4x
AD4

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				C1155 CCD	1800 l/w G/T = 47.1°	306u	5184A	1			
								3		Red line strongest	8K
416	4.5	9	A0					4		> 60% S/N Near Full moon (n 15° from)	
188								5		clouds in	
								6		blue line strongest	34K
								7			11K
								1			
								8			3.8K
173		11	G2V					9		< 30% S/N	
187								10			
								11			
? forgot shutter								12		< 40% S/N	
185								13			
								14			3.2K
188								15			
								16		clouds in	

pg #1 Wed / Thurs

Emulsion Batches:

Date 1996. Aug. 28/29 Observers WxL / Jn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC41410, fts	BIAS (4)			19 25					
411	comp							#3 Fc Ar FFA	3sec
42	HD 182572	19 20 42	11 43 49	19 43 57		1 26 E			126
413	Comp							"	3s
14	Comp							"	3s
15	HD 157856	17 20 46	-01 33 52	19 52 58		0 45 W			290
16	Comp							"	3s
17	BIAS (4)			20 01					
18	Comp							"	3s
19	SV Egn	20 57 19	+5 48 52	20 08 45		2 21 E			901
20	"			20 24 15					899
21	Comp							"	3s
22	SV Egn			20 41 27					905
23	"			20 59 35					901
24	comp							"	3s
25	BIAS (4)			21 16					

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. $+20.8^{\circ}\text{C}$ 66% H
 Transparency Conditions *Fine* 344
 Focus 6.66 90 cgain
 Spectr. Temp. -100.7°C Dome Temp./Hum. $+19.1^{\circ}\text{C}$ 68% H
 390 0 50 1024 4 1 CCDFWT

Exp. Mtr.	Seeing	Ph. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				C1455 CCD	1800 lines	306 μ	5184A	1c			
Exp meter	Balance?		(was slightly falling)		47.1 $^{\circ}$			3c			3.6K
2300	3"	5.16	G7IV	Hd1				4c	std val.		4.1K
								5			3.6K
								6			4.3K
550	3"	6.44	F3V					7			2.6K
								8			3.4K
								1			
								9			6.3K
450	3"	9.9	A0					10	DRL	70/1 S/N	
480								11			
								12			
500								13			
535								14			
								15			3.1K
								1			

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions ... Fine ... some haze ...

346

Focus ... 6.66

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1800 w/cm	306 μ	5184A	16			6.6K
300	2"	1018	F8					17		> 50% S/N	
319								18		close to full moon though	
								19			3.6K
328								20			
323								21			
322								22			
312								23			
315	2.3"							24			
								25			
								1			
								26			
530	3"	9	40					27		increasing cloud	
498								28			
								29			

3A7pg#3

Wed 1 Thurs

Emulsion Batches:

Date 1996 Aug 28/29 Observers WXL / 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.
CC41441	Comp							FeA # 3ND	3s
42	HD187691	19 46 14	+10 09 55	23 49 06		2 14 W			138
43	Comp							v	3s
44	Comp							v	
45	BB Peg	22 22 56	16 20 00	00 03 41					600
46	Comp							u	3s
47	BB Peg	"	"	00 22 50		0 28 W			893
48	Comp							v	3s
49	BIASCA)			00 42					
50	Comp							v	3c
51	SV Equ	20 57 19	+05 48 52	00 40 24		2 17 W			759
52	"			01 02 55					
53	Comp							v	3
54	Comp							v	3
55	BB Peg	22 22 56	+16 20 00	01 25 56					900

Spectr. Temp. Dome Temp./Hum. *r. 17.6°C. 77.28%* Transparency Conditions ... *Part. Cloudy*
 Focus *6.66*
 Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<i>20 f/160</i>				<i>CASCCD</i>	<i>1800 A/m</i> <i>47.1°</i>	<i>306 μ</i>	<i>5184A</i>	<i>3ci</i>			
<i>1600</i>		<i>5.11</i>	<i>F8</i>					<i>4</i>	<i>std vel</i>		
								<i>5</i>			<i>4.1K</i>
								<i>6</i>			<i>6.8K</i>
<i>230</i>		<i>10.8</i>	<i>F8</i>					<i>7</i>		<i>clouds in</i>	
								<i>8</i>			
<i>360</i>	<i>2"</i>	<i>10.8</i>	<i>F8</i>					<i>9</i>		<i>some cloud</i>	
								<i>12</i>			
								<i>1</i>			
								<i>15ci</i>			<i>6K</i>
<i>420</i>	<i>2-3"</i>	<i>9</i>	<i>F10</i>	<i>FeAr source was on for 1st 300 secs of exposure.</i>				<i>14</i>		<i>A 2 - 00 00 12</i> <i>B 5 - 00 03 06</i>	<i>Some cloud</i>
<i>4</i>								<i>17</i>			
								<i>16</i>			
								<i>19</i>			
<i>356</i>	<i>2"</i>	<i>10.8</i>	<i>F8</i>					<i>20</i>			

ccd Spectr. Temp. -100.3°C Dome Temp./Hum. $+16.5^{\circ}\text{C}$ 81.2% H Transparency Conditions Hazy 352

Focus 6.66

Spectr. Temp. Dome Temp./Hum. $+15.7^{\circ}\text{C}$ 83.1% H

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				CASS ccd	1800 l/m	306x	5184A	1			
								1			13K
								3			48K
666	3"4"	8.9	F8					4		100/1 S/N	
601								5			
								6			28K
596								7			
								8			20K
2100								12			
2100								12	std vel		
								15			

All to Mr. / ccd / CASS together with All "wen" data

353

Pg #1

Thurs / Fri

Emulsion Batches:

Date 1996 Aug 29/30 Observers Kok / 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.
CC41483	BIASCA)			1959					
84	Comp							F.H.R. #3	35
85	HD 148856	16 25 54	21 42	20 01 55					50
86	v	"	"	20 05 54					52
87	Comp							FeAr	35
88	Comp							" #3	35
89	HD 27022	4 11 18	64 54 00	20 20 47	20 47 45	9 16 E			10 17
90	Comp							FeAr	35
91/93	Flats x 3							JUNG Filter #n Clear	115
CC41494	FLATS x 3							JUNG Filter #4	55 sec
CC41494	Comp							FeAr Filter #5	35 sec
95	HD 27022	"	"	21 34 36		8 14 E			871
96	Comp							FeAr	
97	BIASCA)			21 53				"	

Spectr. Temp. ^{CCD} -100.5°C Dome Temp./Hum. +20°C 74.8H Transparency Conditions Fine / Hazy 354
 Focus 6.75
 Spectr. Temp. Dome Temp./Hum. 390 0 50 1024 4 1 CCD F17

Exp. Mtr.	Seeing	Hgt. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
170 filter 50000				CASS CCD	1800/n 40.1°	306	4000A	1			
BG 39 filter, Heav. Trippolin TRAY.											
8158	2.8	2.8	G8III					4	Mk std.		
8130								5	"		15K
								6			
								7			8K
8600	3.4	5.4	G5III					8	Mk std		max 780
								9			
								10			8.7K
								11			
					1800/n 41.2°	306	4190A	11			11.6K
								12			4.8K
7400	5.4	G5III					4190A ± 3A	15	Mk std		1.7K
								16			2.8K
								1			

355
pg #2

Thurs / Fri

Emulsion Batches:

Date .. 1996 Aug. 29 / 30 Observers .. Keki / Tr ..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp
CC41498	Comp			22 03 52				FeAr	—
99	HD 148856	16 25 54	21 42 00	22 03 52				FeAr	152
500	Comp							"	3
501	Comp							"	3
502	HD 9826	01 ^h 30 54	40 54 00	22 14 44		4 50 E			320
503	Comp							FeAr	3
CC41504/G	Flats x3							Time clear	8s
CC41507	Comp							FeAr	8
CC41508	HD 148856	16 25 54	21 42 00	22 28 46		4 W			
09	Comp							ND Filter	2
'	Comp							"	2s
	HD 27032								
CG80671/74	HD 207754	21 46 12	+13 25 00	23 03		Defam H Box center			4 x 67m
75/78	DARK								4 x 67m
79/80	DARK								2 x 133
81/82	HD 207754	"	"						2 x 133

