PARTIAL Index

Flexure Tests 1990 Nov 7 CASS, 1990 Nov 12/13 CASS, 1991 Feb 11/12 Echelle,

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.	See

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 4

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				David Dunlap Observatory							
				74" Logbook							
				Vol. 66							
				Plate Nos. 492 - 832							
				Sept. 1990 - March 1991							

5

Thurs - Fri

Date 1990 Sep 27/28 Observers Fds - Tm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp. / Exp. Mtr.	Focus / Seeing
	Prompted Fleet	at posn of Vega						Tungsten	30s		
	Comp			18 46 15				Th-Ar	20s		
	HD 172167 Vega	18 33 33	38 41	18 48 33	18 50 57	0 22 W				20,000	
	Comp			18 51 37				"	20		
	Comp			18 56 31				"	20		
	HD 213420 6 Lac	22 26.2	+42 37	19 00 13	19 53 25	2 28 E				4000	4"
	Comp			19 54 27				Th-Ar	20		
	HD 213420 6 Lac	22 26.2	+42 37	19 55 46	20 52 28	1 29 E				4000	
	Comp			20 53 16				Th-Ar	20		
	HD 213420 6 Lac	22 26.2	+42 37	20 54 20	21 52 02	0 29 E				8500	4"
	Comp			21 52 54				Th-Ar	20s		
	HD 213420 6 Lac	22 26.2	+42 37	21 53 35	22 23 32	0 03 E				2353	4"
	Comp			22 24 42				Th-Ar	20		
	4 flats @ 25	831, 817, 810, 804									
	4 flats @ 90	2831, 2812, 2787, 2794									

Spectr. Temp. ..... Dome Temp./Hum. +16°C ... 86% Transparency Conditions ... s/Hazy ... cloudy ... 6

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +14°C ... 94%

Topup @ 18 30 T=-0.043

Exp. Mtr.	Seeing	Mtg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30s				Echelle Retica	17.91	105 .259	.4945	456278		Focus = 2186 for Bet Cass	1140
20s											8631
20,000		0.04	A0V								2883
20											8579
20											8601
4000	<2"	4.51	B2IV								908
20											7824
4000		4.51	B2IV								890
20											7680
5320	<2"	4.51	B2IV							Dewar T=-0.068	1143
30s											7377
2353	<2"	4.51	B2IV							cloudy	491
20											7604
										T=-0.030 Topup @ 22:50	

1 pg #1 Sun – mon

Date 1990 Sep 30/Oct 1 Observers J.n../.MKi.....

Emulsion Batches:

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.....Telescope...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr. A	Exp. Mtr. B	Seeing
FIT 00492.mki	Flat while opening			18 45 29	19 33	focus run ≈ 50 secs Best Cass → Cass		TUNG A=1/4		45	1/200	*
493.mki	Comp			19 35 48	19 39 36		f18 stop in	FEAR A 1/4	≈ 200s	8	1/70	
494.mki	HD 182917	19 21.9	+50 02	19 42	20 42	01 39 W				10	1/200	V poor
495	Comp						f18 stop IN	FEAR A=1/4	≈ 200s	10	1/75	
496	PU VUL	20 16.8 Precessed	+21 15	20 52 31	22 02	02 21 W	+21 36					poor
497	Comp			22 07 38			f18 stop	FEAR A=1/4	200	7	1/70	
498	BM CASS	00 48.6	+63 33	22 19	23 38	00 55 E	+64 04			10	1/250	poor
499	Comp			23 49			f18 stop	FEAR A=1/4	≈ 220s	8	1/60	
500	HD 3765	00 35.3	+39 40	23 54	00 15	00 02 E				30	1/300	V poor
501	Comp			00 18			f18 stop	FEAR A=1/4	220	10	1/65	
286.Tn	HD 3765	00 35.3	+39 40	00 17		0 0	4 frames	'N' mode	Int x4	39	1/39	V poor
502	HD 182917	19 21.9	+50 02	00 30	01 11	06 08 W				20	1/50	**
503	Comp						f18 stop	FEAR A=1/4	300	8	1/50	
504	HD 14386 MIRA	02 14.3	-3 26	01 26 39	01 58	0 0				50	1/500	poor
505	Comp			01 59	02 40		f18 stop	FEAR A=1/4	300	8	1/70	

Spectr. Temp. ..... Dome Temp./Hum. +11°C 76% Transparency Conditions .. P.H.R.T. Cloudy - hazy .. 8.

Focus ..... medium N W Breeze

Spectr. Temp. ..... Dome Temp./Hum. ..... PTS powered up by 1840 no encoder.

parison Exp.	Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks tonight	Quality
	45 / 2000*		ND = 2.0		Fiber PTS	1800/5018	BS	4820Å	C/H B		* cnts = 1600 at zenith	
≈ 200s	8 / 70		no ND						CHB			
	10 / 200	v poor	var 7.8V	M						CH Cyg pgm	Dec Drum +5016	
≈ 200s	10 / 75		no ND									
		poor								PU Vul pgm	H Beta emission	
200	7 / 70		~~var 7.8-9.3~~	~~M~~								
	10 / 250	poor	var 8.8-9.3V	M								
≈ 220s	8 / 60											
	30 / 1300	v poor	v 7.36	dk5						std vel		
220	10 / 65											
Int x4	39/39	v poor	v 7.36	dk5	"	Dome W	Fiber Hal	Fans on since opening		seeing test	Dome T = +6°C No wind at all	
	20 / 150	~~4~~ 4"			Fiber PTS	1800/5018	BS	4820Å	CHB	CH Cyg pgm	seeing better [Tel East side]	
300	8 / 50											
	50/2500	poor	~3V	M			Cnts	to 4500/sec briefly			ND 0.6 in Beam.	
300	8 / 70											

9 pg #2 Sun – Mon

Date 1990 Sep 30/Oct 1 Observers J.A. M.K.I.

Emulsion Batches:

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Spectr. Temp. ....

Focus .....

Spectr. Temp. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mir. A/B	Seeing
506	MWC 560	07 21.0	−07 32	02 30	03 13	3 49E				8/25	V poor
507	"	"	"	03 14	04 20	2 42E	−7 41			8/110	
	Field Drawn in Field Book. It matches former Field drawn.									Too bad about	
508	MWC 560	07 21.0	−07 32	04 20	~~05~~ 38	1 24E				8/130	poor
509	Comp			20~~5~~ 40			f18 NO ND	FeAr A=1/2	200	15/190	
510	Flat at end			06:~~17:50~~	08:17		f18 ND 2.0	TUNG A=1/4		40/1900	

Spectr. Temp. ..... Dome Temp./Hum. +6°C 87% Transparency Conditions ..5.1. Hazy..... IV

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +5.5°C 87%

H = 87%
sl foggy

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B											
8 /25	v poor	Faint		Fiber PTS	1800/50·8	BS	4820Å	CHB	ND 0.6 in By mistake	cnts only ≈ 20/sec at start	
8 /110									NO ND Filter; I thelps.		
Too bad about leaving ND in Beam for Exp # 506. Things were bad enough as they were over there.											
8 /130	poor			Fiber PTS	1800/50·8	BS	4820Å	CHB		1·8 mey on "E"	
15 /190				"	"	"	"	"			
40 /1900				"	"	"	"	CHB		50/2350 at 8h	
									Bucked up to 35" to end.		
					found revolving door opening facing control room dark corners probably elevated.						

II Tues/Wed

Date 1990 Oct 2/3 Observers KK/Tn/Pd

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
511	Comparison	~~platform~~	Zenith	[Oct 1 afternoon]			f/18 only	~~FeNe~~	
	Deleted	—			1913		f/18 only	FeNe	330s
512	Comparison						f/18 Stop	FeNe A=1/2	
513.KK	HD183912	19 26 42	+27 45 00	18 36 30	18 50 05	00 12 E			
514.KK	"	"	"	18 50 39	19 17	00 15 W			
515.KK	"	"	"	19 17	19 56	00 54 W			
Fm 000 287.Tn	HD183912 seeing test				20 03	01 00 W			Int x4
516	Comp						f/18 Stop	~~FeNe~~ A=1/2	
517	HD186791	19 41.5	+10 22	20 23	20 37	01 20 W			
518	Comp			20 41			f/18 stop	FeNe A=1/2	200
519	HD217675	22 57 3	+41 47	21 01 19	21 55 40	00 36 E			
520	"	"	"	22 05 30	22 49	00 16 W			
521	Comp						f/18 stop no ND	FeNe A=1/2	x 200 Int = 0
DT 173.Tn	M.RA	02 14 3	-3 26	00 54	01 02	00 47 E			
174.Tn	"	"	"	01 13	01 21	00 28 E			"
	Note 174 Tn	CAMERA Rotated ≈ 90° CCW							

Spectr. Temp. ..... Dome Temp./Hum. +11°C 80% Transparency Conditions ... Fine 12:

Focus .....

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

Speckle configuration; fiber 1 & 3 6.3× objective
0".34 in 150° for Albireo A2

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
330/330				RC #1	830/ 39.5	300μ	PCS				
120/120				"	"	"	"		Speckle		
900/900	2"	B= 4.2	K5II +B?	"	"	"	"	300-3800 pixels	KK pgm Speckle	6 meg Time tag Same focus adj @ 1425 (image off hole)	
1100/1100	2"			"	"	"	"	500-3600 pixels	"	10 meg Time Tag to "E"	
1200/1200								"			
(39×39 pixels ?)	2" ?					speckle Fiber Head.			Only ME Fan On, due to water in SE bell. Dome WSW, light SW breeze		
1800/1800		~~B~~ 2.72 ~~5.4~~	~~K5 VII~~					500-3600	std/vel	Timetag 6.4 meg	
120/120		B									
300/300	3"	3.6	B6p					600-3600	Asm Sp KK	Timetag to "0" 6.1 meg	
300/300	2-3"	"	"					500-3600 Pixels	"	" " 4.4 meg	
300/190											
47 columns	3"	mix ?	M	Dome ESE		speckle Fiber head (Q in worm)			Drive Test	300 frames SW breeze	
47 col	"	"	"	Dome South		"			Dec Drive Test.		
					Q6	Leaving worm at end.					

13 #2

Date 1990 Oct 2/3 Observers Tm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
DT 000175.Tm	MIRA	0214.3	−3 26	01 3357	01 42	0007E			
	Camera Back to normal Rotation posn.			Q•5 leaving worm at start of 175.Tm					
DT 000176.Tm	H016739	0235.9	+3946	0211	0218	0005W	?	.	Int x0
					R5 leaving worm at end				
DT 000177.Tm	H016739	"	"	0222	0229	0016W			Int x0
					R•2 leaving worm at end				
	Note. No Flat Done Tonight due to ~~fiber sys~~ signal loss.								
522	Flat — after attempting to reconstruct previous state							A='8	72.0s

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

Exp Mtr	Seeing
47 c/ [illegible]	OK
5.0 c/ [illegible]	
[illegible] counts	OK
37 c/ [illegible]	OK
[illegible]	OK

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .... FINE ..... 14...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 49.5°C 75%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
47 columns	OK										
Q: 1 leading column at end					300 frames	speckle Fiber Head					
39 columns	OK	492 ✓	F9V	300 frames		"			Drive Test at Zenith Dome West		
39 col	OK	"	"	CAMERA 90° CCW of normal "		"			Dec Drive Test Dome West		
1800/1800											

15 Sat-Sun

Date 1990 Oct 13 Observers KK/Tn/Tn & Niki

Emulsion Batches:

2 Large Tours looked at Ring Nebula

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	Vega	18 36.5 (1989.5)	+38 46		18:00	0:35W	1S-2S-	5-5-5	5-2
	γ Lyr	18 58.5 (1989.5)	+32 40		1815	0:26W	5 10	20 20	40
	γ Aql	19 45.8	+10 35		1825	0:13E	5-10-20	20-40	40-40
523	Flat (before tone)			1836	1901		A=1/4	ND=20	
524*	Comp - renum to 524 (200 now) Done			2059			A=1/2	F18 stop	200
525	Ring Nebula			2107	2145	0403W			
526	Comp						F18 stop A=1/2	FEAR ND 0.2	200
527	HD 182917	19 21.9	+50 02	2154	2244	0432W			
528	Comp						F18 stop A=1/2	FEAR ND 0.2	200
529	BM Cass	00 48.6	+63 33	2251	2356	0013W			
	MIRA "naked eye" mag estimates (*with my new plastic safety glasses)								
530	Comp						A=1/2	FEAR ND 0.2 F18	200
531	MIRA	02 14.3	−3 26	0007	0034	0033E	ND=1.2		
532	Comp						A=1/2	FEAR ND 0.2 F18 stop	200

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

Exp. Mtr	Seeing
	He
A: B	
A: 200	
C: 196	
E: 1/15	
B: 1/10	
D: 1/30 1	3"
A: 1/10	
C: 1/30	4"
E: 1/15	
B: 1/15	
D: 1/500	4"
E: 1/100	

Spectr. Temp. ..... Dome Temp./Hum. +13°C 85% Transparency Conditions . Clear. by sundown 16

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Some Cloud during Tour.

Fans on & Door open by 17:30

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	Hazy	0.00	A0				Tech Pan 2415		Hartmann	Hot	
		B- 3.02	B9 II				"		"		
		V 2.72	K3 II				"		"		
A B				Fiber Fed PTS	1800/508	BS	~~~~ 4820Å	CH B			
70 2000											
10 190											
5 /15			H&B Emm					Something to do		while Fixing guide camera ~~Focus 2106 T= +8.7~~	
8/ 110											
10 /300	3"	VAR V≈8	M							H&B double pair (Twin Peaks)	
10 /110											
10 /300	4"	VAR ≈9	M							Cuts to 500/sec	
Mira s/ brighter than α and δ Cet But s/ fainter than γ Cet ∴ ≈3.7V										Focus 2743 T= +8°C	
10 /115											
20 /1500	4"	V ≈3.7	M	Note (Std Vel next page can be used to compare magnitude to some degree)						1.5 cuts/sec for H&B emission	
5 /100											

17 #2

Date 1990 Oct 13/14 Observers T.A.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
533 mki	HD 18884	02 57.1	+3 42	00 39	00 55	00 55 E	ND=1.2		
534	Comp						A=1/2	FEAR ND 0.2	200
535	MWC 560	07 21.0	+07 32	01 35	02 19	03 54 E	No ND		
536	Comp			02 19			ND 0.2	FEAR A=1/2	200
537	Flat on Timer			02 47	1'	0 0	~~Platform~~ ND 2.0	JUNG H=1/4	10,800

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

Exp. Mtr.	Seeing
6. 1/250	4"
6 1/20	
2 1/50	cirsats
5 1/10	
5 1/200	

Spectr. Temp. ..... Dome Temp./Hum. +8°C 90% Transparency Conditions Sl. hazy 18...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +7.5°C 93%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
50 / 250*	4"	2.53 B=449	m1.5 III	Fiber PTS	1800/5078	BS	4820Å	CH B	stdvel	Bright 5000 cnts/sec before defocus*	
200 6 / 120											
4 / 150 (cts at start)				1800 cnts by end of exp	1800/5078	BS	4820Å	CH B	TIME TAGGED 400K	ie west of pair RH star in Im aquisition view	
20 5 / 110							MWC	not	visible in Finder at start (upper finder)		
							The 2 nearby field stars easily seen however.				
							Fit Files Backed up on 35" to 536.wmki				
35 / 2100				Fiber PTS	1800/5078	BS	4820Å	CH B			

H sun-mon

Date 1990 Oct 14/15 Observers Tn. / Mki

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FIT 00538.mki	Flat while opening up			18 19	18 42		ND=2.0	TUNG A=1/4	
539	Comp			18 45			f18 stop ND=0.2	FEAR A=1/2	200
540	HD 182917	19 21.9	+50 02	18 51 34	19 47	01 38 W			
541	Comp						f18 stop ND 0.2	FEAR A=1/2	200
542	BM CASS	00 48.6	+63 33	19 56	20 33	03 06 E			
543	Comp						f18 stop ND 0.2	FEAR A=1/2	200
544	PG VUL	20 16.8	+21 15	20 39	20 50	01 45 W			
545	PG VUL	"	"	20 51	21 24	02 19 W			2000s
546	Comp						ND 0.2	FEAR A=1/2	200
547	HD 222368	23 34.8	+5 05	21 31	21 42	00 42 E	ND 0.6		
548	Comp						ND 0.2	FEAR A=1/2	200
549	HD 14386 MIRA	02 14.3	-03 26	21 49	22 03	03 00 E	ND 0.6		
550	"	"	"	22 03 20	22 13	02 50 E	ND 0.6		
551	Comp			22 13			ND 0.2	FEAR A=1/2	200
552	Flat [all closed up]			22 28		Platform 0 0	ND 2.0	TUNG A=1/4	

Spectr. Temp. ..... Dome Temp./Hum. +12°C ... 85% Transparency Conditions .. SI. Hazy ... -cloudy ...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +11.°C ... 96%

Fans on & Dome open by 1815 20

South East wind 11 km/hr

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Å	~~P.H.~~ c/A	Program	Remarks	Quality
40/2000				Fiber Fed PTS	1800/5008	BS	4820Å	B		No change to setup from previous	
7/110											
5/200	3"	VAR 3.8V	M							(HB dbl) thin cloud [max cnts Focus 2732 T = +11.6°C]	
5/110	"										
10/500	2.5"	VAR 3.8V	M							dbl, last nights rate cnts to 700/sec (corr 287 cts sim: 14)	
										or ≈ 25 cnts/sec/pixel @ HB	
5/200	3"										
10/180	3"									Time Tagged	
40/2000		B 4-64	F7V						std vel	* in & out of cloud	
40/2000	poor	V 4	M						Rg pgm	PART Cloudy	
20/1000	"	"	"						n	more cloudy 1-2 cnts/sec/pixel @ H_3 emission	
30/1900									Backed up to 551		

21 pg #1 mon - TUES

Date 1990 Oct 15/16 ... Observers JR .....

Emulsion Batches:

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Spectr. Temp. ....

Focus .....

Spectr Temp. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Comparison Declination	Comparison Type/Filter	Comparison Exp	Exp Mtr	Seeing
553	Flat (while opening)			18 03	18 39		TUNG A=1/4	IVD 200		15	2.50
554	Comp			18 43		FeAR	~~F18~~ NO:02	~~TUNG~~ A=1/2	200	5	1.50
FIT & TAG 555, mkd	PU VUL	20 16·8	+20 15	18 48	19 39	0037W	~~F18 stop~~ ~~IVD=02~~	FeAR A=1/2	3000 sec	10	1.200 2.5"
556	Comp			19 39			F18 stop NO 0.2	FeAR A=1/2	200s		
557	HD182917	19 21·9	+50 02	19 4630	20 31	0226W				8	Free
558	Comp						F18 stop NO 0.2	FeAR A=1/2	200s	5	1.30
559	Comp (at Ha)						F18 stop no ND	FeAR Clear	200	5	1.60
560	HD182917	19 21.9	+50 02	20 43 43	21 18	0313W				7	1.300 2.5"
562	Comp			≈ 21 34			F18 Stop no filter	FeAR A clear	200s		
FIT & TAG 561, mkd	V. HD 182917	19 21·9	+50 02	21 19	21 33	0328W			800 sec	30	1.200
563	HD 207076	21 41·4	-2 40	21 39	21 5130	0126W				4	1.200 4"
564	Comp			21 52			F18 stop no filters	FeAR A clear	200	5	1.60
565	Comp (H Beta)			21 58			F18 stop ND 0.2	FeAR A=1/2	200	10	1.60
566	HD 207076	21 41.4	-2 40	22 03	22 17	0150W				10	1.900 4"
567	Comp						F18 stop ND 0.2	FeAR A=1/2			

Spectr. Temp. ..... Dome Temp./Hum. ..+11.5°C..64% Transparency Conditions ..Mostly Clear - Part. Cloudy. 22

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..+8.°C...75% Focus 2728 @ 10.7°C cuts MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ →	CH ~~P.H.~~	Program	Remarks	Quality
45/2150				Fiberfed PTS	1800/50.8	BS	4820	B			
8/150											
10/200	2.5"	≈10V							3/sec/pixel on HB cuts to 300/sec	TIMETAG 500→3600 pixels To E: 1.6 meg some cloud by 19 20	
8 /400		V4R ≈ 8.5	IV						CH Cyg pgm	Red HB peak higher than Blue one cuts to 550/sec	
5/130											
5/60				PTS	1800/62.8	BS	6600Å	B			
20/1300	2.5"	V ≈ 8	IV		1800/62.8		6600Å		CH cyg pgm	(Hα looks single & symmetrical Hα ≈ 2 cnts/sec/pixel)	
20/1000							6600		CH cyg pgm	Timetag 500 - 3600 pixels SI Haze now ≈ 3 meg	
40/2200	4"	B 7.89	M7III	PTS	1800/62.8		6600		CH cyg std		
5/60				"	"		"				
10/160				PTS	1800/50.8		4820Å				
10/900	4"	B 7.89	M7III	"	"		"		CH cyg std	Cloud at end	
				"	"		"				

23 pg #2

Date 1.9.90..Oct.15/16.. Observers .Jn.....Stefan.plenty.in

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
F.T 00 568.mki	BM CASS	00 48·6	+63 33	22 25	23 08	00 26E			
569	Comp			2310			f18 stop ND 0.2	FeAR A=1/2	200s
Fm 000 288.Tn	BM Cass Seeing test [done before Comp 569]			2309		00 25E	4 frames	Int x4	
Fm 000 289.Tn	HD 3765	00 35·3	+39 40	2319		00 00	11	11	
570.mki	HD 3765	"	"	2320	2330	0009W			
571	Comp						f18 ND 0.2	FeAR A=1/2	200s
572	HD 14386	02 14·3	-03 26	2337	2352	01 07E	ND 1.2		
573	Comp			2352			f18 ND 0.2	FeAR A=1/2	200s
574	Comp						f18 no filter	FeAR A clear	200
575	HD 14386	02 14·3	-03 26	000328	00 14	00 45E	ND 1.2		
576	Comp						f18 no filter	FeAR A=clear	200
577	Flat			0021	0129		f18 ND 2.0	TUNG A=1/4	4000
578	Flat on timer			0143			f18 ND 2.0	TUNG A=1/4	30 sec
	Note regarding 578 (Oct 17) kk felt that the λ region								
	was prob 4820Å, and that next dregs λ change was not rel to 578.						I didn't check comp lines to verify this shot		

Spectr. Temp. ...
Spectr. Temp. ...

Mir	Seeing
5	3"
5	
pref. ck	
ok	
4½	3"
4	
2	3"
6	
5	
4	
4	
3	

Oct 18 ff
shows

Spectr. Temp. ..... Dome Temp./Hum. +8°C 76% Transparency Conditions .. Part. Cloudy 24

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +7.5°C 82%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ D	~~H~~ CH	Program	Remarks	Quality
8/400	3"	VAR =9V	M1	Fiber PTS	1800/50·8	BS	4820Å	B		Focus 2738 T=+8.0°C	
5/120											
31×31 pixel	OK					Fiber Head				Dome North Light west wind	
31×31	OK					"				Dome west "	
40/2400	3"					BS			std vel		
4/130											
20/1200	3"	~3.8	M				sl <1 cnt/sec/pixel of H peak		MIRA pgm	sl hazy Some Rel Dry as noted oct 13/14	
6/140							4820				
5/60				Fiber PTS	1800/62·8	BS	6600Å				
40/2400				"	"	"	6600Å		MIRH pgm	Almost 2 cnts/sec/pixel @ Hα	
8/60						"	"				
48 ~~12~~800					1800/62·8	"	6600Å		cnts mostly 22600 cnts	*cnts 3200/sec when Tel on platform (Briefly)	
30/1750					1800/50·8		4820Å				
									Fits Worked up to 577		

Oct 18 Reduction of this Flat shows it consistant with 4820Å region. In fact probably very Red beyond Hα due to contin problem.

25 Tues - Wed

Date 1.9.90..Oct16.17... Observers ..Tn.....mki.checking..

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.
579	Comp (Kept any way - It was where things were; last grat Rotn)						f18 ND 0.2	FeAR A=1/4	
580	Comp						f18 ND 0.2	FeAR A=1/2	200
581	PU VUL	20 16.8	+21 15	18 41	19 32	0034W			3010
582	Comp						f18 ND 0.2	FeAR A=1/2	200
583	HD 182917	19 21.9	+50 02	19 37.30	20 04	0204W			30
584	Comp						f18 ND 0.2	FeAR A=1/2	200
585	V1016 Cyg	Precessed 19 53.6	+39 34	20 09 20	20 39	02 06 W			
586	Comp						f18 stop ND 0.2	FeAR A=1/2	200
587	HD 207076	21 41.4	-2 40	20 45	21 09	0046W			
588	Comp						f18 ND 0.2	FeAR A=1/2	200
589	HD 14386	02 14.3	-03 26	21 17	≈1 40	0315E	ND 0.6		
590	Comp						f18 ND 0.2	FeAR A=1/2	200
591	HD 222368	23 34.8	+05 05	21 45	21 54	0021E	ND removed f18 ND 0.2	FeAR A=1/2	200
592	Comp								
593	Flat			22 04	≈ 01 04	—	Jung ND 2.0	A=1/4	
594	3 Hr DARK	shutter closed		04 18					

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

Foc Mir A B Seeing

PROB Flat

1/10

1: 1/400 42°

2: 1/100 42°

3: 1/400 42°

4: 1/200 3"

4: 1/400 4"

5: 1/400 4"

6: 1/400

6: 1/400

Spectr. Temp. ..... Dome Temp./Hum. +12°C ... 64% Transparency Conditions . Clear ..... 26...
medium South wind

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +10°C ... 67%

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	CH.	Program	Remarks	Quality
		[PROB Flat	∂ of previous from Last night]		F. ber Fel PTS	1800/? *	BS	?	B		* ∠ prob / yes, very active Rel	
	/110				"	1800/508	BS	4820Å				
10	/400	∠2"	≈10V		"	1800/508	BS	4820Å		Cnts to 500/sec	TIMETAG to E: 3.4 meg 6 cnts/sec/pixel for H peak	
20	/1000	∠2"	VAR ≈8V	M						CH Cyg pgm	Rel LH HP part higher Focus 2735 e/r E	
7	/400	∠2"	≈10V							Field drawn but no doubts →	Str Em at Red Blue ends H Beta very Str. 12 cnts/sec/pixel	
		3"										
40	/2000	3"	B= 7.89	M7 III						CH Cyg std	some cloud	
40	/2400	4"	≈ 38V	M		Fainter S1 brighter	then rcet Then S cet			M1 RA pgm	thin cloud	
7	/140											
30	/(100-3000)	4"	B= 4.64	F7V						std vel	cloud	
								Backed up to 594 on 55° and All, incl TAGs to Perseus,				
30	/1800											
∠10	/∠10				Lights out						R. Hill	

Fri - Sat

Date 1990 19/20 Oct. Observers T.n./P.d.t.

Emulsion Batches:

Optical dish

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
ce 01389.Fds	* BIAS										
1390.Fds	* Comp			21 24				ThAr	6 sec		
1391.Fds	* HD 195556	20 26 58	+48 36 55	21 27	21 50	0255W				2350	
	* Comp							ThAr	6s		
	* HD 195556	" "	" "	2200	2230						
FM 000 290.PdR	HD 13013	02 02.3	+43 59	0056		0026W	+44 28	Int x4	"N" mode	2339 Pds	
291.PdR	HD 19509	03 03.1	+36 55	0126		0000		Int x4	"N" mode	2339	

Spectr. Temp. ..... Dome Temp./Hum. +03.3c 70% Transparency Conditions ..... Clearing ..... 2S ....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +2°c 80% Topup @ 17:30 T=-12.6°c FANS on & Dome open by 1730

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ λ	~~Slit~~ P.H. Height	Program	Remarks	Quality
				Echelle CCD	19.00	.265	4481Å	.205			
2050									"	[No goal, we ended Exp with stop and not "Readout]	
									" "		
										8Ci saturated	
	[Topup @ ≈ 22:40 T-8c] Sometime during previous exp, CCD drastically warmed up.										
39x39 pinhole		6.4 V	G8 (very light NW breeze)			Fiber Head	(Dome facing W)		Seeing Test	Dome T: +1.3°c	
39x39		7.10 V	KO	"	"	"	(Dome SW)		" " by MARIO		
										Guide Camera seemed noisy tonight.	
				Note* Nov 3/90 Jn deleted			The Ce obs except files were ~~after~~ next day or so. I believe.				

29 pg #1 SAT-SUN

Date 1990 Oct 20/21 Observers P.d.r.-T.n

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp A	Mtr B	Seeing
FIT 00595.mki	Flat			1817	1843		ND 2.0	Tung A=1/4		30	1400	4.5"
596	Comp						ND 0.2	FeAr A=1/2		10	1140	
597	PU VUL	20 16.8	+21 15	190335	2006	1 24.5 W	NO ND			5	160	4.3"
598	Comp						ND 0.2	FeAr A=1/2				
599	PU VUL	20 16.8	+21 15	2023	20 50	2 09 W	ND 0.3*			5	170	
600	Comp						ND 0.2			5	120	
601	V1016 Cyg	19 53.6	+39 34	20 59	21 40	3 23 W	ND 0.3			5	80	3"
602	Comp HD 182917			21 41			ND 0.2	FeAr A=1/2				
603	CH Cyg	19 21.9	+50 02	21 54	22 45	5 00 W	no filter			5	1200	5"
604	Comp						ND 0.2	Fe Ar A=1/2				
605	HD 207076	21 41.4	-2 40	22 52	2329	3 23 W				10	1500	>6"
EOC	Comp						ND 0.2	Fe A A=1/2				
607	BM Cass	00 48.6	63 33	23 42	0050	1 36 W	[redacted]			1/2	350	3.5"
608	Comp						ND 0.2	Fe A		5	100	
609	BM Cass	00 48.6	+63 33	01:02	02:05	2 51 W				2	300	4"

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

Spectr. Temp. ..... Dome Temp./Hum. ≈6.0°C 75% Transparency Conditions ... Mostly Clear ... 30

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ≈4.7°C ... 92%

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	CH.	Program	Remarks	Quality
30	1400	~~<3"~~	~~<10~~ V		Fiber Feed PTS	1800/5098	BS	4820Å	B			
10	1140											
5	1160	<3"	V ≈10								Hβeta ≈ 3 cts/sec/pixel	
5	170		V ≈10								*To reduce Hβeta cts to <1/sec	
5	1120											
5	180	3"	V ≈10									
5	1200	5"	VAR ≈8	M						CHogg pgm		
10	1500	>6"	B= 7.89	M						CHogg std		
10	350	3.5"	VAR? ≈8							New absorption Red of Hβeta?		
5	1100									Header says BM Cass		
10	1300	4"								TimeTAG to E:\Spect		

31 #2

Emulsion Batches:

Date 1990 Oct 20/21 Observers P.D. I.T.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
610	Comp						ND 0.2	FeA	200	5/110	
611	Mira HD 14386	02 14.3	-03 26	02:20.8	02:42	02 04W	ND 1.2			24/900	
612	Comp						ND 0.2	FeA	A=½ 200	5/110	
613	~~MCW 560~~ *	~~07 21.0~~	~~-07 32~~	≈03	0314	≈0230E	no filter			5/200	3"
614	MWC 560	07 21.0	-07 32	0317	0518	0026E	no Filter			5/350	3"
615	Comp						ND 0.2	FeA A=1/2	200s	5/100	
616	HD 66141	07 57.1	+02 36	05 28	0548	E	ND 1.2			2/1300	3"
617	Comp						ND 0.2	FeA A=½	200		
618	Flat			06 09			ND 2.2	Tung A=½	0,80	35/2700	
~~619~~	~~Comp~~						~~ND 0.2~~	~~FeA A=½~~	~~200s~~	~~7/35~~	
~~620~~	~~V 1016 Cyg~~	~~19 53.6~~	~~+39 34~~	~~18:25~~							

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

Spectr. Temp. ..... Dome Temp./Hum. 14.5°C ... H=93% Transparency Conditions ... Sl. hazy ... 32 ...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 14.3°C ... H=94%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	C.H.	Program	Remarks	Quality
5/110				Fiber PTS	1800/508	BS	4820	B		Header says BM Cass	
20/900		vm 3.7	M								
5/110											
5/200	3"	v 2.10							* WRONG STAR Field Drum	TIMETAG TO E 260K TONE of mark 580	
5/250	3"	v 2.10								TimeTAG to E 69meg CNTS TO 450/sec	
5/100											
20/1300	3"	v 4.39	K2 III						stdvel		
35/2700											
~~7/30~~											

33 Mon - Tues

Date 1990 Oct 22/23. Observers P.d.c./I.T.n.

Emulsion Batches:

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.....

Spectr. Temp. ...

Focus .....

Spectr Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr A	Exp Mtr B	Seeing
FIT00 619.mK1	Comp						ND 0.2	Fe AR A=1/2	200	5	1/10	
620	V1016 Cyg	19 53.6	+39 34	18 25	19 30	1:20 W				5	1/50	3"
621	Comp						ND 0.2	Fe AR A=1/2	200s	5	1/100	
622	PU Vul	20 16.8	+21 15	19 51.5	21 17	2:44 W				5	1/60	4"
623	Comp						ND 0.2	Fe AR A=1/2	200s			
624	HD182917	19 21.9	+50 02	21 29 20	22 33	04 57 W				8	1/100	5"
625	Comp						ND 0.2	Fe AR A=1/2	200s			
626	HD207076	21 41.4	-02 40	22 40 29	23 20	03 22 W				5	1/150	5"
627	Comp						ND 0.2	Fe AR A=1/2	200			
628	BM CASS	00 48.6	+63 33	23 30	00 29	01 23 W				8	1/300	3"
629	Comp						ND 0.2	Fe AR A=1/2	200			
630	HD14386 MIRA	02 14.3	-03 26	00 38	00 58	00 27 W				1	300-3000	5"
631	Comp						ND 0.2	Fe A A 1/2	200	1	1/10	
632	FLAT			01:14:38	02:05:00		ND 20	Tung A 1/4		25	1"	
633	FLAT			0219					10, 80	5	1/100	

Spectr. Temp. ..... Dome Temp./Hum. +8°C 62% Transparency Conditions PART Cloudy 34

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +5°C 75% * λ center more like 4830Å probably Grating angle s/ shifted from previous nights

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	CH.	Program	Remarks	Quality
5 / 110				Fiber PTS	* 1800/5016	BS	4820	B	*		
5 / 50	3"	✓ ≈10								Cloud as Neutral Density	
5 / 100											
5 / 60	4"	✓ ≈10								thin cloud as Neutral Density	
8 / 180	5"	VAR ≈8	M						CH Cyg pgm	thin cloud	
5 / 150	5"	B= 7.89	M7						CH cyg std	cnts to 500/sec in clouds increasing cloud	
8 / 300	3"	VAR ≈8.5								cnts to 600/sec under cloud PART Cloudy	
10 / 300-3000	5"	≈ 4	M						MIRA pgm	Note some HB rates may be too high on cloudy times.	
10 / 110											
25 / 1700											
6 / 1700											

Pg #1 Tues - wed

Date 1990 Oct 23/24 Observers P.d.r. I.T.n

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
634	Comp						ND 0.6	FeNe A=1/16	200
635	PU VUL	20 16.8	+21 15	18 56	19 15	0055 W	no filter		
636	PU K UL	"	"	19 23.5	19 55	0135 W	ND 1.2		
637	Comp						ND 0.6	FeNe A=1/16	200
638	V1016 Cyg	19 53.6	+39 34	20 01.36	20 24	2 18 W	ND 1.2		
639	V1016 Cyg	"	"	20 27.26	21 13	3 08 W	no ND		
640	Comp						ND 0.6	FeNe A=1/16	200
641	HD182917	19 21.9	+50 02	21 19	21 39	4 06 W	no ND		
642	Comp						ND 0.6	FeNe A=1/16	200
643	HD 207076	21 41.4	-02 40	21 45	2201	2 06 W	no ND		
644	Comp					0		Int Y4	~~UV~~ mode
FN 00292	HD223094	~~23 41.5~~	+28 09	22 15		0 21 W	no ND	Int Y4	IV mode
645	HD223094	23 41.5	+28 09	22 18	22 42	0 47 W	ND 0.3		
646	Comp						ND 06	FeNe A=1/16	200
647	BM CASS	00 48.6	+63 33	22 57	23 37	034 W	no ND		

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

E.T. Mtr	Seeing
1/50	
1/300	4"
1/40	4"
1/40	
1/350	3"
1/45	
1/100	4"
1/200	4"
3 + 3 Prods	
1/700	3"
1/500	3"

Spectr. Temp. ..... Dome Temp./Hum. +9°C 70% Transparency Conditions Clearing 36

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +6.5°C 78%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	CH.	Program	Remarks	Quality
5/50				Fiber PTS 1800	1800/62.7	RS	6580R	B			
10/500	<3"	V= 10					"			≥10 cnts/sec/pixel @ Hα	
5/40	<3"	V= 10								<1 cnt/sec/pix @ Hα	
5/40		V ≥10								<1 cnt/sec/pix @ Hα	
15/350	3"	V ≥10								≥10 cnts/sec/pixel @ Hα	
5/45											
25/1100	<3"	Var ≥ 85 V	M6						CH Cyg pgm	cnts to 1500/sec	
25/2000	4"	B= 7.89	M7						CH Cyg std.		
~~31×31~~									~~Dome SW~~	~~Mod NW breeze~~	
31×31 pixels		V 7.45		4 Frames		Fiber Head			Dome SW	Mod NW breeze	
30/1700	3"								Std vel	some cloud	
10/500	<3"	VAR ≥8	M							≥1 cnt/sec/pixel for Hα	

37 #2

Emulsion Batches: .....

Date 1990 Oct 23/24 Observers Pdr/Tn.....mkt..stacking up

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Spectr. Temp. / Focus / Spectr. Temp. / Exp / Mir / Seeing
648	Comp after BM Cas						ND 0.6	FeNe H=1/16	200	5 1/50
649	Flat (for Hα)			23 47	00 54	02 W	+64	TUNG A=1/2		40 1/30 ND
650	Comp			01 02		"	" ND 0.2	FeAR A=1/2		10 1/25
651	BM Cas	00 48.6	+63 33	01 08 38	01 23	02 21 W	no filter			1 1/50 3"
652	Comp						ND=0.2	FeAR A=1/2		5 1/60
653	HD 14386	02 14.3	-03 26	01 31	01 47	01 21 W				10 1/30 3"
654	Comp						ND 0.2	FeAR A=1/2		
655	MWC 560	07 21.0	-07 32	01 57	02 08	03 25 E				1/50 4"
656	Comp						ND 0.2	FeAR A=1/2		
657	FLAT						ND=2.0	TUNG A=1/4		30 1/300
	START @	CCD 1329.50		for	CCD					

Spectr. Temp. ..... Dome Temp./Hum. +6°C 80% Transparency Conditions Mostly Clear 38

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +6°C 82%

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	C.H.	Program	Remarks	Quality
5 / 60				Fiber Fed PTS	1800/627	BS	6580Å	B			
40 / 100	ND=2.6			"	"	"	"	B			
10 / 125				Fiber PTS	1800/508	BS	4820Å	B			
10 / 500	3"	Vuk ≈8.5	M_b					B		PART Cloudy - Cloudy	
8 / 100								B			
10 / 300 3000	4"	V ≈4	M					B	seeing at slFainter than dy Sork Cet's	Cloudy mostly Some clear breaks Cirrus to 5000	
		V ≈20									
/ 150	4"	V ≈10								PART Cloudy - Total	
30 / 1800											
							All backed up & ftp to Perseus.			to this Date.	

39 Py#1 Wed–Thurs

Date 1990 Oct 24/25. **Observers** Pdr./Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE01389.Fits	BIAS (x4)			~23 40					
1390	DARK								
1391	BIAS (x4)	LOAD DARK, BAT							
1392	DARK	(≈ 40 mins total)							
1393	Comp							ThAR	10s
1394	HD 3901	00 36 29	+49 57 51	00 51	01 38	2 52 W	+50 28		
1395	Comp							ThAR	10s
1396	Comp			02 03				ThAR	10s
1397	HD 224572	23 53 56	+55 11 54	02 05 40	02 37 46	4 35.5 W	+55 43		
1398	Comp			02 42					
1399	Comp for α TAU							ThAR	10s
1400	HD 29139	04 30.2	+16 18	$02^{h}\ 56^{m}.30^{s}$	$03^{h}\ 05^{m}\ 30^{s}$	0 27 W			
1401	Comp							ThAR	10s
1402	Comp for Capella			03 16				ThA	10s
1403	HD 34029	05 09.3	+45 54	03 19	03 22	0 02 W			

Spectr. Temp. ..... Dome Temp./Hum. +8.6°C 79% Transparency Conditions ... V. Hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... clearing By midnight.

90 cgain 0 0 256 1024 4 1 CCDFm

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H. Length	Program	Remarks	Quality
				CCD Echelle	19.00	115μ .255	4481	600μ .205		1ci	
										2ci	
										3ci	
										4ci	
≈2200	2"	V 3.81	B2V						Fds Si pgm	1ci	ADU ≈2000 max
										T = -129°C Tcpu before this comp	
~1700	<2"	V 4.88	B1V						Fds Si pgm	2ci	ADU ≈1400 max
		B ~~2.44~~	~~K5 III~~								
6000		B 2.44	K5III						Std Vel	~~B 4 4 4~~	ADU ≈3000
5875		B 0.88	G8III+						Capella	2 ADU 4000	

91 #2 Wed - Thurs

Date 1990 Oct 24/25 Observers Pdr / Th

Emulsion Batches:

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Spectr. Temp. ....

Focus .....

Spectr. Temp. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
1404	Comp for Capella							Th AR	10s		
1405	HD 34029	05 09.3	+45 54	$03^h 32^m 30^s$	03 40	00 20W				500	
1406	Comp							Th AR	10s		
1407	BIAS x (4)										
1408-1411	Flats x 4					00 28W	+45 07	TUNG	55s		
1412-1415	Flats x 4					00 00	+16°	TUNG	55sec		
1416-1419	DARK. BAT started			04 30							

Spectr. Temp. ..... Dome Temp./Hum. 6.6°C ... 85% Transparency Conditions ... cloudy ... 42 ...

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H. Length	Program	Remarks	Quality
				CCD Echelle	19.00	.255 115u	4481Å	600u .205			
≈ 7500		B 0.88 (6811 ?.7F)							Capella	max ADU 5000	
										T = -129°C	
								.185		≈ MAX ADU = 8000	
								.185			

Note- Ce 1389.FTS → Ce 149.FTS now FTP'd to Perseus / CCDOBS

43 Fri/Sat

Date 1990 Oct 26/27 Observers KK SC Pd

Emulsion Batches: Optical data clone

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
ce 1420	Comparison							Th A	10^s		
ce 1421	HD 183912	19 26.7	+27 45	18:58	19:11						2-3"
ce 1422	comparison							Th-A	10^s		
ce 1423	bias 4X										
ce 1424	comparison							Th-A	10^s		
ce 1425	HD 186791	19 41.5	+10 22	19:22	19:29					2.00	2"
ce 1426	comparison							Th-A	10^s		
ce 1427	comparison							Th-A	60^s		
ce 1428	HD 202109	21 8.7	+29 49	19:40	19.51						2"
ce 1429	comparison							Th-A	10^s		
ce 1430	comparison							Th A	10^s		
ce 1431	HD 209790(A)	22 00.9	+64°08'	20:03	20:30						4"
ce 1432	comparison							Th-A	10^s		
ce 1433	HD 209791 (B)	22 00.9	+64°08'	20:35	21:19					4.00	3?
ce 1434	comparison							Th-A	10^s		
ce 1435	comparison							Th-A	10^s		

Spectr. Temp. ..... Dome Temp./Hum. +3.2C / 62.5% Transparency Conditions clear 44

Focus .....

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

94 again T = −100°
00256 1024 4 1 ccd/fmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD ECHELLE	19.00	.277 60μ	.4582 4481 Å	600μ .205			
2000	2-3"	B=42	K5II + B						Asm-Sp / ICK		1700
2100	2"	4.24	K3III								1500
2200	2"	4.7	G8II								1500
2000	4"	4.63	A3m							seeing variable	1900
420	3?	6.9	F7								250 drive hgd

45

Date 1990 Oct 26/27 Observers ..... page 2 .....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
ce 1436	HD 215182	22 38.3	+29° 42'	21:28	21:36					2000	2"
ce 1437	HD 215182	22 38.3	+29° 42'	21:37	21:54					5000	2"
ce 1438	comparison							Th-A	10s		
1439-42	flats							Tung	15s		
1443	flat							Tung	60s		
1440 1444	dark	1200s									
		Oct 29									
cef013	Hartmann - in							Neon	20		
cef014	Hartmann - out							Neon	20		
		Oct 30									
cef 015	Hartmann out	Dewar filled at at micrometa side						ThA	10		
016	" IN							"	"		
017	" IN	Dewar flush						"	"		
018	" OUT							"	"		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... 46 .....

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2000	2"	3.8	G81 + F?								1700
5000	2"	3.8									3800
2				echelle	17.70	20μ x 50μ	6300 Å .3100		focus test	T = 6°3C F = .250	
2											
P				"	"	50 x 200μ	"				

47

Emulsion Batches: .....

Date 1990 Oct 30 cont. Observers KK — focus tests on echelle .....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
	rotated tilt rings so that notch now reads 8 - inner 8. outer										
	instead of 7 inner 11 outer										
cef 019	mask IN							THA	10^s		
cef 020	mask OUT							THA	10^s		
1990	Oct 30/31	Mki/Pdr	PCS								
658	FLAT			17:34	20:32		ND = 2.0	Tung A = 1/4		30/130	
659	Comp.			20:57	21:00:25		ND 0.2	FeA A = 1/2	200	Hc/180	
660	Comp			21:03	21:06:26		" "	A = 1/4	200	5/50	
661	BM Cass	00 48.6	+63 33	01 13:30	01:33:30		No ND			30/540	
662	Comp			01:42:29			ND 0.2	FeA A = 1/2	200	10/200	
663	HD 29587	04 34 30	+41 57 00	02:01:00	02:21:13	$00^h 00$	No ND			40/1000	
664	Comp			02:25	02:26:25		ND 0.2			5/110	
665	MCW 560	07 21 00	-07 32 00	02:57	04:12:28	$00^h 53$ E				1/250	3"
666	" "	" "	" "	04:15	05:30:06	$00^h 25$ W				1/200	3".5

Spectr. Temp. ..... Dome Temp./Hum. 5.7°C/84.8% Transparency Conditions Cirrus/clear 48.

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/1500											
10/180											
5/50										~2 phot/sec/pix @ 4765Å	
10/540											
15/120											
40/2000		V= 7.29	G2						std vel	defocused slightly	
8/110											
10/250	3"	V ~10									
10/200	3".5										

49

Date 1990 Oct 30/31 Observers MKi/Pdr (cont'd)

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
667	Comp	(1950)		05:32:10	05:35:35		Fe Ar A = 1/2	ND 0.2	200	5/135	
668	HD 86986	09 59 47	+14 47 56	05:49:30	05:59:30					20/1500	
669	Comp			06:01:30				ND 0.2	200	10/120	
670	FLAT			06:23:10			Tung A = 1/4	ND 2.0		20/1500	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... 50 .....

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5/135											
30/1500		V 7.93								spect photom std	
10/120											
28/1500											

51

PCS

Date Oct 31 / Nov 1 Observers MKI / Pdr

Emulsion Batches:

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Spectr. Temp. .....

Focus .....

Spectr. Temp. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp. Mir	Seeing
f:too 671 mk.	FLAT			21:47	23:45			ND 2.0	3h		
672	Comparison			23:55			ND 0.2	Fe-A A=1/2	200		
673	HD 29587	04 34 30	+41 57 00	00:06:30	00:11:29	02:05 E					
674	Comp	"		00:12:40			ND 0.2		200		
675	HD 19445	03 05 29 (1950)	+26 09 08	00 29 30	00 49 37	00 05 W					
676	Comparism			00 52 06	00 55 34		ND 0.2		200		
677	MCW 560 ?			01 15 30	01 37 18						
678	MCW 560 ?			02 13 30	02 27 10						
679	Comp						ND 0.2	Fe A A=1/2			
680	FLAT			03 01 00			ND 2.0				

Spectr. Temp. ..... Dome Temp./Hum. 5.5°C/57% Transparency Conditions ..Clear / moon 52

Focus ..... Clouded over at ~2:30

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/1600											
5/120											
40/2800	3"									rad vel std	
13/130											
20/1000		V 8.00	2dF							spectphoton std	
10/180											
10/50											
30/1700											

53 Thurs Fri

Date 1990 Nov 1/2 Observers ..T.n....(mki plane in)

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
681-mki	Flat			17 26 30	18 18 34	*Hr Ls from	ND 2.0	TUNG A=1/4	3105	4	4"
682	Comp			1821		Hr L circle	ND 0.2	FeAr A=1/2	200s	4	1
683	PY VUL	20 16.8	+21 15	18 26	19 26	00 32 W	no filter			4	2 3/4"
684	Comp						ND=0.2	FeAr A=1/2	≈ 180s		
685	V1016 Cyg	19 53.6	+39 34	19 33 30	20 34	0306 W	* no filter			KP 6 180	3"
686	Comp						ND=0.2	FeAr A=1/2	200s	5 100	
687	HD 182917	19 21.9	+50 02	20 39 44	21 27	0430 W	no filter			5	4"
688	Comp						ND 0.2	FeAr A=1/2	200	6 100	
689	HD 207076	21 41.4	-02 40	21 37 30	22 23	0305 W	Open * -02 08			5 200	4-6"
690	Comp						ND 0.2	FeAr A=1/2	200		
691	HD 223311	23 43.4	-06 56	22 28	22 44	01 24 W	no filter			4 100	5"
692	Comp						ND 0.2	FeAr A=1/2	200		
693	MIRA HD 14386	02 14.3	-03 26	22 49	23 06	00 44 E	no filter *			5 100 5 300	5"
694	Comp						ND 0.2	FeAr A=1/2	200s	5	
695	Flat			23 33	01 30	0 0	ND 2.0	TUNG A=1/4	3hrs	4 150	

Spectr. Temp. ....

Focus.....

Spectr. Temp. ....

Spectr. Temp. ..... Dome Temp./Hum. +11°C ...85% Transparency Conditions ..V..Hazy....Full moon.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +8°C....93% * Encoder Date @ 09 30 1990 do Hr Ls wrong e.g. when powered

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	CH.	Program	Remarks	Quality
40/1400				FF PTS (fiber fed)	1800/508	BS	4820Å	B			
10/110											
3/100	2¾"	V =10	HB Em							= 1.3 cal/sq/pixel @ 4300	
6/80 **	3"	V =10	HB Em						** Cyg ts to 220/50	* > 3 cal/sq/pixel @ H&K	
5/100										V hazy	
5/250	4"	VAR ~8V	Mb						CH Cyg pgm	Cont = @ 7200 Land hazy - part cloudy	
6/100 2000											
8/500	4-6"	B= 7.89	MF						Cl Cyg std	* part cloudy encoder date wrong on f.	
40/2000	5"	V 6.07	gK4						std/vel	thin cloud - thicker	
30/1000 →3000	5"	V =4	MA?						MHA pgm	* In/out of cloud + defocused	
5/110											
40/1500								Flow	3 ALL FITS Exposed to flow		
							All	PCS	Files Exited off = Perkins to Date	1990.	

pg #1 Tues/Wed

55

Date 1990 Nov 6/7 Observers T.n. mtki phone in

Emulsion Batches:

AST Time Synchronous with Astro. Clock

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FIT 00 696 mtki	Comp			18 23			ND 0.2	Fe Ar H-1/2	200s
697	PU VUL	20 16.8	+21 15	18 41 26	19 33	01 58 W	no filter		
698	Comp						ND 0.2	Fe Ar H-1/2	200 s
699	HD 182917	19 21.9	+50 02	19 45	20 42	04 04 W			
700	Comp						ND 0.2	Fe Ar H-1/2	200s
701	HD 207076	21 41.4	+02 40	20 49 48	21 15	02 15 W			
702	Comp						ND 0.2	Fe Ar H-1/2	200s
703	HD 3765	00 35.3	+39 40	21 21 29	21 37	00 18 E			
704	Comp			21 43			ND 0.2	Fe A H-1/2	200s
Fm 000 293 TN	HD 3765	00 35.3	+39 40	21 41		00 14 E		"N" mode	Just <4
705	V 1016 Cyg	19 53.6	+39 34	21 48	22 07	04 57 W			
706	Comp						ND 0.2	Fe Ar H-1/2	200s
707	HD 14386	02 14.3	−03 26	22 21 24	22 33	00 59 E			
708	Comp						ND 0.2	Fe Ar H-1/2	200s
709	HD 14386	02 14.3	−03 26	22 43 25	23 01	00 31 E			

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

Plate No.	Mir.	Seeing
696	30	
697	100	4"
698		
699	50	4"
700	ND	
701	40	5"
702	05	
703	00	4"
704		
705	00	3"
706		
707	00	5"
708	00	
709	00	4"

Spectr. Temp. ..... Dome Temp./Hum. 4°C 72% Transparency Conditions ... PART Cloudy ... 56 ...

Focus ..... NW wind

Spectr. Temp. ..... Dome Temp./Hum. ..... Dome open & Fans on by 18 EST

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	CH.	Program	Remarks	Quality
5 / 130				FF PTS	1800/508	BS	4820?	B			
8 / 100	4"	V c10								< 2 cnts/sec/pixel @ H beta	
8 / 250	4"	V c8	M6						CH Cyg pgm	{Red H beta comp much stronger than previous obs}	
5 / 100											
15 / 700	5"	B- 7.89	M7						CH CYG Std	cnts to 1000/sec	
5 / 115											
30 / 1600	4"	V 7.36	dK5						Std Vel	cnts to 2600/sec -630 ± 0.2 kms/sec	
39 x 39 pixels	POOR	V 7.36	dK5	4 frames semi cloudy					Seeing test	med to NW breeze Dome West cloud at end	
4 / 100	3"	V 210								< 4 cnts/sec/pixel @ Hβ to	
10 / 500	5"	prob 24	M						MK2 pgm	cnts to 1000/sec thick uniform Cloud	
8 / 140											
10 / 500	4"								Mix 4 pgm	some brief cnts to 1000/sec (thick cloud)	

57 Pg #2

Date 1990 NOV 6/7 Observers TN

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
FIT00									
710, MK	Comp			23 02			ND 0.2	IIaA #1/2	200s
711	HD 15318	02 22.8	+08 14	23 08	23 20 30	00 20E			
712	Comp						ND 0.2	IIaA #1/2	200
713	SKY (Cloud)	[02 22.8	+08 14]	23 29	00 09 30	W	[not too interesting at all]		
714	Flat (on timer)	platform		00 40		0 0	ND=20	TUNG #1/4	10 800

see next page

TN	CCD CASS MOUNT (using CCD pgm)			Dome Turned west before start					
CCF00PIF	CCD1 Flexure TESTS		Nov 7/90	19 48		02 00W	+40°	FeNe	2sec
CCF04PIF	2			20 05		03 00W	+40°		
CCF05PIF	3			20 10		04 00W	+40°		
06	4			20 15		05 00W	+40		
09	5			20 19	Dome moved 1st	05 00W	+20°		
08	6			20 23		04 00W	+20°		
07	7			20 26		03 00W	+20°		
010	8			20 29		02 00W	+20		
011	9			20 33		01 00W	+20		

Spectr. Temp. ..... Dome Temp./Hum. +1°C 77% Transparency Conditions ..... Cloudy now 58

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +1°C 76%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	E.H.	Program	Remarks	Quality
4 B				FF PTS	1800/50.8	BS	4820Å	B			
15 /1300 *	4"	B 4.22	B9.5III						Sp Phot Std	* cuts 200 → 1800/sec in & out of thick cloud Ended by solid cloud	
3 /15 /1400		very hard to see HD 5318 through cloud							* Thick Cloud ↑ a 2x Etched circle diam N of Star ↖ maybe 5 or 6 Em lines at blue end		

Backed up on 3.5" to FIT00705.mki → FIT00714.mki [On Pengeus to 714 mki, Nov 7/90

(Hr Angle) by hand wheel

All movements made gradually & slower Hα * 1ci H- 85.66 Dome T = +3.3°C

then usual sets to objects.

530	0	10	1024	7	1	CCDFMT FOR All		

1
2
3
4
5
6
7
8

* Wave length probably ≈ 8500Å TH Nov 15/90

59

Date 1990 Nov 7 Wed Observers KK

Emulsion Batches:
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Spectr. Temp. ...
Focus 4.9
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CCF0001	Hartmann Test	stellar						FeNe/clear	2s		
CCF0002	"	comparison						"	2s		
	Nov 7/8 Cont of previous pages Flexure Tests										
CCF12PIF	Flexure Test			20m 36		0000	+20°	FeNe Clear	2s		
13PIF				20 42	Done moved before exp	01 E	+20°	"	2s		
14PIF				20 46		01 E	+40°	"	2s		
15PIF				20 49		00	+40°		2		
16PIF				20 53		00	-10°		2		
	now CCD8 used		SAme night Nov 7/8			Cgain=0					
CC00001.FTS	BIAS(4)			21 08							
2	BIAS(4) ~~DARK 15m~~	DARK.BAT	1c1	21 10							
3	DARK ~~BIAS(4)~~		2c1								
4	~~DARK~~ BIAS		3c1								
5	DARK 15m		4c1	≈ 21 40							

Spectr. Temp. ..... Dome Temp./Hum. +3.8 ..... Transparency Conditions 60

Focus ..... 4.95 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 0 cgain

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/4200	250μ	CCD				
				BC	830/4200*	250μ	550 Hα O	10	1024 T	1 CCDFINT *G=4210 on Spectroller	
							Note λ prof = 8500 Å for Hil.				

61 wed Thurs

Date 1.9.90. NOV. 7.8... Observers T.a.....kk. phone in

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination FILTERS	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC00006	PTS Comp 5ci			≈ 22			ORANGE	FeNe clear	3s		0
CC00007	HD 8779 6ci	01 21.4	-00 55	22 16	22 26	00 09E	ORANGE		10 min	:30	5 poor
CC00008	HD8779 7ci	"	"	22 31	22 48	0012W	ORANGE		14 min	:30	"
9	Comp ~~8ci~~			22 54			ORange	FeNe clear			
10	HD8779 8ci	01 21.4	-00 55	22 59	cloud 23 08 20	0033W	ORANGE in beam		9 min	:30	poor ?
11	Comp 9ci			2322			ORange				
12	FLAT 10 ci					≈ +10° dec 0 0	ORANGE + ND 2.0	TUNG H=12	60s		
13	FLAT 11 ci					0 0	"	"	120		
14	BIAS (4) 1ci	Lights OUT		00 39	[looks like CC00014 was not taken]						
15	BIAS (4) 1ci			0040							
16	DARK 15m 2ci										
17	BIAS (4) 3ci										
18	DARK 15m 4ci										
	reclamp bridge										
19	Hartmann - comparin		T= 2.7°C F= 5.72								
20	Hartmann stellar										

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

Spectr. Temp. ..... Dome Temp./Hum. +2°C 82% Transparency Conditions PARTIAL CLOUDING (2)

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +1°C 81%

530 0 10 1224 7 1 CCDFMT

Stellar image guided on RH slit MEAN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~ Slit (L or R)	Program	Remarks	Quality
	0 CGAIN			CCD CASS	830 [G4210]	250u blue	H α			G=4210 on Sp controller	
2500	SI POOR	V 6.41	gk0					RH	stdvel	Rack 12,00 for Both	2200
3900	"	"	"		~~Exp~~			RH	"	Slits max on stellar signal with exp meter	3500
										CCD Temp = -129.	
1500	poor *	V 6.41	gk0	(* seeing Dia ≤ Length of slit)	• SI < slit Length			LH	stdvel	Rack 12,100 equiv Star on RH slit	
											3000
									Topup after Flats T=-131°		6000

Note Wavelength most likely ≈ 8500 Å, not Hα

Tu nov 15/90

63 Thurs/Fri

Date 1.9.96 Nov. 8/9 Observers Pdr./J.T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Min	Seeing
CC000	BIAS(4).	CC00021.FTS									
~~21.PIF~~	~~BIAS(4)~~	~~Lost~~ BIAS(4) with CCD2		~~2~~ ~~2745~~	Done 19:52 after		30.FTS				
~~22.PIF~~	~~DARK 15m~~	CC00022.FTS Lost	BIAS(4)		2230						
~~23.PIF~~	~~BIAS(4)~~	CC00023.FTS with CCD ~~pair~~	DARK		23:09				1200		
~~24.PIF~~	~~DARK 15m~~	CC00024.FTS	BIAS(4)		23:35						
25.PIF	Comp			1811			FeNe Clear	OG 550	2s		
CC00026.FTS 26.PIF	HD 194071	20 18.5	+27 55	1816	1830	01 03 W		GG14		300	poor
27.FTS	Comp	written					FeNe Clear	OG 550	2		
28.FTS	Comp	written		~~1832~~ 1910	~~1843~~		FeNe Clear	OG 550	2s	~~400~~ 300	
29.FTS	HD 194071	20 18.5	+27 55	1911.5	1946	2 17 W		GG14			
30.FTS	Comp						FeNe Clear	OG 550	2s		
31.FTS	Comp						"	"	"		
32.FTS	HD 216899	22 51.7	+16 02	20 0430	20 4330	00 41 W	Dec Drum +16 37	GG14		1400	
33.FTS	Comp						FeNe Clear	OG 550	2s		
34.FTS	Comp			20 51			"	"	2s		
35.FTS	HD 1326A	00 12.7	+43 27	20 5330	21 14	00 09 E		GG14		200	10K

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

Spectr. Temp. ..... Dome Temp./Hum. +0.6°C 67% Transparency Conditions ... Clear - Hazy 64

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 440 0 32 1024 21 CCOFMT man AOCY

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD CASS	830/G4210	250u 061	Hα	1		Topup @18 T=-1215	
								2			
								3			
								4			
								5ci			
800	POOR	8.13	G81II					6ci	Std vel	RH slit	300
								7ci		CCD2 brought in	
~~600~~								~~8ci~~			
		8.13	G81II					2ci	std vel	RH slit (stellar)	
1200		8.66	dM3.5						Asm Sp-KA	Getting V Hazy RH slit Field Brown → Black	700
1200	OK	8.07	M1E						Hsm Sp KA	RH slit	1100

65 #2

Date 1990 Nov 8/9 Observers T.A.L.Pd.S.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
36.FTS	Comp						FeNe Clear	OG 550	2s		
37.FTS	HD 1326B	00 12.7	+43 27	21 18 40	21 54 30	00 32W	GG14	GG14		230	50x
38.FTS	Comp						FeNe Clear	OG 550	2s		
39.FTS	Comp						"	"	2s		
40.FTS	HD 3765	00 35.3	+39 40	22 02 20	22 20	00 40W	GG14	GG14		500	
41.FTS	Comp						FeNe Clear	OG 550	2s		
42.FTS	Comp						FeNe Clear	OG 550	2s		
43.FTS	HD 9138	01 24.9	+05 38	22 38 30	22 49	00 14W	GG14	GG14			
44	Comp						FeNe Clear	OG 550	2s		
45	Comp			23 48			"	OG 550	2s		
46	HD 8779	01 21.4	−00 55	23 49	00 06	1 35W	GG14	GG14		1400	poor
47	Comp						FeNe Clear	OG 550	2s		
48	Comp			00 24			FeNe Clear	OG 550	2s		
49	HD 12029	01 53.0	+28 54	00 29 30	00 54	1 51W	GG14	GG14		750	50x
50	Comp						FeNe Clear	OG 550	2s		

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

Spectr. Temp. ..... Dome Temp./Hum. -0.2C 72% Transparency Conditions .. Hazy .....

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD CASS	830/G 4210	2Sec	IIIa				
230	soso	V 11.04	M6V						Asm Sp Std	Too Hazy, Prob too faint too	300
500		V 7.36	dK5						std vel	v cloudy	
		V 4.84	K4III						std vel	v cloudy	
4000	poor	V 6.41	gK0						std vel	part cloudy	1200
2450	soso	V 7.80	K2III						std vel		

61 #3

Date 1990 NOV 8/9 Observers Pdt. T.L.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
51.FTS	FLAT	Dec = 29°		0105		0 0	TUNG	OG550 ND20	60s	P=clear	
52.FTS	FLAT	Dec = 29°		0111		0 0	"	"	90s	"	
53.FTS	FLAT	Dec = 0°				0 0	"	"	60s	"	
54.FTS	BIAS (4)			0124							
55.FTS	DARK 15m	DARK, BAT									
56.FTS	BIAS (4)										
57.FTS	DARK 15m										
58.FTS	~~BD +53935~~ (Comp)						FeNe Clear	OG550	3s		
59.FTS	~~BD +53 935~~	~~05327~~	~~+5326~~	0215	03 06	0020W		GG14		300	5850
60.FTS	Comp						FeNe Clear	OG550	3s		
CCF00021	Hartmann —	comp		T = +2.4 C		F = 5.75		FeNe	2		
CCF00022	" -	stellar						"	"		
23	"	"						"	"		
24	"	comp				F = 5.65		"	"		
25	"	"									
26	"	Stellar				F = 5.85					

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

Spectr. Temp. ..... Dome Temp./Hum. -1.5°C 77% Transparency Conditions ... Cloudy ... 58 ...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -2°C 76%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
A=clear				CCD CASS	830/GA210	250u	Hd note Lower slit stronger			upper 4600 max	ADC4
n							note Lower Slit max=7600			upper 6600 max	"
n											
										Torque 0135 T=-102°C	
		*V d	It seems fainter [note - Image Aquisition view has another 2 stars of ≈ same brightness in TV view,								
200	5050	~~9.79~~	dm2	CCD CASS	830/GA210	250u	Hd	1ci	Asm Sp-KK	ST Hazy RH slit on guide view	ADC4 360
			Image Aqu Field of Obj I did is DRAWN in Book. CARD FIELD was reproduction								
										after alignment of Newtonian flat	
		*	Note Exp 59.Fits is of an object a 5' NW of DM +53 935 Field drawn								
		*	Much fainter than intended object.							Identifies it. In Book	

69 #1 Mon-Tues

Date 1990 NOV 12/13 Observers T. J. Pat

Emulsion Batches:

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Spectr. Temp. ....

Focus .....

Spectr. Temp. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CCF00027-RIF.	Flexure Tests			20 13		02.00W	+40°	0650 A-Clear	2s		
28	"					04E	+40	"	2s		
29	"			20 24		03E					
30	"			20 26		02E					
31	"			20 31		01E					
32	"			20 35		00					
33	"			20 37		01W					
34	"			20 41		02W					
35	"			20 43		03W					
36	"			20 45,5		04W					
37	"			21 09		04W	00°				
38	"			21 11		03W					
39	"			21 12		02W					
40	"			21 14		01W					
41	"			21 15.5		00					

Spectr. Temp. ..... Dome Temp./Hum. +1°c ....77% Transparency Conditions .. Snow 70

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... CCDFMT [460 0 32 1024 21 CCDFMT]

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD CASS	830/40.2*	25	Hα		G=4210*	Dome moved East after exp	
								1ci			
								2ci			
								3ci			
								4ci		Dome moved West after exp	
								5ci			
								6ci		Dome moved West after exp	
								7ci			
								8ci		Dome moved West after exp	
								9ci			
								1ci		Dome moved East before Exp	
								2ci			
								3ci			
								4ci			
								5ci			

11 #2

Date 1990 NOV 12/13 Observers T.A./.P.dr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CCF00042	Flexure test			21 17.5		01E	00°	OG550 A-clear	2s		
43				21 19		02E					
44				21 22		03E					
45				21 23,5		04E					
	DARK. BAT shunted			0109							

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

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								6a			
								7a		Dome moved East after exp.	
								8a			
								9a			
					Note	I can see an obvious Y shift between 1a & 9a. Ta					
								Primarily from 4hrs W → Meridian (1a Y shift)			

13 pg #1

Date Nov 14/15, 1990 Observers Tn./Pdr.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp Mtr.	Seeing
CC00061.FTS	BIAS (4)			17 33							
62	DARK 15m } DARK.BAT										
63	BIAS (4)										
64	DARK (5 min										
65	Comp (for Vega)			18 23							
	Vega			18 25 20						4 sec	
CC00066	HD 172107 (Vega)	18 33 33	+38 41	19 08	19:10	3 51 W				59400	
67	Comp (for Vega)							FeNe OG550	10s		
69	(Cyg X-1) HDE 226868	19 54.6	+34 56	19 34	20 26	3 46W		RG1		10	
68	Comp (1st comp for Cyg X-1)							FeNe OG550	100s		
70	Comp at end							"	100s		
71	HDE226868	19 54.6	+34 56	20 42	21 42	5 02W				560	poor
72	Comp							FeNe OG550			
73	Comp							"			
74	HD 15318	02 22.8	+08 01	21 56	22 25	00 45E		RG1		780	

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

Spectr. Temp. ..... Dome Temp./Hum. 4°C / 72% Transparency Conditions Some Clouds, 74....

Focus .....

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

30 GAIN
CCD FMT [448 0 32 1024 21] Cont ADC4

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CASS	831/~~445~~ 44.0	* 250μ	10,100 Å	* dbl window slit Star guided in RH window	~~C-530~~	T = ≈ −80 FOR IR WORK	
										(Note in searching wrong λ region) (Absorption lines seen in Vega spectra ≥ 12000 Å)	
										Note (Nov 22) T₂ Grating angle may have been 49.5° for EC00065, or ≈ 12000 Å (Actually another order Blue at this Tilt)	
6600											
59400		V= 0	A0V		831/44.0						
500		B= 9.78	09.7Iab							Cloud & wind	220
560	poor	B= 9.78	09.7Iab							PART Cloudy	220
7800		V= 4.28	B9.5III						Spl hot Std		330

15 #2

Date . Nov. 14/15 (cont'd) Observers ..... Tm / Pdr .....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
cc00075	Comp							FeNe OG550			
76	Comp							Fe Ar OG-550			
77	Flat			22 42			A=1/4	Tung OG550	50 sec		
78	Flat			22 48			A=1/2	"	10 sec		
79	BIAS(4)			22 58							v poor
81	HD 209975	~~22 02.1~~ ~~22 02.5~~	~~+61 48~~ ~~62 14~~	23 32 30	00 17	5 31 W		RG1		1000	v poor
80	Comp Before #81			00 25			Clear	FeNe OG-550			
82	Comp after #81 exp			00 22			"	FeNe OG 550			
83	HD209975	22 02.1	+61 48	00 27	00 42 41	5 57 W		RG1		1260	
84	Comp			00 48				Fe Ne OG550			
85	Dark			00 52 30							
86	Comp							FeNe NO FILTER	15 sec		
87	DM +53 935	05 33 12	+53 26	03 00 30	03 58	01 36 W	no filter			1600	poor
88	Comp							FeNe clear	15s		
89	DM +53 935	"	"	04 02	05 04	02 43 W	no filter			1200	v poor

Spectr. Temp. ..... Dome Temp./Hum. +5°C 73% Transparency Conditions .. Part. cloudy ..... 76..

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					831/44.0						
					〃						
					〃						3000
					〃						
	✓ ~~poor~~	✓ ~~5.40~~			〃				Sp		
6000	✓ poor	✓ 5.10	09.5 Ib		〃				Sp Phot Std	cloudy partly	
					〃						
					〃						
8300					〃						1500
					〃						
					〃						
					〃		Topug during DARK 01 30			T=-84°C @ 01 30	
					1800/47.4		G = 50 20			5232Å = 47.4	
1100	poor	✓ 9.78	dm2	560	0 32	1024	21 CCDFmT			T=-102°C	270
1200	✓ poor	✓ 9.78	dm2							5170Å = 47.2	≤70

T1 #3

Date 1990 Nov 14/15 Observers P.d.s. J.T.s

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
90	Comp							FeNe ~~0.55U~~	15sec
91	Comp							"	15sec
92	HD 65583	07 54.3	+29 31	05 14	05 32	00 51 W			
93	Comp							FeNe	15s
94	Comp							"	
95	HD 66141	07 57.1	+02 36	05 47	05 51 40	01 10 W			
96	Comp							FeNe	15s
97	Comp							FeNe	15s
98	HD 92588	10 36.3	-01 13	06 07	06 20 30	E			
99	Comp							FeNe	15s
100	Flat							A=1/8 Tung	40s
101	Flat							A=1/4 Tung	30s
102	Flat							A=1/4	60s
103	bias 4x								
104	15m dark								
105	bias 4x								

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

Exp. Mtr	Seeing
F500	V poor
H1500	V poor
F500	V V poor

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. Hazy ... P.M.T. Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +6.°C ... 85 %

78

APO

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CASS	1800/	150μ					
5500	✓ poor	✓ 7.00	dG7				5170Å		std vel		800
11500	✓ poor	✓ 4.39	K2III						std vel		1200
5500	✓✓ poor	✓ 6.26	sg/KI						std vel		
~~1900~~											1100
											3000

9

Date Nov. 15/16, 1990 Observers KK/Pdr

Emulsion Batches:

Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CCØØ106	Comparison (test)							Ti Ne	30s		
107	"	"						Fe A	60s		
108	NGC 7027			"	18 31						
109	"			18 33							
110	Bias										
111	NGC 7662			19 00	19 06				360s		
112	" "			19 09 40					90s		
113	" "			19 12 30					90s		
114	" "			19 31 51					90s		
115	" "			19 35 52					90s		
116	" "			19 39 20					90s		
117	" "			11:44	19:50				360s		
118	GK Per			20 40 35	20 44 52				240s		
119	bias 4X										
119a	mean of four flats							Tung 1/16	5s		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Clear 80

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30s					1800/4910	250μ	CCD			~~445~~ 0 32 1024 2 1	
60s					"	"	"			30 gain	
					1800/4880?	slitless			Exp Neb / KK		865
						"					
						"					
360s						"			"	90 cgain	2200
90s						"			"		
90s						"			"		
90s						"			"	Telscope Nurse made	
90s						"			"		
360s						"			"		
360s						"			"		only scan up.
240s						"					
						"					
5s						V				back to 30 cgain	900
										550 0 25 1024 21 ccd fmt	

81

Date Nov. 15/16 1990 Observers Pdr/Huang

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Trans Mtr	Seeing
CC ~~00~~ 120	Comparison						f18 stop in	FeAr A=1/4	x 200 s		
				~~22:04:25~~							
CC00120 FTS	Comparison			~~23:03:00~~				FeAr A=1/4	x 200 s		
CC00121.FTS	BM CASS	0048.6	+63.33	23.03:00	00.15:15						
CC0122.FTS	Comparison							FeAr A=1/4	x 200 s		
CC0123.FTS	Flat							Tung A=1/2	x 30s		
CC00124 FTS	Bias (avg 4)										
CC00125	Comp						no filtr	FeAr clear	60s		
CC00126	Flat							Tung A=1/2	5s		
CC00127	Bias (avg 4)										
CC00128	V471 Tau	03 44.7	+16 57	02 03 30	02 33 30			Yellow	30min		
CC00129	Fe Ar				02 42				60s		
CC00130	V471 Tau	03 44.7	+16 57	02-46 00	03 20	2 53 W			34 min		
CC00131	FeAr								60s		
CC00132	V471 Tau	03 44.7	+16 57	03 37	0407	3 40 W					

Spectr. Temp. ..... Dome Temp./Hum. 76.5/12.4°C Transparency Conditions Clear 87

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 550 0 25 1024 2≠1 ccdSmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Cass	1800/4820 =45°.2	250μ				Telescope normal mode	
										G=4820 = 4879 Å°	
					1800/6035					G=6035 ~ Hα 6570 Å°	
											7400
300. ds										T=-101.8	
700 ?									2ai?		
600									3ai		

85

Date Nov 15/16 Observers Mki/SChan/Bdr

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC00133	Comp.						clear	Fe Ar	60s		
134	V471 Tau	03 44.7	+16 57	04 20	04 50	4 21 W			30m	400	
135	Comp							Fe Ar	60s		
136	Flat.						Tung A = 1/2	Clear	5s		
137	Comp							Fe Ar Clear	60s		
138	HD62509	07 39 12	20 16 00	05 30	05 30 39	01 11 W			39s	2000	
139	Comp								60s		
140	Comp			05 50					60s		
141	HD87901	10 03 03	12 27.3	05 58 04					60s		
142	HD87901			06 03 31					30s		
143	Comp			06 09.				Fe Ar Clear	60s		
144	Flat							Tungs A = 1/2	5s		
145	Bias (Acq 4)										
146	Dark								3600s		
147	Flat							Tung A = 1/2	5s		

Spectr. Temp. ..... Dome Temp./Hum. 10.°C./82.9% Transparency Conditions ... Clear ... 84

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... dl copied to optical disk

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Cass		long 2Sec				T=-99°.2	
600 cts											
										Top-up (T~97.0)	
20000										R.V. Standard.	7700
										Sp Phot Standard	
											7000
											3000
											8000
										decker out, full length	uncert

85

Date Nov 17/18 Observers Schwarz / Millar / Pdr

Emulsion Batches:

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Spectr. Temp. ....

Focus .....

Spectr. Temp. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CC 00 148	Comp						no filter	FeAr A = 1/4	200s		
CC 00 ~~149~~ 150	Pu Vul	20 16,8	+21 15	20 05	20 52,5					650 cts	
CC 00 149	Bias (avg 4)										
CC 00 151	Comp							FeAr A = 1/4	200s		
CC 00 152	Flat							Tung A = 1/2	10s		
CC 00 153	Comp							FeAr ~~Clear~~ Clear	60s		
CC 00 154	Pu Vul			21 11.75	21 47.5		Yellow			360 cts	
CC 00 155	Comp							FeAr Clear	60s		
CC 00 156	Bias (avg 4)										
CC 00 157	Flat							Tung A = 1/2	5s		
cc00158	Comp.							FeAr Clear	60s		
cc00159	Flat							Tung. A = 1/2	5s.		
cc00160	Bias (avg. 4)										
cc00161	V471 Tau	03 44.7	+16.57	23 35.00	00:05:35	0h 20m W ?	Yellow				
cc00162	Comp.							FeAr clear	60s.		

Spectr. Temp. ..... Dome Temp./Hum. 00/71 % Transparency Conditions ... Clear .....

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Coss		250μ				550 0 25 1024 2 ccd fmt	1
650 cts											
										G = 4820 H_β	
					1800/6035					G = 6035 H_α region	
360 cts										Central H_α Pixels Saturated	
										Spectrum shifted towards down in the window compared to 4 hrs W in H.A.	C

67

Date Nov 17/18 Observers Pdt/Mills

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00163	V471 Tau	03 44.7	+16 57	00:15:00	00:45:00	25 30W			30min
CC00164	Comp.							FeAr Clear	60s
CC00165	V471 Tau	03 44.7	+16 57	00:53:30	01:23:00	1 3 40W			30min
CC00166	Comp.							FeAr Clear	60s
CC00167	~~V471 Tau~~ Bias (Avg. 4)								
CC00168	Flat							Tung. A=½	5s.
CC00169	V471 Tau	03 44.7	+16 57	01 39.00	02 11 08	1 52W			30min
CC00170	Comp.							FeAr Clear	60s.
CC00171	V471 Tau	03 44.7	+16 57	02 22.05	02.52:05	2 32 W			30min
CC00172	Comp.							FeAr Clear	60s
CC00173	V471 Tau	03 44.7	+16 57	03:01:00	03:31.00	3 11 42W			30min
CC00174	Comp.							FeAr Clear	60s
CC00175	Bias (Avg. 4)			~~3 42 05~~					
CC00176	V471 Tau	03 44.7	+16 57	03:42.05	04 12:05	3 52 57W			30min
CC00177	Comp.							FeAr Clear	60s.

Spectr. Temp. ..... Dome Temp./Hum. -15/71%... Transparency Conditions ..clear..... 88.....

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~545											300
~600											
~740											340
750										Reset DOS time CCD time unchanged	
~860											
~905											

89

Emulsion Batches:

Date Nov. 17/18 Observers Pdr./Miller

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
cc00178	V471 Tau	03 44.7	+16 57	04:14:05	04:48:05	04 29 02W			30min	~20	
cc00179	Comp.							Fe Ar clear	60s.		
cc00180	Flat							Tung. A=1/2	5.s.		
cc00181	Comp.							Fe Ar clear	60s.		
cc00182	Bias (Avg. 4)										
cc00183	Comp.							Fe Ar clear	60s.		
cc00184	HD 62509	07 32 12	28 16 00	05:33:40	05:34:10	01 21 W			30s.		
cc00185	Comp.							Fe Ar clear	60s.		
cc00186	Comp.							Fe Ar clear	60. s.		
~~cc00187~~				~~05:56:32~~	~~05:57:12~~						
cc00187	HD 67901	10 03 03	12 27.3	05:56:32	05:57:12	0:39:33E			40.s		
cc00188	Comp.							Fe Ar clear	60.s.		
cc00189	Bias (Avg. 4)										
cc00190	Flat							Tung. A=1/2	5.s.		
cc00191	Dark								1 hr		

Spectr. Temp. ..... Dome Temp./Hum. -02.3/.73%. Transparency Conditions . clear..... 90

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~820											
										CCD powered down before this observation for ~1 min to reboot program & controller	

01

Date 18/19 Nov. Observers LZZ/Pdr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
~~CC00192~~	~~Comparison~~										
~~CC00193~~	~~Tung~~ Flat										
CC00192	Flat							Tung A=1	5s		
CC00193	Comparison							Fe A Clear	60s		
CC00194	BD +46° 186	0h45m18s	46°37'3"	22:34:30	23:19:00	2:01:52W		Yellow			
CC00195	Comparison							Fe A Clear	60s		
CC00196	Comp							Fe A Clear	60s		
CC00197	Bias (Avg. 4)							Tung A=1/2 ↓	20s ↓		
CC00198	Flat										
CC00199	HD 7927	1h1	57°	00:22:00	00:27:00					1 sec	
CC00200	Comparison							Fe A Clear	60s		
CC00201	Comparison							Fe A Clear	30s		
CC00202	Comparison							Fe Ne Clear			

Spectr. Temp. ..... Dome Temp./Hum. -0.08, +84.7 Transparency Conditions slightly cloudy 92

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... ccdfmt | 570 0 25 1024 2 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~628~~		10.4	FI:	CCD Cas		250μm	1800/6035		Hi latitude supergiants	Dimitar's list b=-17	
10 500		5.00	FO		1800/6035 1800/6035 1800/4520				NGC 457 RV		3000

93

Date 18/19 Nov Observers JLT/Pdr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC00201	Comparison							FeNe Clear	60s		
CC00202	Flat							Tung A-2	100s		
CC00203	Bias (Avg. 4)										
CC00204	HD 7827	1h13m47s	57° 42	01:54:00	01:59:00						
CC00205	HD 7902	1h13 47	57° 42	02:09:40	02:38:00	~5h W					4850
CC00206	Comparison							FeNe Clear	60s		
CC00207	Flat							Tung A=1/2	100s		
CC00208	Bias (avg of 4)										
CC00209	Comparison							FeNe Clear	60s		
CC00210	HD 62509	7h39m.2	28°16'	03:23:25	03:23:25	~00h 40m W					
CC00211	Comparison							FeNe Clear	60s		
CC00212	Comparison							FeNe Clear	60s		
CC00213	HD 29139	4h30.2	16°19'	03:54:30	03:55:20	~03h W			50s		
CC00214	Comparison							FeNe Clear	60s		
CC00215	Flat							Tung A=1/2	100s		

Spectr. Temp. ..... Dome Temp./Hum. —1°/88% Transparency Conditions High clouds

Focus ..... ccdfmt 94

Spectr. Temp. ..... Dome Temp./Hum. 525 0 25 1024 2 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800/4522	250μm					
~~5000~~										Uneven illumin.	5000
12000		v 5.00	F0	Spectrum well centered in window & slit for above format							500
4850		v 7.01	B6							Telescope very close to North Pier.	380
~~5000~~										Uneven illumination	5000
15000		1.14	K0	Spectrum off the reading window of the chip Had to guide off center of slit.						RV standard	
~~5000~~											
				Had guide off center of slit as above						RV standard	480

95

Date 18/19 Nov. Observers ZLT/Pdr.

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC00216	Bias (Avg. 4)										
CC00217	Dark								3600		
CCF00046	Hartmann test – 'comparison' position							FeNe clear	60s		
CCF00047	Hartmann test – 'stellar' position							V	V		

Spectr. Temp. ..... Dome Temp./Hum. -2°/85.5% Transparency Conditions High clouds 96

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800/ 4522	250μ				F = 5.86 T = -0.5	

97

Date Nov. 19/20 Observers Fds/Pdr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
ce01441	flats										
01442	comp							Th Ar	30s		
01443	HD172167 Vega			20:14:00	20:17:00			No filter			
01444	comp			20 22 54				Th Ar	20s		
01445	comp							Th Ar	20s		
ce 01446	HD 22928	03 35 48	47 28 04	20:34:55	20:44:23	3 28 E		No filter		1500	
1447	comp			20:47:35					20s		
ce 01448	HD 22928	03 35 48	47 28 04	20:50:49	20:59:26	3 05				1500	
1449	comp								20s		
1450	"			21:34:00					20s.		
1451	HD 22928	03 35 48	47 28 04	21.35:00	21:45:20						
1452	comp			21 47:05							
1453	HD 22928	03 35 48	47 28 04	21:47:50	21:55:30						
1454	comp			2200:00							
1455	Comp										
1456	HD 34303	5h 12m 45s	-6° 57' 04"	22.09:00	22 39 12	3 3 42 E					

Spectr. Temp. ..... Dome Temp./Hum. 1.4°C / 79.6 % Transparency Conditions Hazy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 40 cgain T = -127° 98

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle	: 18.60	.269 = 80μ					
				cross	: 4.556	.225 = 400μ (height)					
15000		3.00	B5III								
										not backed up to exabyte.	
15000		"	"								
		"	"								
		"	"								
		3.66	R5III								

09 (cont'd)

Date ... Nov. 19/20 ... Observers ... Fds./Pdr ...

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
Ce 01457	comp										
Ce 01458	comp			22 48 04							
Ce 01459	HD 22928	03 35 48	47 28 04	22 50 30	22:56:54					2000	
Ce 01460	comp			22 58 00							
Ce 01461	comp			23:02:21							
Ce 01462	HD 34503	5 12 45	-6 57 09	23 08 15	23 48 15	1 53 E					
1463	comp			23:50 00							
1464	comp			23:5400							
1465	HD 22928	03 35 48	47 28 04	23 57 03	00 07 02	00 00 36					
1466	comp			00 08 08							
1467	comp			00 11 51							
1468	HD 34503	05 12 45	-6 57 09	00 15 24	00 43 09						
1469	comp			4500							
1470	comp			00 49 05							
1471	HD 22928	03 35 48	47 28 04	00 52 13	01:02:13						
1472	comp										

Spectr. Temp. ..... Dome Temp./Hum. 0°C / 85.5 % Transparency Conditions ... Clear 100

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2000		3·00	BS III								
		3·60	BS III								
		3·00	BS III								
		3·60	BS III								
		3·00	BS III								

101 (cont'd)

Date Nov 19/20 Observers Fds/Pdr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
1473	comp			01:07:00							
1474	HD 29139	04 30 18	16 19 30	01:10:00	01:15:00						
1475	comp			01:15.42							
1476	comp			01:19:06							
1477	HD 34503	05 12 45	-06 57 09	01:20:20	2:06:00	00 27 W					
1478	comp										
1479	comp										
1480	HD 22928	03 35 48	47 28 04	02:28:20	02:38:26	02 35 W					
1481	comp			02:39:33							
1482	comp			02:47.55							
1483	HD 34503	05 12 45	-6 57 09	02:49:32	03 29 20						
1484	comp			03:30:20							
1485	comp			03:33:34							
1486	HD 22928	03 35 48	47 28 04	03:35:30							
1486	Bias (44)										
1487 - 1491	5 Filts @ 200s	dec = +47°, HA = 0			→ 1497	bias ×4		1499 bias ×4			
1492 - 1496	5 Filts @ 200s	dec = -6°, HA = 0			1498	DARK 15m		1500 DARK 15m			

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

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		0-85	K5III						SMPvel		
		360	B5III								
										incomplete backup on Exabyte (Physics)	
		3.00	B5III								
										Ctuclet + saved	

103

Date . Nov. 20/21. 1990 Observers . Fds/Pdr

Emulsion Batches:

Spectr. Temp.

Focus

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
ceo1501	Bias (4)										
ceo1502	Bias (4)										
1503 1504 1505 1506	4 flats 220s	dec =	+45°	HA = 0	slit height = 600μ = .205						
1507 1508 1509 1510	4 flats 220s	dec =	−6°	HA = 0	"	"					
1511	comp			18:00:30				Th-Ar	20s		
1512	HD172167	18 33 33	+38 41	18:05:00	18 08 00						
1513	comp			18:09:30				Th-Ar	20s		
1514	comp			18:16:05				Th-Ar	20s		
1516	HD22928	03 35 48	+47 28 04	18:20:30	18:40:30	ES"20					
1517	comp							Th-Ar	20s		
1518	HD22928	03 35 48	+47 28 04	18 44 06	19 04 06	4 56 E					
1519	comp							Th-Ar	20s		
1520	HD22928	03 35 45	+47 28 04	19 07 15	19 27 15	4 34 E					
1521	comp			19 [illegible] 3				Th-Ar	20s		
1522	HD22928	03 35 45	+47 28 04	19 30 03	19 49 03	4 11 E					
1523	comp							Th-Ar	20s		

Spectr. Temp. ..... Dome Temp./Hum. 3.8/82.9 Transparency Conditions . Clear ..... 104 ....

Focus .....

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

90 again T = −101 °C

CCD Format: 0 0 256 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ X-grating	P.H.	Program	Remarks	Quality
					18.60	80μ = .269	.4556	slit	height = 400μ = .225		
		0.04	A0 V						STD		
		3.00	B5 III						Fds ∫ pen		
		3.00	B5 III						Fds - ∫ pen.		
		3.00	B5 III						Fds - ∫ pen.		
		3.00	B5 III								

105

Date Nov. 20/21 Observers Fds/Pdr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CQ 1524	HD22928	03 35 45	+47 28 04	19 53	20 13	3 48 E					2
1525	comp			20 15 10				Th-Ar	20s		
1526	HD22928	03 35 45	+47 28 04	20 16 30	20 36 30	3 24 E					
1527	comp			20 38 20				Th-Ar	20s		
	comp										
1528	HD22928	03 35 45	+47 28 04	20 41 25	20:01						
1529	comp			21 04 27				Th-Ar	20s		
1530	comp			21 08 19				Th-Ar	20s		
1531	HD 29139	04 30 18	16 19 30	21 12 20	21 17 20	3 36 E					
1532	comp			21 19 00				ThAr	20s		
1533	comp			21 22 20				ThAr	20s		
1534	HD 34503	05 12 45	−6° 57 09	21 28 20	22 28 20	3 06 E					
1535	comp			22 30 10				ThAr	20s		
1536	comp			22 33 35				ThAr	20s		
1537	HD 22928	03 35 45	+47 28 04	22 37 10	22 46 46						
1538	comp			22 49 06				ThAr	20s		

Spectr. Temp. ..... Dome Temp./Hum. 2.2/67.8 Transparency Conditions Clear 106.

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion ~-5°	Slit P.H. Height	Program	Remarks	Quality
					18.60	50μ F.269	.4556	400μ F.275.			
	2"	3.00	BS III						Fds - 5 Per		
		300	BS II						Fds - 5 Per		
		3.00	BS II						Fds - 5 Per		
		0.85	T2 III						Stdvel		
		3.60	BS III						Fds - 1 per		
		3.00	BS III						Fds - 5 Per	exp at. weather	

107 (cont'd)

Date Nov 19/20 2021 Observers Fds/Pdr

Emulsion Batches:

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Spectr. Temp. .....

Focus .....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
1539	comp			22 51 53				Th-Ar	20s		
1540	HD 29139	04 30 18	16 19 30	22 54 35	22:56:35						
1541	comp			22 57 47				Th-Ar	20s		
1542	comp							Th-Ar	20s		
1543	HD 34503	05 12 45	-6 57 09	23 02 20	23 32 20	02 03 E					
1544	comp			23 33 38				Th-Ar	20s		
1545	comp			23 38 20				Th-Ar	20s		
1546	HD 22928	03 35 45	+47 28 04	23 40 20	23 50 20	0 10 E					
1547	comp			23 51 14				Th-Ar	20s		
1548	comp			23 54 48				Th-Ar	20s		
1549	HD 29139	04 30 18	16 19 30	23 56 45	00 00 00						
1550	comp			00 01 08				Th-Ar	20s		
1551	comp			00 03 50				Th-Ar	20s		
1552	HD 34503	05 12 45	-6 57 09	00 06 30	00 41 30						
1553	comp			00 43 30				Th-Ar	20s		
1554	comp			00 48 50				Th-Ar	20s		

Spectr. Temp. ..... Dome Temp./Hum. 1.6/89.6 Transparency Conditions Clear 108

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Focus = 222 ϕ

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		0.85	K2III						STD vel		
		~~3.60~~	~~B5III~~								
		3.60	B5III						Fels - Cpv		
		3.60	B5III						Feb - Spec.		
		0.85	K2III						STD - vel		
		3.60	B5III						Feb - Cpv		

109

Date ..Nov. 20/21 20..... Observers ...F.ds./Pet.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
1555	HD 22928	03 35 45	47 28 04	00 52 40	01 07 42						
1556	comp			00 08 30				Th-Ar	20s		
1557	comp			01 12 37				Th-Ar	20s		
1558	HD 29139	04 30 18	16 19 30	01 14 00	01 17 00						
1559	comp			01 17 45				Th-Ar	20s		
1560	comp			01 19 50				Th-Ar	20s		
1561	HD 34503	05 12 45	-6 57 08	01 21 15	02 01 15						
1562	comp							Th-Ar	20s		
1563	comp			02 06 10				Th-Ar	20s		
1564	HD 22928	03 35 45	47 28 04	02 08 35	02 23 35	2 24 W					
1565	comp			02 24 26				Th-Ar	20s		
1566	comp			02 27 15				Th-Ar	20s		
1567	HD 29139	04 30 18	16 19 30	02 28 30	02 32 30	1 39 W					
1568	comp			02 33 30				Th-Ar	20s		
1569	comp			02 36 37				Th-Ar	20s		
1570	HD 34503	05 12 45	-6 57 09	02 38 10	03 28 10	1 53 W					

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Clear ... / ... night ... cloud ... range

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ... 8.0, 92.1% ... 110

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		3.00	B5 III						Feb - δ Per		
		0.85	K2 III						STD UEL		
		3.60	B5 III						Feb - ℓ Pu		
		3.00	B5 III						Feb - δ Per		
		0.85	K2 III						STD UEL		
		3.60	B5 III						Feb - ℓ Pu		

Emulsion Batches:

Date Nov. 20/21 Observers Fels. | Pelt

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
1571	comp			03 29 08				Th Ar	20s		
1572	MD34503	05 12 45	-6 57 0s	03 30 00	04 10 10						
1573	comp			04 10 54				Th-Ar	20s		
1574	bias (4)			04 16 00							
1575	bias (4)			04 19 00							
1576 77 78 79	4 flats @ 220s	HA=0	$\delta = +45°$								
1580 81 82 83	4 flats @ 220s	HA=0	$\delta = -6°$								

Spectr. Temp. ..... Dome Temp./Hum. 0.6 / 92.1% Transparency Conditions . Hazy ... Clouds .....

Focus .....

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

112

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
									FOS-Pol	clouded out	
			Nov 22/23 @ 23 EST noted that MIRA was sl fainter than δ Ceti								
										ie perhaps ≃(V=4.3) binoculars and visually	

113

Emulsion Batches:

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Date Nov. 23/24. 1990 Observers T.H. / N.S.R.

Spectr. Temp. ...

Focus .....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CCF00048.FTS	Comp for M44	M44	(FeNe in bowl) maybe		OG550 filter as well	0 0	Aperture Clear	~~FeNe~~ RG1	100s ~~300s~~		
CCF00049.FTS	Comp "			2017			Ap Clear OG550	FeNe ~~RG1~~	300s		
CCF00050.FTS	Comp "			2038			Aperture Clear OG550	FeNe	200		
CCF00051.FTS	Flat						4 aperture 1/4 OG550	TUNG	30		

Spectr. Temp. ..... Dome Temp./Hum. 5.5°C/80.5 Transparency Conditions . VARIABLE + CLOUD ...

Focus .....

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

T = −80°C FOR IR WORK CGAIN=30

CCDFMT [490 0 32 1024 21] 114

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Δλ(Å)	P.H.	Program GC-14	Remarks	Quality
FEARCOMP				CCD CASS	831/44°	250	10100		Note ~~RG1~~	Yellow filter part	
30 000								1ci		broken, missing a section	
≈100 000								2ci			
———											

anson Exp

PL sun/mon

Date 1990 Nov 25/26 Observers T.N

Emulsion Batches:
→ all dos copied to optical disk
also copied to CCD/Perseus/CHS

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CC00218	FHS Comp for	CXGX-1		19 50	note (F.H. Tray stopped down with TAPE)		FeNe	OG550	100s
CC00219	HDE 226868	19 54.6	+34 56	19 57	20 18	4 22 W		OG550	
CC00220	"	"	"	20 20	20 29	4 32 W		OG550	
CC00221	"	"	"	20 30	21 04	5 07 W		OG550	
CC00222	BHS(1)								
CC00223	HDE 226868	19 54.6	+34 56	21 06	21 20	5 23 W		OG550	
CC00224	Comp						FeNe	~~OG550~~ X	100s
CC00225	Comp						FeAr	~~X~~	100s
CC00226	Comp for	HD15318		21 38			FeAr		100s
CC00227	HD15318	02 22.8	+08 01	21 40	22 02	00 24 E		OG550	
228	Comp						FeAr		
229	BHS(4)								
230	Flat						Tungsten	Rep. Kp OG550	10
231	Comp						FeAr	Rep. Used OG550	100
232	Flat wt	19 Cep	posn	2030		4 27 W			

Spectr. Temp. ..+2°C..... Dome Temp./Hum. +2°C 62%

Focus 5.85 <1 pixel diff in Hartmann test (One line test) Fast check

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

Transparency Conditions .. PARTIAL Clearing

440 0 32 10 14 21 116

Tel Focus @ +1.9°C = 2670

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	APCU Quality
				CCD CHSS	G=4689 831/44	* 250μ	10,100Å	5ci	✓	* Full Length CCD T=-80°C CGAIN=30	
≈700	3.0	B 9.78	09.7Ib			* 25Dμ	"	4ci	✓	* Guide star near center of TO FAINT CENTER cloud gt end	226
300								1ci	✓	Guide star right of center	
950								2ci	✓	Guide star center between 4 pts	250
								3ci	✓		
≈300								5ci	✓	Cloud at end (ALSO Platform time)	
* [forgot to change Filter to Comp mode]								5ci	✓		
Scene here								1ci	✓		
								1ci	✓		
8000	OK	4.28	B9.5II					1ci	Sp Phot STD	part cloudy	
										Filter out	
										Filter in	Flat Field
										Filter in	

#2

117

Date 1990 Nov 25/26 Observers MKI-TR

Emulsion Batches:

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Spectr. Temp. .....

Focus .....

Spectr. Temp. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination (For All Comps Ap Clear)	Comparison Type/Filter	Comparison Exp	Exp Mtr	Seeing
233	Comp						FeAr	OG550	100s		
234	HD209975	22 02 01	+61 48	22 36	22 53	4 50 W		OG550		9:40	ok
235	"	"	"	22 54	23 09	5 06 W		OG550		9:00	
236	Comp						FeAr	OG550	100		
237	Comp for BM CASS			23 22			"	*	100		
238	BM CAS	00 48 16	+63 33	23 28	23 52	3 00 W		OG550		4:10	
239	BIAS(4)										
240	BM Cas	"	"	23 57	00 20	3 28 W		OG550		1:40	
241	comp.	"	"	00 25	00 27		Ap Clear FeAr	OG550	100.		
242	Comp for HD197433						FeAr	OG550	100		
243	HD 197433	20 38 08	+75 14	00 40	01 32	8 58 W		OG550		5:30	foc
44	Comp						FeA	OG550	100s		
245	Bias(4)										
246	Comp at MIRA pos							OG550	100s		
248	HD 47386	02 14 3	-3 26	01 59	02 00			"		4:40	

Spectr. Temp. ..... Dome Temp./Hum. 0° ..... 68% Transparency Conditions ... PART ⇒ mostly cloudy ...

Focus .....

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

118

MID ADUC

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CASS	831/44°	Full Length 250	10,100				
8400	OK	V 5.1	09516							Tel reversed (East side)	500
9000		"	"								
										* Filter (∴ no filter in) Tech had fallen	
400		V =9								thin cloud (Tel still on East side)	
800		V =9								cloudy	
										filter IN	
8700											
350	POOR	VAR =8	G5± KOV					4Ci	Hdy pgm *	cloudy (VW cap)	
										(filter holder slid out from detent)	
8000									DIRA pgm		6500

119 #3

Date 1.7.90. U.a. 25/26... Observers ..M.K.i...[illegible].....

Emulsion Batches:

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Spectr. Temp. ....

Focus ....#3

Spectr. Temp. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
249	HD14386	02 14.3	-3 26	02 02				OG550			
250	"	"	"	02 05				"			
251	Comp d'end						Ap Clear	FeAR "	100s		
252	Flat at Mira posn						Ap 1/2	FeAR	20s		
253	Comp							FeAR	100s		
254	~~Mira Sta Comp~~ bias(4)			~~02~~03 06	~~02 46~~			~~FeAR~~		35	
255	Comp						Ap Clear	FeAR OG550	100s		
256	HD22928	03 35.8	+47°28	03 16	03~~3~~0	3~~5~~0 W		OG550			
257	Comp						Aperture Clear	FeA OG550	100s		
258	Flat						Ap = 1/2	TUNG OG550	10s		
259	Flat #2			03 40			"	"	"		
260	BIAS(4)										
261	Comp			03 52			Ap Clear	FeAR OG550	100s		
262	HD 87901	10 03.1	+12 27	04 04	04 08	1 58E		OG550			
263	"	"	"	04 08 30	04 12	1 53E		"			

Spectr. Temp. ..... Dome Temp./Hum. 0°C ... H=66% Transparency Conditions .. Clear .....

Focus ... #3 Nov. 25/26 120

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
		=4.3	M	CCD Cass	831/44	250μ	10,100		MIRH	~~Mirrored~~ HD 12486 by mistake Guided on Left ↑	
									"		
										AA mirr 360 pos.	
35										~~Very~~ stars,	
60000 ~~cts~~										(CCD T) = -80° still	
~~Redo~~	0'	V =3	B5 III						SPER Sp phot std	Tel still in motion (Test ok)	
											500 nm
		V							αLEO		Mean
60,000		1.4							Sp phot std		2000
78,000									"		

12/ #4

Date 1990 Nov 25/26 Observers Mk/JN

Emulsion Batches:

Spectr. Temp. ...
Focus #4 m
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing
264	AD Leo			~04 14	04 35	01 30 E		OG550		1000	ok
265	Comp						Hp Clear	FeAr OG550	100s		
266	"						"	"	20s		
267	HD 52961	06 58.1	+10 55	04 56	05 11	2 10 W		OG550	100	1800	ok
268	"	"	"	05 12	05 31	2 30 W		"		F100	
269	Comp						Hp Clear	OG550	100		
270	Comp for MWC 560	07 21.0	-07 32	~06 ??		W	Ap Clear	FeAR no filter	10s		
271	MWC 560	07 21	-07 32	~06 ??	06 17	2 54 W		"		150	
272	"	"	"	06 18	06 29	3 06 W		"	+10	<40	ok
273	Comp						Hp Clear	FeAR	10s		
274	FLAT						Ap=½	TUNG no filter	10.	-	
275	FLAT			06 43.						-	
276.	BIAS (4)										
277.	Sky			06 48.							

Spectr. Temp. ..... Dome Temp./Hum. -1°C 68% Transparency Conditions ... PART. Cloudy .....

Focus ... #4 NOV. 25/26.

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

122

Mayall #84

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000	OK			CCD CASS	G=4684 831/44°	Full Length 250μ	10,100		ADLeo		
1800	OK	V 7.40						2ci		(guiding drifted a bit + left) CCD @ T=-80°C still	260
2100								3ci			
					~~G=4810 1800/452~~		~~4520Å~~				
				CCD CASS	G 4810 1800/452	Full Length 250μ	4820Å			still T=-80°C	
250										very nice	
440	OK								Binning for 1800/452 [5500 32 124 21]		
										sp. controller changed during exposure.	580.
~										Note:- controller reset.	3300.
											6000.

12³ #5

Date 1990 Nov 25/26 Observers MKL/TG

Emulsion Batches:
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.....

Spectr. Temp. ...
Focus #5
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
278	BIAS(4)			207							
279	DARK 15m	DARK BAT									
280	BIAS(4)										
281	DARK 15m										

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

Focus ... #5 Nov. 25/26 ... 124

Spectr. Temp. ..... Dome Temp./Hum. ... -2° ... 71%.

C Gain still = 30

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
										T = -80°C	
										Topup @ 07.10 → 07.20	

#1 Mon / Tues

1990

Date Nov. 26/27 Observers TN/NSR

Emulsion Batches:

All: This page copied to CCD/Hercules/Cass

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
CC00	COMP. FOR							06550			
282	HDE 226868	19 59.6	+39 56	17 40			FeA	~~FeA~~ R60	1005		
283	HDE 226868	"	"	1749	1755	0204 W		~~06550~~	~6605	~175	Fair
284	"	"	"	1756	1836	0245W		"	~2400s	~481	"
285	COMP.			1837	1839		FeA	06550			
286	COMP			1843							
287	HD 214923	22 36 30	+10 19 00	1846	1853	0017W		R60		~180	"
288	COMP	"	"	1856	1858	0022W	FeA	06550			
289	FLAT	"	"	1902	1903		Aper = 1/4 TUNG	"	30s		
290	BIAS(4)	"	"	1905							
291	HD 214923	"	"	1907	1915	0039 W		R60		~500	
~~292~~	~~DARK~~	"	"	1919	1924	0040 W					
292	HD 214923	"	"	1928	1932	0056 W		R60		~250	
~~293~~	"	"	"	1932	1938			R60		~500	
293	BIAS (4)										
294	DARK 15 min.	DARK·BAT.									
295	BIAS (4)										
296	DARK 15 min										

Spectr. Temp. ..... Dome Temp./Hum. 0°C / 69, 5% Transparency Conditions ... HAZY ... + Some CLOUD.

Focus ... #1 Nov. 26/27 ...

Spectr. Temp. ..... Dome Temp./Hum. +2°C ... 78%

CGAIN = 30 126

440 0 32 1024 3/1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CASS.	G=4689 831/44	250μ	10, 100Å	ci 2		CCD T = -80°C	
~175	Fine	B 9.78	079Lab	"	"	"	"	ci 2		much cloud	
~481	"	"	"	"	"	"	"	ci 3		More cloud (Deneb not) visible improving! THEN START CLOUD	
				"	"	"	"	ci 4			
~180	"	V = 3.4	B8V	"	"	"	"			THICK CLOUD ENDED EXPOSURE	
				"	"	"	"				
30				"	"	"	"				mean ADU ~5000
~500		V = 3.4	B8V	"	"	"	"		CGain 30 Had to Reset Forgot to set CGAIN	~HOLE IN CLOUD THOUGH VERY HAZY CLOUD.	
		"		"	"	"	"		CGain=0	KILLED (i.e HOLE IN CLOUD)	
~1050		V = 3.9	B8V	"	"	"	"	1ci			
~500		"	"	"	"	"	"			CLOUD AGAIN! STOPPED.	
		Note CGAIN = 0 FOR 292-296						1ci	CGAIN=0		
									C		

12" #2

Date 1.9.90..Nov.26/27.. Observers T.H.....(Tests).....

Emulsion Batches:
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.....

Spectr. Temp. ....
Focus.....#2....
Spectr. Temp. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
	~~DARK (lights out too)~~		Lost.	~~21 53~~	~~2253~~				~~3600~~	~~Auto~~	~~CG~~
~~00297~~	BIAS(4)			2300							CGA
298	DARK 15m	DARK+BAT		23~~0~~2							
299	Bias (4)										
300	Dark 15m										
301	DARK	(no lights either)		2338					1800		
302	Bias(4)			0015							
303	DARK			0017					450		

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

Focus #2 NOV. 26/27 GAIN by 00 128

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

CCD Temp changed from -80 → -125 @ 20 30

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	~~Note CGAIN=0~~			CCD CASS	831/44°	Blank ~~2nd~~			CCD Temp changed back to -80 @ 21 EST		
	CGAIN=30			"	"	"			440 0 32	1024 2 1 CCDFMT	
										T=-80°C	

pg#1
19

Thurs - Fri

Date 1990 Nov. 29/30 Observers Sr.t./Tn/..P.d.s.....

Emulsion Batches:
✓ ..WORM.....
✓ ...perseus.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce01584.fts	DARK	+BIAS(4) = ce01585.FTS							15 min
1586	Comp			18 22				ThA	5s
1587	HD172167	18 33.6	+38 41	18 23	18 26	03 48W			
1588	HD 172167	"	"	18 34	18 47	04 08W			
1589	Comp			18 50				ThA	5s
1590	Flat (Drive off)					04 34W	+38°	Tung	35s
1591	Flat	" "		19 22		04 34W	"		35s
1592	Comp								
1593	HD4614	00 43 03.0	57 17 06	19 36	20 21	0 10 E			
1594	Comp								
1595	HD4614	00 43 03	57 17 06	20 29.7	21 14 40	0 44W			
1596	Comparison			[illegible]					
1597	HD4614	00 43 03	57 17 06	21 19	22 04	1 33W			
1598	Comp			22 06				ThA	5s
1599	Comp							ThA	5s
1600	HD17878	02 47.2	+52 21	22 13	22 5835	00 37W			
1601	Comp							ThA	10s

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

Exp Mtr	Seeing
28:0	poor
11	
19	
1	
00	* SCSC

Spectr. Temp. ..... Dome Temp./Hum. +1°C ..... 58% Transparency Conditions . P.A.R.T. Cloudy ..... 130...

Focus ..... Pyt#2 00256 10244 1 CCDFMT MAX

Spectr. Temp. ..... Dome Temp./Hum. ..... central x grating 0.5000 CGAIN=90 ADCU

CCDT=-100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	SLIT P.H. (Height)	Program	Remarks	Quality
				CCD Echelle	19.25	90µ .265	3950Å	600µ	xeo	Tel Focus 2269	
8800	poor	B =0	A0Va						Vega		3500
11,600		"	"							Cloud	
								.185 800µ .175 on 800µ .205 600µ	? (was .185 or .175 micrometer ?)		
8600		B 4.01	G0V								
9195											
11,000											
6860	* 50:50	B 4.69	G4III						Image 5/> 1/2 Slit Length	Ideal Tel focus 2243 from comet = -1°C	

131 Pg 42

Date 1990 Nov. 29/30 Observers ~~...~~ Sr.t/Th./Pds.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
ce01602.Fts	HD 17878	02 47.2	+52 21	23 04 30	23 49 25	1 15 W		~~Flat~~			4"?
1603	Comp							ThA	5s		
1604	HD 17878	02 47.2	+52 21	23 54	00 39	2 04 W					
1605	Comp							ThA	5s		
T606 1609	Flat x(40	of HD17878		00 51		2 22W		ThAr	15s		
1610	Comp			01 07				ThA	5s		
1611	HD28305	04 22.8	+18 58	01 09 23	01 54	1 43 W					
1612	Comp							ThA	5s		
1613	HD28305	04 22.8	+18 58	01 56	02 41	2 31 W					
1614	Comp							ThA	5s		
1615	HD 28305	04 22.8	+18 58	02 42 38	03 27 40	3 17 W					
1616	Comp							ThA	5s		
1617	Comp			03 31 ~~03 31~~				ThA	5s		
1618	HD48329	06 37.8	+25 14	03 39 24	04 20	1 55 W					
1619	Comp								5s		
1620	HD48329	06 37.8	+25 14	04:21:10	05 06 00	2 41 W					

Spectr. Temp. ..... Dome Temp./Hum. ~1°C 65% Transparency Conditions Clear .....

Focus ..... Pg #2

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion Å	P.H. Height	Program	Remarks	Quality
6825	~~4~~ 4"?	B 4.69	G4III	CCD echelle	19.25	90u .265	3950Å	600u .205	5rt pgm	Image ≈ ½ slit ~~Height~~ in diameter	
		B 4.69	G4III								
					19.25			900u .185			
					19.50	.90u		600u .205		Note change to Echelle tilt (blueward)	
6200									6ci		
									1ci		
7776								5ci	5ci		
7050		B 4.69									
		B 2.98	G8I								

(3) #3

Date 1990 Nov. 29/30 Observers Srt./Pdr./Ts..... KK (next AM)

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
1621	Comp			05 06				Th-Ar	5s		
1622-1625	Flats (4)	at HD48329 position						THNG			
1626	Comp							Th Ar			
1627	HD 48329	06 37.8	+25 14	05 23	06 04	3 39W					
1628	Comp										
1629	BIAS (4)										
Lef0021	focus test	- IN		Normal position				ThA	20		
22	focus	- OUT						"	"		
23	focus test	- IN	2	mounting screws on cable side of dewar							
24	focus test	- OUT									
25	bias for above										
FIT00715	comparison for speckle							FeNe	600	5	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..Cloudy at end.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -2°C 70%

134

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	S.I.2 P.H. Height	Program	Remarks	Quality
				CCD Echelle	19.50	90u		600u .205			
						"		~~800u~~ 800u	micrometer .185		
								600u .205			
					Tonight's All back up to CCD Perseus / echelle						
										00128 1024 & 1	
loo send											
15					1800/47.0			4250Å		.040 entrance (16x obj)	

13" #1 Fri-Sat

Date 1990 Nov 30/Dec 1 Observers Srt/Tm/Pdr

Emulsion Batches:

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Spectr. Temp. ...

Focus .....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
ceo1630	Dark			17:00					15 min		
1631	Bias (4)			17:30							
1632	Comparison			18:05				ThAr	5 sec		
1633	HD 4614	00 43 03	57 17 06	18:05	18:50	1 36 E				1.5 sec	cir
1634	Comp			18:52				ThAr	5s		
1635	~~Comp HD 10700~~							ThAr	5s		
1635	HD 10700	01 39 25	-16 27 51	19:00	19:50	1 31 E					
1637	Comp			19:51				ThAr	5s		
1638	HD 10700	"	"	19:52	20 37	0 45 E				2.0	
1639	Comp			20:38				ThAr	5s		
1640	HD 10700	01 39 25	-16 27 51	20:39	21 24 06	0 02 W				2.0	
1641	Comp			21:25				ThAr	5s		
1642	Comp							ThAr	5s		
1643	HD 23249	03 38 27	-10 06 06	21:30:26	22 15	01 06 E				2.0	
1644	Comp							ThAr	5s		

Spectr. Temp. ..... Dome Temp./Hum. 13.3/57.6 Transparency Conditions ~~High~~ ~~Clear~~ 136

Focus ..... pg#1 thin clouds

Spectr. Temp. ..... Dome Temp./Hum. ..... slit GAIN = 90 CCDTemp = -101°C 0 0 256 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. Height	Program	Remarks	Quality
				ccc echelle	19.50	90μ .265	3950Å	600μ .205	Set pgm		
15500	OK	B 4.01	G0V								
			~~G0~~								
			G8V								
9,100		B 401	G8V								
5580		B 4.01	G8V								
7600		P 4.46	K0IV								

Pg 137 #2 Fri Sat

Date 1990 Nov 30/Dec 1 Observers T. J. Prd. J. S. T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ceo 1645	HD 23249	03 38.5	−10 06	22 16	2301	00 20E			
1646	Comp							Th Ar	5s
1647	HD23249	03 38.5	−10 06	2303	2348	00 30W			
1648	Comp							Th A	5s
1649	~~HD~~ Comp			2356				"	5s
1650	HD 21120	03 19 26 ~~04 22 47~~	+08 40 37 ~~+08 57 31~~	2356	00 33	1 31 W			
1651	Comp							Th Ar	5s
1652	FLAT	[Drive off)		00 50		1 34W	+9 00	Tung	15s
1653-1654	FLAT (2)					"	+9 00	Tung	40s
1655	FLAT							Tung	90s
1656-1659	FLATs (4)	Drive off		01 16		0 0	−13°	Tung	40s
1660	Comp			~~01~~				Th Ar	5s
1661	HD 21120	03 19.4	+08 41	0135	0207	305W			
1662	Comp							Th Ar	5s
1663	HD 21120	03 19.4	+08 41	02 20	03 05	4 04W			

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

Exp. Mtr.	Seeing
7½	½ str.
7	
2	150
2	60
	35
	poor

Spectr. Temp. ..... Dome Temp./Hum. +3°C 54% Transparency Conditions ... Part Cloudy .....

Focus ..... pg 82 138

Spectr. Temp. ..... Dome Temp./Hum. +2°C ..... 61% central very gusty From west

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Δ	Slit P.H. Height	Program	Remarks	Quality
~~7~~ 410	½ slit height	B- 4.46	K0 IV	CCD Echelle	19.50	90u .265	3450Å	600u .205	Srt pgm	x grating 0.5000 for All	
2100										cloud	
2800		B ~~4.49~~	G6 III						Srt pgm	part cloudy	
						90u		800u .185		ADUC MAX	1500
						90u		800u .185		ADUC MAX	3900
						"		"			
						"		"			
								600u .205			
3525		B 4.19	G6 III					"		cutoff by cloud	
								"			
4000	poor	B 4.49	G6 III					"	Srt pgm	CCD temp T=-100°C ½ in cloud	

135 #3

Date 1.9.90. ~~Dec~~ Nov 30/Dec 1 Observers Sr.t./T.A./P.d.r.....

Emulsion Batches:

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Spectr. Temp. ...

Focus.....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
1664	- Comp	for HD 211	20					Th Ar	5s		
1665	Bias (4)			0425							
	Dec 1/2										
~~1666~~											

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

Focus .....

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

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

#1

Date 1990 Dec 1/2 ... Observers ... S.r.t. / P.d.r. / T.a. .....

Emulsion Batches:

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Spectr. Temp. ...

Focus .....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CEO											
1666 Hs	Bias (4)										
1667	Dark				17 54	3 42 W			15 min		
1668	Comp										
1669	HD 172167	18 33.6	+38 41	17 49	17 54	3 42 W					
1670	Comp								5s		
1671	Comp								5s		
1672	HD 4614	00 43.1	+57 17	18 04	18 14	2 10 E					
1673	Comp			18 17 50							
1674	HD 4614	00 43.1	+57 17	18 21	18 31	1 53 E					
1675	Comp								5s		
1676	Comp								5s		
1677	HD 17878	02 47.2	+52 21	19 04 30	19 31	2 58 E					
1678	Comp								5s		
1679	Comp								5s		
1680	HD 10700	01 39.4	-16 28	19 38	20 14						

Spectr. Temp. ..... Dome Temp./Hum. +4.4°C ... 61% Transparency Conditions .... Hazy - part cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +4°C ... 63%

142 max APO

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ >	P.H.	Program	Remarks	Quality
				CCD Echelle	~~CCD~~ 19.2	70u 0.273	5169 5178 5183		X grating •389	Order #110	
15 min 22000											
22.000		B -0	A0V							Si saturation	165+
3710	OK	B 4.01	G0V						2 Cals		1/300
3500		B 4.01	G0V								
3500		B 4.69	G4III								
1600		B 4.22	G8V						T Cet	Cloud increasing	

143 #2

Date 1.9.90. Dec. 11.2.... Observers .Sat./Tu./Sat.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
Ce01681.Fts	Comp for H010700							ThAr	5s		
1682-1685	Flats at -16° Dec					00 55W	-16 01	Tung	~~30s~~ 25s		
1686-1689.Fts	Flats at +55°					0200E	+55°	Tung	30s		
1690.Fts	BIAS(4)	Bias, BAT		2057							

Spectr. Temp. ..... Dome Temp./Hum. +3.8c 64% Transparency Conditions Cloudy

Focus .....

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

144

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	Slit P.H. Height	Program	Remarks	Quality
				CCD echelle	19.2	70u .273	5172Å	600u .205			
								800u .185			
								.800u .185			

pg #1 SUN/MOON

Date 1990 Dec 2/3 Observers Tm/Pdr

Emulsion Batches:

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Spectr. Temp. ....

Focus .....

Spectr. Temp. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
ce01691-01695	Flats		+10 00	17 47		00h..	+10°	TUNG	20sec		
ce01696 Fts	Comp							ThAR	20sec		
1697	HD 172167	18 33.6	+38 41	18 09 45	18 12 12	4 04 W				5.00	
1698	HD 172167	"	"	18 14 55	18 16 45	4 07 W				864	
1699	Comp							ThAr	20s		
1700 ~~1670~~ 1701 ~~1671~~	HD 22928	03 35 48	+47 28 04	18 34	19 19	3 36 E				17.0	
1702 ~~1672~~	Comp							ThAr	20s		
1703 ~~1673~~	Comp.							ThA	10s		
1704 ~~1674~~	HD26912	04 10.1	+08 39	19 43 38	20 27	3 19 E				1.60	
1705 ~~1675~~	Comp							ThA	10s		
1706 ~~1676~~	Comp							ThA	10s		
1707 ~~1677~~	HD 22928	03 35.8	+47 28	20 36	20 48	2 25 E				17.0	
1708 ~~1678~~	Comp							ThA	10s		
1709	Comp							ThA	10s		
1710	HD 29139	04 30.2	+16 19	20 58	21 03	3 03 E				3.00	

Spectr. Temp. ..... Dome Temp./Hum. 1.5 / 52.3 % Transparency Conditions Clear 146

Focus .....

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

0 0 256 1024 4 1
90 C gain - CCD T = -100°C ADUC MAX

Exp. Mtr.	Seeing	Pkg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. Height / Slit	Program	Remarks	Quality
				CCD Echelle	18.60	80u .269		~~600u~~ .205		xgrating @ .4555	
						80u .269		~~450u~~ .220	400µ .225 Tm	4 ci	
15000		V 004	AOV				??	2 ci	" Fds Std	5 ci	4000
8646		C004	AOV					3 ci	"	6 ci	
					Cross grating setting			5 ci	"	7 ci	
1700	OK	V 3.00	BS III					10 ci	" Fds pgm	5 PER	
1860	OK	V 4.29	B3 IV						Fds-pgm	1/2 Tau	
4200	.							3 ci		5 PER	
								4 ci			
5200	ok	V 0.85	K						Fds std	2 Tau	2200

Pg#2 147 Sun - mon

Date 1990 Dec 2/3 Observers T.n. / . f. p.d.t.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
1711	Comp							ThA	10s
1712	Comp							ThA	10s
1713	HD 26912	04 10.1	+08 39	21 11	22 08	1 40 E			
1714	Comp							ThA	10s
1715	Comp							ThA	10s
1716	HD 22928	03 35 48	+47 28	22 17 30	23 06	0 07 E			
1717	Comp								10s
1718	Comp			~~23 18~~	~~23 23~~				
1719	HD 29139	04 30.2	+16 19	2318	23 23	1 43 E			
1720	Comp								
1721-1725	Flats (5)	60s (9500 max Adcu)	[80s (13000) x 4]			0 0	+47°		~~60~~s
1726-1727	Flats (2)	13000 Adcu each				0 0	+47°		80s
1728-1734	Flats (7)					0 0	+10°		80s
1735	Bias (4)			0041					
1736	Dark								15 min
1737	Bias (4)								
1738	Dark								15 min

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

Exp Mtr	Seeing
1500	OK
	OK
2.3s	
Blue	
5100	

Spectr. Temp. ..... Dome Temp./Hum. -1°C 59% Transparency Conditions .. Hazy - ? Cloudy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... central slit

148

MAX 4DUIC

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. Height	Program	Remarks	Quality
				CCD Echelle	600 18.60	80u .269	4471-4480	400u .225			
1500	OK	V 4.29	B3III						Fds pgm	thin cloud Mu Tau	2000
	OK	V 3.00	B5III						Fds pgm	medium cloud 5 per	
2380					18.59 *			18u		* Ech grating bumped between exps?	
8100											
5100		V 0.85	K5III								
								600 .205			
								600 .205			

#3

KP Sun-mon

Date 12.90 Dec 2/3 Observers Pdr./Tn

Emulsion Batches:

Spectr. Temp.

Focus

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp Mtr	Seeing
Ceo 1739 HS	Comp			01 34 ~~30~~				ThA	10s		
1740	HD 26912	04 10 1	+08 39	01 34 30	01 55 32	2 08 W					
1741	Comp							ThA	10s		
	Dec 5/90 Tests										
FIT * 716.~~KK~~	Comp (test)		Diffuser OUT no f stop	~~no f stop~~ 21 36 no f stop	21 27	0 0	−10°	FeNe clear	999s		
* 717.KK	Flat (test)		Diffuser IN not stop		23 25	0 0	−10°	clear			
* These entries repeated next page.											

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Part cloudy 150

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ~16°C 55%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Echelle	1859	80μ .269	C control 4480	*400μ		Slit Height Looks short to when before	
405	soso								Sci Fld Spgm	Cloud again	500
					All back up to end on Perseus / echelle.						
A MAX = B							only 115 neg left on E: (4st)				
<15 <15							* 4250A		* FeNe lines	Identified, control OK	
400 300				speckle PTS	1800/47°		4250A			.048 entrance (16x obj)	
	note										
		Diffuser Out for comp, gives sl higher signal									
		Diffuser IN for Tung ≈ doubles signal in both A & B.									

151 Wed - Thurs

Date 1990 Dec 5/6 Observers Pdr - Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
~~FIT 00716.kk~~ 01742	comp	No f stop,	Diffuser out	~~21~~ 21 10	21 27	0 0	-10°	FeNe clear	999s
FIT 00717.kk	FLAT	no f stop	Diffuser IN	21 36	23 25	0 0	-10°	Tung Clear	
Tag+FIT 00718.kk	HD 34029 Capella	05 09.3	+45 54	23 46	00 54	00 20W	+46°		
Between these Exps	Newtonian Flat adjusted to try to mask signal on A as B. Back to Original setting is about it!								
Tag+FIT 719.kk	HD 34029	05 09.3	+45 54	01 02 30	01 26	00 53W	+46°		
720.kk	Comp	No f stop	Diff OUT	01 30 30	01 50 30		+46°	FeNe Clear	20 min
721.	Flat	no f stop,	Diffuser IN	02 08		0 0	platform	Tung Clear	3 hrs

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

Exp. Mtr.	B	Seeing

Spectr. Temp. ..... Dome Temp./Hum. ~18°C 72% Transparency Conditions ... Part. cloudy ~Cloudy 152

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Tel focus for speckle head = 2771 mean

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
<15 <15				Fiber-fed PTS	1800/47°	300μ?	4250Å			Speckle setup	
400 max / 300						"					800
50 to 500 / 40 - 300	poor **	B= +0.7	G8III? +F	F F PTS speckle	1800/47	"	4250Å		KK pgm	** = out of Thin cloud. Large Dome Turn @ 00 EST	
~~50 / 40~~ 500 / ~~to 300~~ → 300 / 50 → 250	** Image poor	of Capella ~~xxx~~ 8 +0.7	G8III +F	50% larger than FF guiding hole, and with much scintillation (image jumping) FF PTS speckle	1800/47°		4250Å		KK pgm	more cloud Thick by end of exp	
<15 / <15			~~"~~	"	"		"				
350 / 350											
				~~Q~~1	716.kk To	720.kk	based upon		Perseus PCS / speckle		

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

153

Date 1990 Dec 8/9 Observers Srt / Pdr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
ce											
01742	Bias (4)			16:07							Poor
01743	Dark			~~16:08~~					15m		
01744	Comp			1751				ThAr	5s		
01745	HD10700	01 39 25	-16 27 51	17 55 19	18 25	2 26 E				1.50	
01746	Comp							ThAr	5s		
01747	HD10700	" "	" "	18 31	19 01	1 49 E				1.28	
01748	Comp							ThA	5s		
01749	Comp							ThA	5s		
01750	HD17878	02 47 10	+52 21 12	19 21	19 46	2 16 E				1.26	
01751	Comp							ThA	5s		
01752	Comp							ThA	5s		
01753	HD23249	03 38 27	-10 06 06	20 13	20 44	2 05 E				1.7	
01754	Comp							ThA	5s		
01755	HD23249	" "	" "	20 48	21 18 45	1 31 E					
01756	Comp										

Spectr. Temp. ..... Dome Temp./Hum. 64.9%/+2.2°C Transparency Conditions Clear ..... 154 .....

Focus .....

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

Focus 2218

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	Poor			CCD echelle	19.1	70μ 0.273		Height 0.205 600μ	x grating : 0.3962		
1150		B 4.2							τ Cet		
1228		B 4.2							τ Cet		
1320		B 4.7							τ Per	Th A lamp was on during this exposure	
									δ Eri		
1547											
		B 4.5									

155 (cont'd)

Date 1990 Dec 8/9 Observers Sat/Pdr

Emulsion Batches: .....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CE 01757	Comp										
01758	HD 21120	03 19 26	08 40 37	21 28 50	21 40	0 52 E				411	dusfal →
01759	Comp										
01760 }	Flat Fields					02h E	-13°00		30s		
01763 }											
01764 }	Flat Fields					02h E	+8°00		30s		
01767 }											
01768 }	Flat Fields					02h E	+52°00		30s		
01771 }		EXABYTE									
01772	Comp										
01773	HD 28305	04 22 46	18 57 31	01 17 00	01 34 21	1 59 W				2566	
01774	Comp			01 38 32				ThA	5s		
01775	HD 28305	" "	" "	01 38 30	01 50	2 16 W				1566	
01776	Comp							ThA	5s		
1777	Comp							ThA	5s		

Spectr. Temp. ..... Dome Temp./Hum. 0.0°C / 70.1% Transparency Conditions Clouded over 1% at ~ 21h40m EST

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... slit Height

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD echelle	19,10	70μ 0.273		600μ 0.205			
411	awful! →							"		at times, image is 2x slit length	
								"		Clouds	
								600μ 0.165			
								600μ 0.185			
								800μ 0.185			
		B 4.54 ↓						600μ 0.205			
3500									∈ Tau		
3500		B 4.54								Focus 2235	

157 (cont'd)

Date 1990 Dec 8/9 Observers Srt/Pdr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
01778	HD48329	06 37 47	+25 13 49	01h58m	02 07 19	0 17 W				STD	fair
01779	Comp										
01780	HD48329	" "	" "	02 09	02 18 13	0 28 W				STD	
01781	Comp							ThA	5s		
01782	Comp							ThA	5s		
01783	HD62509	07 39 12	28 16 04	02 24 55	02 26 55	0 24 E				STD	
01784	HD62509	" "	" "	02 27 35	02 29 04	0 22 E				STD	
01785	Comp							ThA	5s		
01786	Comp							ThA	6s		
01787	HD62509	07 39 12	28 16 04	03 00	03 04 33	0 13 W				STD	
01788	HD62509	" "	" "	03 07 37	03 16 21	0 25 W				STD	
01789	Comp			03 17				ThA	6s		
01790	Comp			03 23				ThA	6s		
01791	HD48329	06 37 47	+25 13 49	03 25	04 00	2 10 W				STD	
01792	Comp							ThA	6s		

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

Spectr. Temp. ..... Dome Temp./Hum. 0.0°C / 67.2% Transparency Conditions Clear 158

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... slit Height

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3500	fair ~3/4 slit length	O 4.38		(cc) echelle	19.1	70μ 0.273		600μ 0.205	ε Gem	x grating: 0.3962 Setting for Ca II K line	
3500		B 4.38									
3550		B 2.14							β Gem		
3500		"							" "		
					19.2	90μ 0.265				x grating: 0.50000	
10029									β Gem		
20000									" "		
14606									ε Gem		

159

Date 1990 Dec 8/9 Observers Sit/Pdo

Emulsion Batches:

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Spectr. Temp. ...

Focus .....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
ce 01793	Comp							ThA	6s		
01794	HD62509	07 39 12	28 16 04	04 23	04 43	$1^h 52^m$ W			-		
01795	Comp										
01796	Flat Fields					$1^h 52$ W	+28		90s		
01800	Bias (4)			05:03							

Spectr. Temp. ..... Dome Temp./Hum. -0.1°C/72% Transparency Conditions Clear ..... 160 ....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Slit height

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					19.2	90μ 0.265	~4030Å order #141	600μ 0.205		x grating 05000	
54000											
								800μ 0.185			
							Backed up to WORM				

161

Date 1990 Dec 9/10 Observers Srt/Pdr

Emulsion Batches:
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.....
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE 01801 01802	Bias (4) Dark 15 min								
01803	Comp			18:09				ThA	
01804	HD H614	00 43 03	+57 17 06	18:11	18:41	1 11 E			
01805	Comp							ThA	
01806 01809	Flat Fields					1 00 E	+54.°5		90s
01810	Comp			21 43				ThA	6s
01811	HD21120	03 19 26	08 40 37	21 45	22 15	0 12 E			
01812	Comp							ThA	
01813	HD21120	" "	" "	22 17	22 30 30				
01814	Comp							ThA	
01815 01818	Flat Fields			22 35		00 05 W	+9°		30s
01819	Comp							ThA	5s
01820	HD29139	04 30 11	16 18 30	23 03	23 05 29	0 33 E			
01821	HD29139	" "	" "	23 06	23 07 49	0 30 E			
01822	Comp							ThA	5s

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

Exp. Mtr	Seeing
65%	Poor
99%	
54%	

Spectr. Temp. ..... Dome Temp./Hum. 5.5°C / 61.5% Transparency Conditions Partly cloudy & cloudy 162

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Slit Height

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD echelle	19.2	90μ 0.265	4000 – 4053 Å order #141	600μ 0.205	η Cas	x grating @ 0.5000	
2542	Poor										
								800μ 0.185		clouded over	
										Clear Patches. 2	
					19.1	70μ 0.273	5190 – 5150 Å order #110	600μ 0.205		x grating @ 0.3962	
2595									o Tau	Mg lines setting	
566											
										Clouds again!	
									α Tau		
									"		

163 (cont'd)

Date 1990 Dec 7/10 Observers Srt/Pdr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
01823	Comp							ThA	6s
01824	HD29139	04 30 11	16 18 30	23 17 10	23 24 25	0h 12E			
01825	HD29139	" "	" "	23 25 30	23 37 22	00h			
01826	Comp							ThA	6s
01827	Comp								6s
01828	HD21120	03 19 26	08 40 37	00 13	00:28				
01829	Comp			00 29				ThA	6s
01830	Comp			01 46				ThA	6s
01831	HD29139	04 30 11	16 18 30	01 43	02 23	2 55 W			
01832	Comp							ThA	
01833	HD29139	" "	" "	02 36	03 21	3 44 W			
01834	Comp								
01835	Flat Fields					3h W	+16 30		
01838	Bias (4)								
01839									
Cef 34/35	Hartmann -	IN/OUT		with 2mm GG13 filter				ThA	20
36/37	"			all bias subtracted before writing					
38/39	"								

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

Exp Mtr	Seeing
15 170	
25 300	
1455	
1455 130	
FY 660	

Spectr. Temp. ..... Dome Temp./Hum. 4.7°C / 66.3% Transparency Conditions Partly cloudy ..... 164...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Slit Height

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
65				CCD Echelle	19.2	90μ 0.265	4000– 4053Å order #141	600μ 0.205		x grating @ 0.500	
5170		B 2.14							α Tau	Ca II K setting	
25200		"							α Tau		
65											
65		B 4.49									
1633										Clouded in	
65											
65		B 2.14 ↓									
116630											
F9000											
											shift
20		Temp =		+3.7°C						F = 0.225	1.17
										F = 0.200	–.66
										F = 0.210	–.31

Date 1990 Dec 10/11 Observers Srt/Pdr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
~~01840~~	~~Flat~~ Bias (4)										
01841	Comparison							GG385	5s		Poor
01842	HD 4614	00 43 03	57 17 06	18:37	18:47	1 02 E		GG385		680	
01843	HD 4614	" "	" "	18:49:35	19:00	0 50 E		"		876	
01844	Comp			19:01				"			
01845	Comp			19:12				"			
01846	HD 17878	02 47 10	52 21 12	19:14	19:39	2 14 E		"			
01847	Comp			19:40				"			
01848	Dark 15m			19:53				"	15m		
~~01849~~	Comp							"			
~~01850~~	HD 29139	04 30 11	16 18 30	21:01	21:08 50	2 26 E		"		1000	
01849	Comp							"			
01850	HD 29139	" "	" "	21:13	21:15	2 20 E		"		1100	
01851	Comp							"			

Spectr. Temp. ..... Dome Temp./Hum. 0.0°C / 48% Transparency Conditions Partly cloudy ..... 16.

Focus ..0.210..with.GG13.(GG385)..(Jn Dec 13) 90CGAIN

Spectr. Temp. ..... Dome Temp./Hum. -2.0 / 57.5% Slit Height 00256 1024 4 1 CCDFMT

Telescope focus: 2231

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD echelle	18.54	60μ 0.277	6590-6718 order #86	600μ 0.205		X grating: 0.2834 Hα settings	
	Poor										
1280		V 3.44							η Cas		2500
876											
1450		V 3.95							ζ Per		
										Left side of chip shows light counts.	
			not stored							through clouds	
3000			not stored; saturated							" "	
1020											

16' (cont'd)

Date 1990 Dec 10/11 Observers Sst / Pdr

Emulsion Batches: .....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
ce 01852	Comp						Th A	GG385			
01853	HD21120	03 19 26	08 40 37	21 27	2151	0 33 E		"		114	1½
01854	Comp						Th A	"			
01855	Dark 15m			21 56				"			
01856	Comp			22 20			Th A	"			
01857	HD23249	03 38 27	-10 06 06	22 30	23 00			"		UCO	2
01858	Comp			23 07			Th A	"			
01859	Comp			23 09			Th A	"			
01860	HD28305	04 22 46	18 57 31	23 11 39	23 32	0^05^W W		"		132	
01861	Comp						Th A	"	5s		
01862	Dark 15m			23 37					15m		
01863	Comp			00 04			Th A				
01864	+1D48329	06 37 47	25 13 49	00 05	00 21 20	1 21 E				115	2
01865	Comp						Th A				
01866	Dark 15m								15m		

Spectr. Temp. ..... Dome Temp./Hum. -2.2°C / 56.8% Transparency Conditions Partly cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Slit height

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		~~3.60~~		CCD echelle	18.54	60μ 0.277	6590 – 6719 Å	600μ 0.205		x grating : 0.2834	
11 11	Poor	V 3.60					order #86		o Tau		
1100		V 3.54							δ Eri		5000
		V 3.53									
632									ε Tau		
125		V 2.98							ε Gem		

169

Date 1990 Dec 10/11 Observers Srt/Pdr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
ce 01867 } 01870 }	Flat Fields			01:55		1 00E	+55°				
01871 } 01874 }	Flat Fields			02 05		1 00E	+20°				
01875 } 01878 }	Flat Fields					1 00E	00°				
01879	Dark 15m			02:24							
01880	Bias (4)										
← Flatfields OK											

Spectr. Temp. ..... Dome Temp./Hum. -4.2°C / 53.8% Transparency Conditions .. Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... slit Height

170

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD echelle	18,54	60μ 0.277	6590 – 6719 order #86	800μ 0.185		×grating 0.2834	

171 pg #1 Thurs / Fri service FOR Srt

Date 1990 Dec 13/14 Observers T.h mki. elect.

Emulsion Batches:

Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
ce C1881.fts	Comp			2255				GG385	5 sec		
01882.fts	4023249	03 38 27	-10 06 06	2258	23 28	00 58 W				240	v* poor
01883.fts	Comp								5 sec		
1884	Comp								5 sec		
1885	HD62509	07 39 12	+28 16 04	2342	2348	00 42 E				178	V poor
1886	Comp			2352					5 sec		
1887	Comp								5 sec		
1888	HD28305	04 22 46	+18 57 31	00 03	00 26	01 11 W				1400	V poor
1889	Comp			00 28					5 sec		
1890	Comp			00 31					5 sec		
1891	HD48329	06 37 47	+25 13 49	00 34	00 55	00 36 E				162	V poor
1892	Comp								5 sec		
1893	Comp								4 sec		
1894	HD87901	10 03 03	+12 27	01 05	01 16	03 39 E				2760	V poor
1895	Comp								4 sec		

Spectr. Temp. ..... Dome Temp./Hum. -3°C 57% Transparency Conditions ... Clearing ... gusty ....

Focus ..... pg#1 cooling Fast 172

Spectr. Temp. ..... Dome Temp./Hum. ..... slit height

Echelle central [90 Cgain] CCD Temp → -100°C

Exp. Mtr.	Seeing	Eg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H. Height	Program	Remarks	MAX Quality
				Echelle CCD	18·54	60μ 0.277	6540-6719Å	600μ .205	~~X grating~~	# X grating • 2834 ORDER 86 centered	
1240	V* POOR	V 3·54	KOIV						Sit pgm	* image Dia ≈ slit height	5200
1780	VV POOR	V 1·15	KOIII						Sit pgm		8800
~1400	V POOR	V 3·53	KOIII						Sit pgm	Dome T = -65°C	5500
~1600	VV POOR	V 2·98	G81b							eGem	~5520
							Of course, a few Cosmic lines are scattered				
2760	VV POOR	V 1·35	B7V$_h$							α Leo A	6000

#2

173

Date 1990 Dec 13/14 Observers JM

Emulsion Batches:

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Spectr. Temp. ...

Focus .....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CE 01896	Bias (4)	} DARK.BAT		01 31							
1897	DARK 15min										
1898	Bias (4)										
1899	DARK 15min										
CE01900 – 1903	Flats (x4)			02 30		0 0	0°	G6385	5 secs		
CE01904 – 1907	Flats (x4)					0 0	+20°	"	"		

Spectr. Temp. ..... Dome Temp./Hum. 6°C 55% Transparency Conditions ... Still Clear ... Π4

Focus ..... #02

Spectr. Temp. ..... Dome Temp./Hum. ..... Slit Height

[Echelle Focus all night. Still set @ 0.210 note: prob not ideal for this]

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	18.54	60μ .277	6590 - 6719Å			× grating 0.2834	
					18.54	60μ .277		820μ .185			10000
								800μ .185			9500
				All backed up to Perseus CCD/Echelle							
				Good Geminid meteor shower							

175

Emulsion Batches: .....

Date 1990 Dec 14/15 Observers KK (afternoon)/Tn

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
~~FIT~~ 722	flat	—	—		17 12	0 0	platform	W/clear	3600		
1990 Dec 16/17 Sun-Mon ↓ Tn [speckle setup unchanged from Dec 14/15 setup]								W			
723. KK	Flat	Diffuser IN (no fstop)		20 51 37	~22	2 34W	+16 34	clear	3700		
Cetest01.Fts	BIAS(4)	for Stem [bands]		90 cgain, T=-130°C							
Test02.Fts	BIAS (1 only)			0 cgain	T=-130						
Fm 724. Tn	HD 25022	03 53 4	+39 44	22 22					Int "N"	Real Time	
FIT 724	Comp	Diffuser OUT		2227			no fstop	FeNe CLEAR	~600		
FIT TAG 725	HD 34029	05 09.3	+45 54	2250	2306	00 44E			947		
Fit 726	Comp	Diffuser out		2311			no fstop	FeNe Clear	660s		
Cetest03.Fts	BIAS	@ 30 cgain, T=-130°C									
Cetest04.Fts	BIAS	@ 90 cgain, T=-130°C		Bin of Column change							
Fit TAG 727	HD 34029	05 09.3	+45 54	00 08	00 23.5	00 32W	Cloud again		910		
IN 295. Tn	HD 34029 (on Fiber hole)	4 Frames		00 25		00 33W			Int x0		
Fit 728	Comp	Diff out		00 30				FeNe Clear	600s		
Fit 729	Flat	Diffuser IN		00 45	01 49	no fstop	Diff IN	Tung Clear	3600		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..Clouding in. Fast at sundown.

Focus .....

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

fibers 0".05 , 355° 176

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
160/400					1800/47	300μ	4250			bad channel ratio	
									Dome T: 0°C	PART Clear	
A * B 200/510				PTS speckle	1800/47	300μ	4250Å		Flat for speckle	*At ~ 300 secs, Tel moved to Park To speed up. At platform A=140 cts B=360 cts	
				CCD Echelle							
				"							
Real Time		V 7.84	AO V	Dome	SW	Fiber Head @ Rack = 12000			[Db/Dos Image sump]	Seeing Test with EEV CCD Guide Camera	
<15/<20				PTS speckle	1800/47°	300μ	4250A				
70/180	poor	B= +0.7	G81II +F	"	"	"	"		AsmSp-KK	Rack for guiding ideal at "11600"	
<15/<20				"	"	"	"		Cloud	coming fast	
				CCD Echelle							
				"	0 0	128	1024	8	CCD Fint (after test wave 41) *will take a frame an hole		
80/300	* 50%	B= +0.7	G81II +F	PTS speckle	1800/47	300μ	4250Å				
"n" mode		[single Dos	after re bo	tot mk III]	Fiber Head			Optical	Rack "11,800" for guide mode		
<15 <20				PTS speckle	1800/47	300μ	4250Å				
130/470				"	"	"	"		Dome T=3°C H=85%		

177 pg #1

Emulsion Batches:

Date 1990 Dec 19/20 Observers J.m./mk.l

Diffuser IN for all comps 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	Comparison Exp.
FIT 00730	mk1 Flat			16 06	1708	0 0	ND 2.2	Tung A=1/2	
731	Comp			17 19			ND 0.2	FeA A=1/2	200
732	BM Cas	00 48 36	+63 33	17 39	18 12	01 05E	none		
733	Comp			1814			ND 0.2	FeA A=1/2	200
FIT 296 Tau	BM Cas (Seeing test) Before previous comp	00 48 6	+63 33	1813		01 04E	none	"n" wide	1 int x 4
734	Comp			1823			ND 0.6 + 0.2	FeNe A=1/16	200s
735	BM Cas	00 48 36	+63 33	1828	1929	00 11 W	no filter		
736	Comp					Dr	ND 0.8	FeNe A=1/16	200s
FIT TAG 737	V471 Tau	03 44 33	+16 57 06	19 42	20 19	01 54E	no filter		
FIT 738	V471 Tau ~~Comp~~	"	"	20 19	21 09	01 04E	no filter ~~ND 0.8~~	~~FeNe A=1/16~~	
739	"	"	"	21 09	21 39	00 35E	"		
740	"	"	"	21 41 30	22 11 40	00 02E	"		
741	"	"	"	22 12 12	22 42 30	00 29 W	"		
742	Comp						ND 0.8	FeNe A=1/16	200s
FIT TAG 743	MWC 560	07 21	-07 32	22 51	23 38 30	02 9E	no filter		

Spectr. Temp. ..... Dome Temp./Hum. -0.6°C 66% Transparency Conditions .. ~~Mostly~~ Clear Completely

Focus ..... Pg#1 Dec 19/20 178

Spectr. Temp. ..... Dome Temp./Hum. -6.°C 75% *Funson's Dome opened as of 17hrs Temp dropping fast.

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
50	2250				PTS Red Coll	1800/508	BS	4820Å	1B			
5	110											
10	200	poor	VAR V=9	mb							Optical Mask @ 11,500 tex guide image centered in BA Fiber Hole image off-center Tex In Dec [to close to bottom of	
5	100											
55/55		~~poor~~ pixels	≈9	mb			200u Fiber Hole	Light North wind	*	Seeing's Camera TEST (N ~~CENTR~~ Dome facing North view		
~~5/50~~					PTS Red Coll	600/627	BS	6550Å	1B		Dome T = -3°C ≈ 2 cnts/pixel/sec for strongest	
5/70		VVV poor	V ≈9	mb							Telfocus = 739 T = -4.3°C	
5/80		VV poor	VAR ~9.5	KOX							Q = 17,00 after binary	
25/100		poor	"	"							not Time tagged	
25/100			"	"								
10/105			"	"								
5/110		poor	"	"							H2 obs FAR Blue? Check it	
5/80		poor	V ≈10	m3?								

IH
pg #2

Date 1990 Dec 19/20 Observers MKi LTy

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
744	Comp						ND 0.8	FeNe A=1/6	200s	2	4
745	Comp					no filters	f18 stop	Fe A Clear	200s	2	4
746	V47H Tau	034433	+16 57 06	23 54 19	00 25	01 [illegible] W	no filter				V poor
747	Comp					no filter	f18 stop	Fe A Clear	200		
748	Comp			00 55			ND 0.2	Fe A A=1/2	200	10	4
FIT TAG 749	IRAS 560	07 21	+7 32	01 00	02 41	0056W	no filter			5	5
750	Comp						ND 0.2	Fe A A=1/2	200	5	4
751	Flat			02 50	03 53		ND 2.2	Tung A 1/2		5	700
752	Comp			04 07	04 12	0 0	ND 2.2	FeNe A=1/2		5	4
753	Flat (on timer)			04 14		0 0	ND 2.2	Tung A 1/4	3h13	5	1500

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

Spectr. Temp. ..... Dome Temp./Hum. −6°C 75% Transparency Conditions ..... CIRR − 3/4 Sky .....

Focus ..... pg #2 Dec 19/20 180

Spectr. Temp. ..... Dome Temp./Hum. −7°C 78%

Sudden complete cloud

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2/40				PTS Red Coll	1800/627	BS	6580Å				
2/40				"	"	"	"				
	V POOR	V/HR ≈10	KOV	"	"	"	"				
				"	"	"	"				
10/140				"	1800/50.8	"	4820 Å				
5/200		V ≈10	M	"	"	"	"			cloud @ 2:38 diminished signal	
5/120				"	"	"	"				
50/2700				"	"	"	"				
8/70				"	1800/627	"	6580Å		HII Bucket up on Persons/PCS/Stetson	TO FIT 752	
25/1500				"	"	"	"		+ All Fits Tugs to take bucket up on Persons PCS/Loki		

#1
181

Thurs - Fri

Date 1990 Oct 20/21 Observers MKi/Tu/Pds

Emulsion Batches:

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Diffuser in for sources

Spectr. Temp. ...

Focus .....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
FIT 00754	MKi Flat (short one)			20 05	20 18		ND 2.0	TuIX A=1/4		30	1½
755	Comp						f18 stop	FeA Clear	200	40	1
756	BM Cas	00 48.6	+63 33	20 27	21 29	2 15 W	no filter			5	8 OK
757	Comp						f18 stop	FeA Clear	200		
758	V471 Tau	03 44 33	+16 57 06	21 39	22 09	00 17 W				80	3 OK
759	"	"	"	22 09	22 39 30	00 48 W	~~f18 stop~~	~~FeA Clear~~	~~200~~	100	
760	"	"	"	22 40	23 10	01 18 W				10	
761	Comp						f18 stop	FeA Clear	200		
Fm 297 Pdc	HD 29587	04 34 5	+41 57	23 20	(4 frames)	00 18 W	= +42°	Int x 4		74	OK
762	HD 29587	"	"	23 22	23 35	00 33 W					
763	Comp						f18 stop	FeA Clear	200		
764	V471 Tau	03 44 33	+16 57 06	23 41	00 11	02 02 W					
765	"	"	"	00 11	00 41	02 32 W					43"
766	Comp						f18 stop	FeA Clear	200		47"
FIT 146 767	M11 C 560	07 21.0	-7 32	00 49	02 06	00 20 W					4"

Spectr. Temp. ..... Dome Temp./Hum. −1°C 90% Transparency Conditions ... SI Hazy .....

Focus ..... #241 Dec 20/21 182

Spectr. Temp. ..... Dome Temp./Hum. 0° 88%

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30	1700				PTS Red Cell	1800/627	BS	6580Å	IB			
10	40											
5	80	OK	VAR ~V-9	M6								
8	80	* 5050	VAR ~9.5	KOX							* Seeing = 4 if 300µ Ne blocks 4 Å dia	
5	100											
10	110											
~~5~~ 3		3" OK	V 7.29	dG2	"N" mode	Regular Dome	Fairchild Camera	West		#200µ Seeing test	FIBER Head Hazy, Medium East wind	
/1600												
~~5~~ /1	45											
5	200	<3"	VAR ~9.5	KOX		1800/627		6580Å				
5	200	<3"	"	"								
5	45											
10	100	4"	VAR ~10	M1							Part Cloudy	

#2 Thurs FRi
183
Date 1990 Dec 20/21 Observers T.n../P.dr.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
FITeg768	Comp.						f18 stop	FeA Clear	200	2	4"
769	HD86486	09 57	+1504	071630	025038	01 28E				1	4"
770	Comp						f18 stop	FCA Clear	200	5	4"
771	Flat			0318		0 0	ND 2.0	TuNG A=1/A	3hrs	3	4"

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

Focus ..... Pg #2 Dec 20/21 184

Spectr. Temp. ..... Dome Temp./Hum. +1°C 85%

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
4	40				DTS Red Coll	1400/627	BS	6580				
10	400	4"										
5	45									All fits backed up to floppy to HARD	FITOOT	
35	2200				"	"	"	"			to end now Ia	

PJ#1 Wed-Thurs

Date 1990 Dec 26/27 Observers KK/Pds/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FIT00772	Flat [For Speckle Later on]			15:27	Diffuser IN no f/8 stop	0 0	platform	Tung clear	7200
CE01908	Comp [0 0 90 CGAIN 256 1024 4 1 CCD Fmt]			19 12		01 20E	polaris	ThA	30s
1909	HD8890	01 22 06	+88 46	19 16 40	19 33 33	0 57E			
1910	" "			19 39 13	20 05	0 29E			
1911	Comp							ThA	20s
1912	BIAS [4]	Average of 4		20 15					
1913	Comp							ThA	20s
1914	HD12929	02 01 37	+22 59	20 23 30	20 45	00 41W			
1915	Comp							ThA	20s
1916	Comp							ThA	30s
1917	HD[illegible]39	04 30 11	+16 18	20 56 15	21 07 29	01 25E			
1918	Comp							ThA	20s
1919	[Dark. BAT]	BIAS (4)		21 13 05					
1920	DARK 15m								
1921	BIAS (4)								

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

Exp. Mtr. A	Exp. Mtr. B	Seeing
5m	60	
40		OK
15	0	OK
3	20	
12	0	OK
		OK

Spectr. Temp. ..... Dome Temp./Hum. -6.9 / 53.2% Transparency Conditions ... clear ...

Focus ..... pg #2 Dec 26/27

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

fibers 0".055 30° P.A.

Dome T = -11 at Sundown MAX

186

Exp. Mtr B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	DDC Quality
500 600				speckle	1800/48.0	300μ	425DÅ				
[no no	no	FILTER]		CCD Echelle	18.60	.364 80μ	4500Å	slit Height 400μ	KK fgm	[xgrating .4555 T = -12°C Echelle focus ≈ .200	
10000	*ok	~2	F					400μ = .225	~~KK~~	~~0 0 256 10^24 + +~~	5000
15000	ok	~2	F						[*TV IMAGE cut of focus but seeing good]		10000
≈3000											
		~~V= 2.00~~	~~K2~~						~~2 HRi std vel~~	~~(1 cosmic Ray spot) -14.3±0.2 Kinetics~~	16
12000	ok	V 2.00	K2 III						2 HRi std vel	-14.3 ± 0.2	7000
	ok	V 0.85	K5 III						std vel	+54.1 ± 0.1 Rec. Rat (1 min) Extension 0.15	8000

18 Spy #2 Wed-Thurs

Date 1990 Dec 26/27 Observers Pdr. ITn

Emulsion Batches:

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Spectr. Temp. ...

Focus .....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr ✱ Fc	Seeing
CE01922	DARK 15min										
FIT00773	Comp	Diffuser OUT				01 08E	no f18 stop	FeNe clear	60s	4.8 20.50	
FIT00774	HD34029	05 09,3	+45 54	22 17 03	00 17 03	01 06W				4.8 1.50 peak	
FIT00775	Comp	Diffuser	out				no f18 stop	FeNe clear	120s	4.8	
FM 2968	HD52860	06 57 39	+47 55 21	00 50		00 00	+47 51	Int x	4	4.8 3.50	
CE01923	BIAS(4)			00 49							
1924	Comp at Capella posn							TH A	20s		
1925	HD 34029	05 09.3	+45 54	01 19 42	01 25 50	02 14W					
1926	Comp							TH A	20s		
1927	Comp							TH A	30s		
1928	HD47105	06 31.9	+16 29	01 34 40	02 06	01 33W				7.8.0	
1929	Comp							TH A	20s		
1930-1933	Flats 4	(echelle CCD)		02 25		01 34W	+16 29	TUNG	40s		
1934-1937	Flats 4			02 47		00 00	+65 00				
FIT00776	Flat for Speckle		Diffuser IN			no f stop		TUNG Halo	3hrs	4.8 1.50	
backed up to Pinsun											

Spectr. Temp. ..... Dome Temp./Hum. -13°C 62% Transparency Conditions Slhazy - cloudy

Focus ..... Pg #2 Dec 26/27 188

Spectr. Temp. ..... Dome Temp./Hum. -14°C 65%

CCD Temp = -100°C

Exp. Mtr. A B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				~~PTS Speckle~~	CCD Echelle still						
20/20				PTS Speckle	1800/4800	300μ	4250Å		Fibers 0.005", 30° PA		
120/150	pook	B= 0.55	G4 +F	"	"	"	"		Asm Sp-KK	*Counts to 300 (both As B)	
15/15		~~B= 0.86~~		"	"	"	"				
"N" mode"	5050			4 frames Echelle CCD	Echelle tilt 18.60	spekle Fiber 80μ	Had 2 control 4500Å	s11+H 400μ	Seeing test Asm Sp KK	Dome W NW [Light- and west wind]	
10 000		B= 0.88	G4 +F						Asm Sp-KK	Clouding in	8000
7800	OK	B 1.09	A0 IV						Asm Sp-KK		6000
						80μ		6200 1.205 set		CCD T = -102°C	1,2000
550/650				PTS Speckle	/ ~~PTS Speckle~~ 1800/4800	30μ	4250Å				

189

Date Thur/Fri 1996 Dec 27/28 Observers KK/Pelu

Emulsion Batches:
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Spectr. Temp. ...
Focus ... See below
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cef0039	Hartmann Foot – IN							THA	30s		
40	" – OUT								30s		
cef0041	Hartmann – IN							"	"		
42	– OUT								"		
ce01938	Comparism							THA	20s		
ce01939	HD34029	05 09.3	+45 54	18:48	19:04					2.90	2.5"
ce01940	Comp							THA	20s		
ce01941-4	Flats							Tury	40s		
ce01945	bias 4x										
ce01946	bias 4x										
ce01947	Dark 15 min										
ce01948	bias 4x										
ce01949	Dark 15 min										

dark. bat

Backed up to Persens

Spectr. Temp. ..... Dome Temp./Hum. -7.2 67.6% Transparency Conditions Thick haze 190

Focus ..see below.....

Spectr. Temp. ..... Dome Temp./Hum. ..... 30 again

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				echelle CCD		.285 .225				T = -7.2 F = .200	
						50μ					
8290	2".5	0.8	GA + F			50 x400					2200
											1900
						50 x600					

pg #1 of 1 Thurs - Fri

Date Jan 3/4 1991. Observers F.Fels/T.....

Emulsion Batches:

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Spectr. Temp. ....

Focus.....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
1950	Bias(4)			17:30:00							
1951	Th-Ar			17:41:32				Th-AR	20s		
~~1952~~	~~HD 27396~~ 53 Per	04 19 19	+46 16 30	17:45:20	18 41 14	3 04 E				567	
1953	ThAr							ThAR	20s		
	[SAO 93228 + Vesta]			≈ 19 12 *	19 51	00 32 E				Fairchild Camera	Ecess Vis
	Image Aquisition view taped with Shen's Beta Video Recorder, Occultation predicted for 1991									T; Vis; Th	
1954	Th-AR			20 08 30				Th-Ar	20s		
1955	HD 27396 53 Per	04 1419	+46 16 30	20 10 15	20 59 46	00 44 E				01	
1954	Th-AR			20 01 30				Th-AR	20sec		
1957	Th-Ar			21:29:06				N	20sec		
1958	HD 22928 5 Per	03 35 43	+47 28	21 30 30	21 35 46	00 39 W				300	
19	Th-AR							ThAR	20sec		
	Th-AR										

Spectr. Temp. ..... Dome Temp./Hum. -7.6°C ... 57% Transparency Conditions .. PART. cloudy ..... 82.

Focus .....

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

90 c gain

0 0 256 1024 41 c o i m

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. ~~Echelle Tilt~~ Echelle	Grating/ Tilt	Slit	~~Emulsion~~	P.H. Height	Program	Remarks	Quality
				Echelle CCD ~~18.59~~	18.59	60μ .277	~~4~~ 4471	450μ .220	x grating = .4555		
		~~4.85~~	~~B4 III~~								
567		4.85	B4 III B4 IV						Lost – Not written by accident. PART cloudy		
Fairchild camera [Coss View]				Image aquisition view Clear during occultation			Occultation Taping		(Start @ 300 on beta meter) Cloudy lowered gain at 1922 EST End 1825 on Beta meter.		
ST; VERY Thin cloud by 1943, otherwise Clear											
					Echelle tilt						
				Echelle CCD	18.59	60μ .277	4471 Å	slit Height 450μ .220	x grating = .4555		
501		4.85	B4 III B6 III						CCD T = -102°C		
										Cloud by 2035	
3000		3.00	B5 III								

193 pg #2
Thurs - Fri

Date JAN. 3/4. 19/..... Observers .Fds.-.T.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
19 Col	HD 273396 (53 Per)	04 14 19	+46 16 30	21 49 37	22:30 39	0 46 W			
1962	Th-AR			22.31.37				Th AR	30sec
1963	HD 273396	04 14 19	+46 16 30	22:32:11	23:13:01	1 28 W			
1964	Th-AR			23:13.44				Th AR	20 sec
1965	HD 273396	04 14 19	+46 16 30	23 14	00 06 30	2 21 W			
1966	Th AR			00:07:30	Or			Th AR	20sec
1967	HD 273396	04 14 19	+46 16 30	00:10:09	00 31 40	2 46 W			
1968	Th AR							Th AR	20 s
1969	Th AR			~~00 41 34~~				n	20s
1970	HD 27928 (5 Per)	03 35 48	+47 28	00 41 34	01 28 14	4 31 W			
1971	Th AR			01 29 30				Th Ar	20s
1972	BIAS x4			01 35 00					
1978-1983	10 Flat @ 60s	MA=0	Sec = +47°	slit	height = 600μ			TUNG	60s
1984	Th-Ar			02:26:20					20s
1985	HD 273396	04 14 19	+46 16 30	02 28 06	02 57 19	05 12 W			
1986	Th-Ar			02 58 30				Th-Ar	20s

Spectr. Temp. ..... Dome Temp./Hum. -8.8°C 69% Transparency Conditions ..... Clear again ..... PH

Focus ..... page #2

Spectr. Temp. ..... Dome Temp./Hum. -8.7°C 66%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt (Echelle)	Slit width (slit)	~~Emulsion~~ λ	P.H. height	Program	Remarks	Quality
1400	OK	V 4.85	B4 IV ~~B6 VII~~	CCD Echelle	18.59	60μ .277	4471Å	450μ .220		X grating .4555	M.A.X.A.D.F 1200
1500	OK	V 4.85	B4 IV ~~B6 VII~~								MAX 1360
2006	ok	V 4.85	B4 III ~~B8 V~~								
503		V 4.85	B4 IV ~~B6 VII~~							CCDT: -103°C	
2743		V 3.00	B5 III							Too Cloudy	
										Temp @ 01 32 T: -103°C	
								600μ .1905			
								450μ .220			
294		V 4.85	B4 III ~~B6 VII~~							Cloud at end	

pg pg #3

Date 1991 JAN 3/4 Observers Ed.S. - T.A.

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
1987	Th Ar							Th Ar	20s		
1988	HD62509	07 39.2	+28 16	030258	031043	2 02W				2600	poor
1989	Th Ar			03:11:21				Th-Ar	20s.		
1990	BIAS (x4)			03:18:35							

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Cloudy ..... P16 ...

Focus ..... Pg #3

Spectr. Temp. ..... Dome Temp./Hum. ... -8.5°C ... 65%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. Height	Program	Remarks	Quality
				CCD Edolle	18·59	60μ	4471Å	450μ			
26000	poor	B= 2'14	K0III						stdvel		

197

Fri - Sat night

Date JAN. 4/5/91 Observers Fds/TA

Emulsion Batches:

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Spectr. Temp. ...

Focus .....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
1991 - 2000	10" flat 60s			16 55 30		0h	+45°	Tung	60s		
2001	BIAS (4x)			17 20 58							
2002	Th-Ar							Th Ar	20s		
2003	HD27396	04 14 19	+46 16 30	17 35 50	18 05 50	3 37 E				4380	cr
2004	Th Ar			18 06 40				Th Ar	20s		
2005	HD 27396	04 14 19	+46 16 30	18 08 00	18 33 00	3 09 E				4.9	
2006	Th Ar							Th Ar	20s		
2007	~~HD 27396~~ Th AR							Th Ar	20s		
2008	HD 22928	03 35 48	+47 28	18 38 05	18 42 13	2 31 E				4.25	
2009	Th Ar Comp							Th Ar	20s		
2010	Th Ar							Th Ar	20s		
2011	HD 27396	04 14 19	+46 16 30	18 47 22	19:11:33	2 31 E				4.3	
2012	Th AR							Th Ar	20s		
2013	HD27396	04 14 19	+46 16 30	19 13 14	19:37:25	2 05 E				4.1	
2014	Th-Ar			19 38 30				Th Ar	20		
2015	Th-Ar			19:41:25							

Spectr. Temp. ..... Dome Temp./Hum. -6°C ... 61% Transparency Conditions ... Clear ... PB

Focus ..... Pg #1

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

Top up 16:31 T = -103°C

90 Cgain & same CCD FORMAT as previous night

Exp. Mtr.	Seeing	~~Plg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	18.75	~~85µ~~ 70µ = .274	4481 Å	~~450µ~~ 600µ	×S = .4555. for Flat		
					18075	70µ	4481 Å	450µ	× grating = .4555		max Adu
2380	OK	V= 4.8~~5~~	B4 IV ~~B5 III~~						53 Per		1340
2380											2380
											~~2340~~
30.25		V 3.00	B5 III						5 Per		~~2338~~
3000		V 4.85	B4 IV ~~A5 III~~						53 Per		3947
305										Note: All START and TIMES ARE	
3000										from Astro Clock and are ahead	
										of AST PC clock times by	
										15 secs.	

1999 Fri - Sat Pg #2

Date .JAN.14.15./.9.9..... Observers .Eds./Tom.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
2016	HD 27928	03 35 48	+47 28	19 42 55	19:46:06	01 26 E				3000	
2017	Th-Ar			19:48:52				Th-Ar	20s		
2018	Th-Ar			19:51:17				Th-Ar	20s		
2019	HD 27396	04 14 19	+46 16	19:53:07	20:20 28	01 22 E				3000	
2020	Th-Ar			20:21:36				Th-Ar	20s		
2021	HD 27396	04 14 19	+46 16	20 22:48	20:57:57	00 45 E				3000	
2022	Th-Ar			20:58:55				Th-Ar	20s		
2025	Th-Ar			21:01:44				Th-Ar	20s		
2024	HD 27928	03 35 48	+47 28	21:04:08	21:10:36	00 04 E				3000	
2025	Th-Ar			21:11:22				Th-Ar	20s		
2026	Th-Ar			21:13:35				Th-Ar	20s		
2027	HD 27396	04 14 19	+46 16	21:15:55	21 56 10	00 13 W				3000	
2028	Th-Ar Comp							Th Ar	20s		
2029	HD 27396	04 14 19	+46 16	21 57 41	22 37 41	00 55 W					
2030	Th-Ar							Th Ar	20s		
2031	Th Ar Comp							Th Ar	20s		

Spectr. Temp. ..... Dome Temp./Hum. ~~-6.8°C~~/.63 7% Transparency Conditions ..clear..... 2.2...

Focus ..... pg 42

Spectr. Temp. ..... Dome Temp./Hum. ..... Difficult to estimate seeing since for max signal stellar image is very out of focus.

Exp. Mtr.	Seeing	~~Pkg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3000	1	3.00	B5 III	echelle/ CCD	18.75	70μ -274	λc = 4431Å Slit height = 450μ	-4555			MAX ADU
3000		4.85	B4 III ~~B6 III~~								
3000		4.85	B4 IV								3795
3000		3.00	B5 III								3987
2500	~~3.0~~	4.85	B4 IV								
		4.85	B4 III								

201 Pg #3

Date 1991 JAN 4/5 Observers F.d.s.-T.h

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce: 02032	HD22928	03 35 48	+47 28 00	22 42 08	22 50 15	1 27 W			
2033								Th Ar	20s
2034								Th Ar	20s
2035	HD27396	04 14 19	+46 16 30	23 53 50	23 28 14	1 46 W			
2036								Th Ar	20s
2037	HD27396	04 14 19	+46 16 30	23 29 50	00 04 24	2 23 W			
2038	Th Ar							Th Ar	20s
2039	Th Ar							Th Ar	20s
2040	HD22928	03 35 48	+47 28 00	00 08 50	00 18 16	03 15 W			
2041	Th - Ar							Th Ar	20s
2042	Th - Ar							Th Ar	20s
2043	HD27396	04 14 19	+46 16 30	00 21 25	01 01 25	3 20 W			
2044	Th - Ar							Th Ar	20s
2045	HD27396	04 14 19	+46 16 30	01 03 00	01 33 00	3 52 W			
2046	Th - Ar							Th-Ar	20s

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

Exp. Mtr.	Seeing

Spectr. Temp. ..... Dome Temp./Hum. -7.8°C 66% Transparency Conditions V.Sl. hazy.....

Focus ..... pg #3 202

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

Exp. Mtr.	Seeing	Eye. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. Height	Program	Remarks	Quality
		3.00	B5 III	CCD Echelle	18.75	70μ	4484 Å	450μ	x grating = 0.4555		
		4.85	B4 IV								
21000 cnts											
3000		4.85	B4 IV								
		3.00	B5 III								
2900		4.85	B5 III								p24x 3600
										CCD T = -102.8	
1286		4.85	B5 III							Thin cloud coming	

203 pg 04

Date 1991 JAN 4/5 Observers F.d.s.-Tm

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
2047	Comp Th-Ar								20		
2048	HD27928	03 35 48	+47 28 00	01 36 33	02 16 33	5 14 W				3.69	
2049	Th - Ar								20		
2050	Th Ar								20		
2051	HD 62509	07 39 2	+28 16	02 21 39	02 29 55	01 25 W				3.06	
2052	Th Ar								20		
2053-2062	Flats x10		Slit Height = 600μ	02 41 57		0 0	+45°				
2063	BIAS (4)										
64	BIAS (4)	JAN 5/6		21 30							
65	DARK 15m										
66	DARK 15m										
67	DARK 15m										
68	DARK 40m										
69	BIAS (4)										

Spectr. Temp. ..... Dome Temp./Hum. -7.9°C 67% Transparency Conditions ... Clouding in ... 204

Focus ..... 19"4

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD Echelle	18.75	70μ	4481Å	450μ			
2369		V 3.00	B5III							cloudy	
3000		B 2.14	K0III/b						stdvel		
								600μ			

205
Night 1 mon-Tues

Date 1991 JAN 7/8 Observers Fds-Jn

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
Ce02070 Fls	BIAS			16 2010							
2070-80	Flats x10	@60s						TUNG	60sa		
Ce02081	Th-Ar			172653				Th Ar	20s		
2082	HD27396	04 1419	+46 16 30	17 3225	18 3227	2 58 E				1639	V poor
2083	Th Ar							Th Ar	20s		
2084	Th Ar							"	2s		
2085	HD22928	03 35 48	+47 28 30	18 3810	18 5920	1 52 E				1 22	poor
2086	Th Ar							Th A	30s		
2087	Th Ar							Th A	20s		
2088	HD27396	04 1419	+46 16 30	19 0322	20 0322	0 27 E				1707	poor
2089	Th Ar							Th A	20s		
2090	HD27396	04 1419	+46 16 30	20 0616	21 06 16	00 24 E				1 2	
91	Th-Ar			21 07 13				Th Ar	20s		
92	Th-Ar			21 11 42				Th Ar	20s		
93	HD22928	03 35 48	+47 28 30	21 14 00	21 2835	00 38 W				1 29	
94	Th Ar							Th Ar	20s		

Spectr. Temp. ..... Dome Temp./Hum. -10°C 53% Transparency Conditions .... FINE ..... 206...

Focus ..... pg #2

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

90 Cgain 0, 0, 256, 1024, 1 CCD FMT

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	Slit P.H. Height	Program	Remarks	Quality
										CCD Temp = -102°C	
				CCD Echelle	18.75	70u 274	4415	800u .185	x grating =	.4555	
				"	"	"	"	600u .205			
1639	V POOR	4.85	B4 IV								1423
3000	POOR	300	B5 III						5 Per		2712
1307	POOR	4.85	B4 IV						53 Per		1513
1612		4.85	B4 IV						53 Per		1608
3000		3 CCD	B5 III						5 Per		4163

20" prism mon-Tues

Date .1991. JAN. 7/8..... Observers .Fds.-T.n.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CE 002095	Th Ar							Th-Ar	20s		
96	HD27396	04 14 19	+46 16 30	21 32 29	22 32 30	01 03 W				6658	6x8
97	Th-Ar							Th-Ar	20s		
98	HD27396	04 14 19	+46 16 30	22 34 00	23 34 00	02 04 W				6880	OK
99	Th-Ar							Th Ar	20s		
2100	Th-Ar							Th Ar	20		
2101	HD22928	03 35 48	+47 28 30	23 47 55	23 57 24	03 07 W				7100	
102	Th-Ar								20		
103	Th-Ar								20s		
104	HD27396	04 14 19	+46 16 30	00 07 54	01 07 57	03 38 W				7375	
105	Th-Ar								20s		
106	HD27396	04 14 19	+46 16 30	01 10 27	02 03 00	04 33 W				7773	
107	Th-Ar								20s		
108	Th-Ar								20		
109	HD22928	03 35 48	+47 28 30	02 06 00	02 34 44	05 45 W				8143	
110	Th-Ar								20		

Spectr. Temp. ..... Dome Temp./Hum. −13.5°C ... 53% Transparency Conditions ... SI. Hazy ... 208

Focus ..... Pg #2 Some cloud by 0030

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

MAX ADU

Exp. Mtr.	Seeing	Pic. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H. Height	Program	Remarks	Quality
				CCD Echelle	18.75	7μ	4481 Å	600μ .205			
2658	SOSO	4.85	B4 IV								
2880	OK	4.85	B4 IV							for	2541
3000		3.00	B5 III							Tel focus 2223 T=−13.5°C	2360
2195		4.85	B4 IV							Some cloud	
1773		4.85	B4 IV							cloud again @ end	1509
403		3.00	B5 III								

209 pg #3

Date 1991 JAN 7/8 Observers Eds-Th

Emulsion Batches:
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.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
ce 002111	Th Ar			02 39				ThA	20s		
112	HD 34029	05 09.3	+45 54	024039	030104	4 37W				7412	
113	Th Ar							ThA	20s		
114-123	Flats (10)			0309		0 0	45°	TUNG	50s		
124	BIAS(4)			0338							
125	"			034240							

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Cloudy ..... 21D..

Focus ..... pg #3

Spectr. Temp. ..... Dome Temp./Hum. -14.5°C ... 60%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD Edelle	1875	70μ	4481 Å	600μ			
7422									Capella		
								800μ .185			

2m Vg 1 Sat-Sun

Date JAN. 12 13 ... 1991 ... Observers ... Fds./ Pcl .....

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

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CEO7126	BIAS (4)			20:04 03							fair
2127	BIAS (4)			20:08 55							
2128	Th-Ar			20:21 58				Th-Ar	20s		
2129	HD 22928	03 35 48	+47 28	20 25 50	20 39 14				~~3600~~	3000	
2130	Th-Ar			20 40 00							
2131	Th-Ar			20 42 23							
2132	HD 27396	04 14 19	+46 16 30	20 45 10	21 45 10	00 35 W			~~2558~~	2000	
2133	Th-Ar			21 46 00				Th-Ar	20s		
2134	HD 27396			21 46 45	22 46 45	01 36 W				1469	
2135	Th-Ar			22 47 25					20s		
2136	Th-Ar			22 49 40					20s		
2137	HD 22928	03 35 48	+47 28	22 52 34	23 12 18					4500	
2138	Th-Ar			23 13 00					20s		
2139	Th-Ar			23 14 35					20s		
2140	HD 27396	04 14 19	+46 16 30	23 15 53	00 15 53	@3 06 W					

Spectr. Temp. ..... Dome Temp./Hum. ...8.2./..70% Transparency Conditions ..Clear..... 212..

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..10.8./..73.1%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	Poor			CCD echelle	for 75	70μ	4481 Å	60% slit height			
3000		V= 3.00	BS III						8 Per	Tel focus 2236 T=-9.0	
2558		V= 4.85	B4 IV								
2369											
4500		V= 3.00	B5 III						8 Per		

213 Pg 2 Sat-Sun

Date Jan. 12/13 1991 Observers F.ds / P.dr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
@02141	Th-Ar			00:16:30					20s		
2142	HD27396	04 14 19	+46 16 30	00:17:10	01:17:10						
2143	Th-Ar			01:17:52				-	20s		
2144	Th-Ar			01:20:46					20s		
2145	HD22928	03 35 48	+47 28	01:22.13	01:36:35	05 05 W					
2146	Th-Ar			01 37 12					20s		
2147	Th-Ar			01 38 44					20s		
2148	HD27369	04 14 19	+46 16 30	01 40 14	02 40 14	05 31 W				11 55	
2149	Th-Ar								20s		
2150	Th-Ar								20s		
2151	HD34029	05 09.3	+45 54	02 44 25	02 48 46	04 44 W					
2152	Th-Ar			02 49 26					20s		
2153	Th-Ar			02 52 01					20s		
2154	HD62509	07 39 14	+28 16	02 53 06	02 59 07						
2155	Th-Ar			03 00 23					20s		

Spectr. Temp. ..... Dome Temp./Hum. -11.3 / 73.4% Transparency Conditions Clear 2/4

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -11.2 / 73.9% slit

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. Height	Program	Remarks	Quality
				CCD echelle	18.75	70μ	4481A	600μ .205			
		V= 4.85	B4 IV								
		n=									
3000		V= 3.00	B5 III								
1955		V= 4.85	B4 IV								
12 000											
5000		B= 2.14	K0 III b							SID Vel	

2nd Pg 3 Sat-Sun

Date ....Jan.12+13.91 Observers ...Fds./Pdr.....

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

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
	HD84441	9 45 22	+23 48 49								
CE02156	Bias (4)			03:10:00							
CE02157-02166	10x Flats		~	03 20		00h	+45°		35s		
167	BIAS(4)			03 4305							
	JAN 18/19/92	PCS	Cloudy	Night							
FIT00777mki	Flat			2047	23 47	0 0	TUNG DIFF IN	Ap 1/a ND20	3hrs	A B	

Spectr. Temp. ..... Dome Temp./Hum. 11.2 / 73% Transparency Conditions ..... 2.16 ....

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. height	Program	Remarks	Quality
		ν= 2.98	~~61IIa-b~~							~~S~~ Flures!!	
					18.75	70μ	4481 A	850μ .185			14000
				Rad Coll PCS	1800/62.7	BS	6540Å*			* actual central λ indicated as 6580Å in header.	
A B 30 1600								B			

217 SAT/SUN

Date 1991 JAN 19/20 Observers T.n./Mki ~~starting~~...

Emulsion Batches: .....

.....

f18 Stop & Diffuser in for all sources

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FIT00778	Mki Flat			17 3520	18 18		DIFF IN Ap=1/4	TUNG ND 2.0	
779	Comp						DIFF IN No Filter	FeAr CLEAR	200s
780	~~HD23735 V471 Tau~> ?~~	~~03 42.3 03 44 43~~	~~+16 39 +16 57 06~~	18 28	18 58 08	From Circle 01 12E	* Dec Drum +17 01		
781	Comp						no filter	FeAr CLEAR	200s
TAG cFIT 782	~~HD23735 V471 Tau~> ?~~	03 42.3	+16 39	19 03	19 47	00 23E	+17 01		2610s
783	Comp						no filter	FeAr Clear	200s
TAG cFIT 784	MwC 560	07 21.0	-07 32	20 06	20 23 40	04 02E	-07 33		1018s
785	Comp						no filter	FeAr CLEAR	200s
TAG FIT 786	MwC 560	07 21.0	-07 32	~20 52	21 07 30	03 17E			~900s
787	Comp						no filter	FeAr Clear	200s
788	Comp (Long)	NOTAG		21 27		0 0	"	"	990
FM000799 Tn	HD40722	05 55 40	+43 22 39	22 00		00 22E	4 frames	Jet X4	Nimate
789	HD40722	"	"	22 04	22 17	00 07E			
790	Comp						no filter	FeAr clear	200s
791	FLAT			~22 36 40		0 0	ND 2.0	TUNG Ap=1/4	

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

Exp Min	B	Seeing
30	1350	
5	40	
10	350	poor
5	40	
10	1100 500	poor
5	50	v poor
5	10.7 6.1	poor
5	40	
5	50 50	
4	4m 3m	
5	35	
5	150	

Spectr. Temp. ..... Dome Temp./Hum. +3°C ... 76% H Transparency Conditions Part ... Cloudy ..... 2B..

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +3°C ... 75% Gusty SW wind

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30	1350				Red Coll PCS	Fiber Fed 1800/6207	BS	~~**~~ 6540Å	CHB		6540Å actual central λ	
5	40					"		** "			** indicated as 6540 in Header	
10	350	poor	8.4	F2		"		** "		prob wrong star	* Dec Drum Field Drumer Note - not using encoder	
5	40					"		** "				
10	100/500	poor	8.4	F2		"		6540Å		prob wrong star	1.2 neg TAG Very gusty. Tel hard to guide	
			note	Dec Circle (Drum)		red +16 33		for α Tau centered		posn logged too	@ 1930. V+T off take a few minutes	
5	50	V Poor	V ~10					6540Å		Mk. pgm	(116K for TAG) clouding in	
										All FITs backed up to FIT00779.wmi		
5	10→60	poor	V ~10							best conts 2100 → 2107	LAST BIT of Clear Sky	
5	40		V ~~6.42~~	~~KO III~~								
31	x31	SOSO	V 6.42	KO III	DOME SW :. vented slit obscured by telescope		[200u Fiber Head view above hole]				[V gusty SW] ~~Thin Cloud~~	
10	400	3"	"	"			BS	6540Å		Thought it was also a std but it isn't.		
5	35									Similar Spectra to prob wrong star Taken at start of night.		
30	1520											
								Backed up to end on			3.5" tapes To	

2nd Sun/Mon

Date 1991 JAN 20/21 Observers J.n

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FIT00792.mki	FLAT			18 26 18		0 0	½ ¼ Tungsten	ND 1.8 Hp 1/4	3 hrs
793	DARK [no lights on]			23 15 10	01 5[illegible]				
	JAN 21/22 Mon/Tues		Pdr/Tel/MKi						
FIT00794.MKi	FLAT			16 15 22	18 07		TUNG	ND 1.8 Hp 1/4	67 00s
FIT00795.MKi	Comp						f 18 Stop	Fc A Clear	200s
FIT00796.	BM Cass	00 48.6	+63 33	18 17	19 00	1 51 W			
797	Comp						f 18 stop	FCA Clear	200s
TAG SELT 798	V471 Tau	03 44	+16 57 06	19 16	20 17 40	0 14 W			
799	Comp						f 18 stop	FCA Clear	200s
FM000300 pdr	HD29587	04 34.5	+41 57	21 20		00 33 W	4x frame	Int x4	"N" mcds
800	HD29587	"	"	21 29 26	2209	01 14 W			
801	Comp						f 18 stop	FCA Clear	200s
TAG FIT 802	HD50138	06 48.7	-06 51	22 16	2227				
803	Comp						f 18 stop	FCA Clear	200
							f		

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

Exp Mtr.	Seeing
Hi 200	
< 1.5	
30/1200	
1.5	
T 100	
< 1.5	V
1.5	V
1.5	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 2.20

Focus .....

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

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst. Rel Coll	Grating/ Tilt	Slit	Emulsion λ	P.H.	Program	Remarks	Quality
40 / 2000				PCS Fiber Fed	1800/627	BS	6540Å	CHB			
45 / 45				"	"	"	"	"			
						Dome T -11°C	H= 47%			Part Cloudy	
35 / 1600				PCS Fiber Fed	1800/627	BS	6540Å	CHB			
4 / 35										Diffuser in for All sources	
5 / 100		V 29	177								
45 / 150	V POOR	V 9.5								Dome T=-15°C, clouds coming in	
39 x 39	V	V 7.29	dG2	Dome W		medium cold North wind				clouds Dome West	
5 / 150	"	"	"							clouds	
300 / 500	V 1.00	V 6.7	B								
~~5 / 500~~	~~V POOR~~	~~6.7~~	B							Part cloudy + hazy	

221 Pg#2 Mon/Tues

Date 1991 JAN 21/22 Observers Pdr./Ta

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
804	Comp						f/18 stop	FeA ~~Clear~~ 1/2	200s
TAC FIT 805	HD 50138	06 46.7	-06 51	22 39	23 00	00 05 E			
806	Comp						f18 stop	FeA A=1/2	200s
TAC FIT 807	MWC 560	07 21.0	-07 32	23 06	00 30 40	00 52W			500s
TAC FIT 808	MWC 560	"	"	00 31	02 32	02 54W			
809	Comp						f18 stop	FeA 1/2	200s
TAC FIT 810	MWC 560	"	"	02 38	02 56	03 16 W			[illegible]s
811	Comp							FeA	
812	SAO ~~AD Leo~~ ?	10 03 03	+12 27	03 16	04 23	02 03 W			4045s
813	Comp							FeA	200s
814	HD 87901	10 03 03	+12 27	04 33	04 53	02 32 W	ND 2.0		
815	Comp							FeA A=1/2	200
TAC FIT 816	AD LEO	10 14 26	+20 21 for Leo Coord's	05 27	07 01	04 30 W			
817	Comp							FeA A=1/2	200s
~~818~~	~~Flat (on Homer)~~		not done						

Spectr. Temp.
Focus
Spectr. Temp.

Exp Mtr.	Seeing

Spectr. Temp. ..... Dome Temp./Hum. -16°C : 56% Transparency Conditions .. Partly cloud - Hazy ....

Focus ..... pg #2

Spectr. Temp. ..... Dome Temp./Hum. -18°C : 60%

222

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/140				PCS Fiber Fed	1800/50.8	BS	4820Å	Ch B			
50/1000		V 6.7	B&C							in and out of clouds	
5/40→100		V 10	M							Ins out of cloud	
<10/100-200	Sosp	n	n							Tel Focus 6-1728 clearer -2809	
10/120											
5/100		V 10	M								
						✓ Actually	someone told me that Roy has now the hot stars please put	S140	09	Acq Bol star to 4½ airmass = 5 6K minutes	
10/2000	poor	V 1.35	BTVm						α Leo	Telluric Std.	
10 130										γ Leo nearby	
10 140									(Locked up	on 3.5" to 8th B (Tn))	

223

Date 1991 Jan 22/23 Observers .....

Emulsion Batches:
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.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
FIT 818	Flat			18 15.5	21 15.5			ND 2.0 A=1/4	2m 1m+	15	2.00

Spectr. Temp. ..... Dome Temp./Hum. 51.8% -9°C Transparency Conditions Cloudy .....

Focus .....

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

224

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
150/1800										New thingh source	
				All FIT + TAG backed up to Perseus							
				All FIT backed up to 3.5"							

225 pg#1

Thurs/Fri
Date 1991 JAN 24/25
Observers Tn./Pdr. [KK] service tests

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCoo303.fts	Comp				18 33		[f18 stop for a comps]	clear FeAr	44s
304	Comp				18 45			clear FeNe	15s
305	18 Tau HD23324	03 39 12	+24 32	18 50 15	19 04 22	00 43E			
306	〃	〃	〃	19 08	19 41 06	00 04E		c~~lear~~	~~15s~~
307	comp							clear	15s
308	BIAS(4)								
FMoo301.Pdr	HD23324	03 39 12	+24 32	20 00		00 14W	+24 54	Nimale	4 frames
309	FLAT			20 12		00 26W	f18	TUNG clear	60sec
310	Comp			20 26			f18	FeNe ~~A=1/2~~	20s
311	HD23324	03 39 12	+24 32	20 30 30	20 57 20	1 10 W			
312	Comp						f18	FeNe A=1/2	20s
313	comp						f18	FeAr clear	90s
314	Flat						f18	TUNG clear	40s
315	Comp						f15	FeNe A1/2	20s
316	HD23324	03 39 12	+24 32	21 23	21 45	1 58W			
317	comp						f18	FeNe A1/2	20s

Spectr. Temp. ..... Dome Temp./Hum. −12.2°C ... 60% Transparency Conditions ... Uniform Haze ... 2%

Focus ... 5.98 ...

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

502 0 40 1024 2 1 ccdfmt
30 cgain

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
32033					1800/39.9	250μ	GG 228 + 3980Å	Actual	center 3980Å	MAX ADU = 1973	
					1800/39.9	"	"			MAX ADU = 1722	
10,200	V poor *	V= 5.65	B8V	CCD CASS	"	"	"		UBVRI std.	MID λ ADU=390; MAX ADU=42[illegible] *almost full slit Long Ht	
26 000	POOR	"	"	"	"	"	"		Tests	MID λ ADU = 700 MAX ADU = 820	
4×Integration 39×34 pixels	POOR		(Image above slit)			250μ	Decker STILL IN Slit Head.		Dome SW	Dome T = −14°C Light NORTH wind	
					1800/39.9 actual	"	3980Å			MAX ADU 2700 MID λ ADU 1770	
	~~SOSO~~				1800/4200	"	4350Å				
26000	SOSO	V 5.65	B8V		"	"	"			MAX ADU = 1400 MID λ ADU = 1150	
						"	"				
						"	"			MAX ADU = 760	
						"	"			MAX ADU = 4600 MID ADU = 3200	
					1800/45°	"	4810Å				
20,400	POOR	V 5.67	B8V		"	"	"			MAX ADU = 1500 MID λ ADU = 1500	

22 pg#2

Date 1991 JAN 24/25. Observers P.d.r. I.T.n.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
318	Comp						f18	FeAr Clear	90s		
319	FLAT						f18	Tung Clear	40s		
320	Comp						f18	FeNe A=1/2	20s		
321	HD23324	03 39 12	+24 32	1 59 30	22 19	7 32 W				30	30s
322	Comp						f18	FeNe A=1/2	20s	~~30~~	
323	Comp						f18	FeAr Clear	60s		
324	FLAT for 5170Å						f18	Tung Clear	70s		
325	Comp						f18	FeAr Clear	60s		
326	Comp						f18	FeNe A=1/16	20s		
327	HD23324	03 39 12	+24 32	22 38	22 56	3 09 W				1/300	
328	Comp						f18	FeNe A=1/16	20s		
329	FLAT for	5890Å					f18	Tung A=1/4	20s		
330	Comp for	6560Å					f18	FeNe A=1/16	10s		
331	Comp for	6566Å					f18	FeAr Clear	60s		
332	HD23324	03 39 12	+24 32	23 14	23 31	3 ~~4~~ W				1/300	
~~333~~	~~COMP~~						~~f18~~				

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

Spectr. Temp. ..... Dome Temp./Hum. -15°C 70% Transparency Conditions ..51. Hazy 228

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... central CCD Temp = -100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD CASS	1800/45.0	250μ	4810Å				
				"	"	"	"			MAX ADU 14000 MID ADU 10000	
				"	1800/46.5	"	5170Å				
20,200	5050	V 565	B8V		"	"	"		VBV std	MAX ADU = 2250 MID λ ADU = 2200	
~~20,200~~											
										MAX ADU = 14000 MID λ ADU = 12000	
					1800/51.5		5890Å				
										7500 ADU MAX	
19,500										MAX ADU = 2550 MID λ ADU = 2550	
					1800/51.5		5890Å			MAX ADU = 5000 MID 5250 5000 ADU	
					1800/56.0		6560Å			4470 ADU MAX	
					"		6560Å				
20000					"		"			MAX ADU = 2000 MID λ ADU = 1600	

229 #3

Date 1991 JAN 24/25 Observers P.d.r./I.t.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
333	FTS Comp						f18	FeAr clear	60s		
334	Flat for	6560Å					f18	Tung A-1/4			
335	FLAT for	3980Å				± 0200E	+2837	Tung clear	90s		
336	Comp for	3980Å					f18	FeAr clear	300s		
337	Comp						f18 stop	FeNe clear	15s		
338	HD90861	10 24 18	2905	00 37	01 17 15	01 13E				F60	OK
339	Comp						f18 stop	FeNe clear	15s		
340	BIAS(4)	DARK.BAT		01 31							
341	DARK 15m										
342	BIAS(4)										
343	DARK 15m										
CCF00052	Hartmann -	comp					f/18	FeNe clear	20		
53	Hartmann -	stellar					"	"	"		

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

Spectr. Temp. ..... Dome Temp./Hum. -16°C ... 72% Transparency Conditions .... FINE - Cloudy 23:0

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -17°C ... 74% MID Topup @ 0015 EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD CASS	1800/56.0°	350μ	6560Å				
							"			6000 MAX mid 5800	
				CCD CASS	1800/39.9°		3980Å		MAX ADU = 4000 MID λ = 3000	T = -102°C after topup	
				"	1800/39.9°		3980Å			prob closer to 3960Å center	
				"	"		"				
10 500	OK	V 7.2	K2III	"	"		"		std/vel	MAX ADU = 290 MID λ = 240	
				"	"		"		std/vel	Cloud by 01 EST	
				BC	1800/4501			CCD		T = -9.3° F = 7.10	
				"	"			"		Dim subtracted	

pg#1 Fri-Sat

Date 1991 JAN 25/26 Observers Pdt. I.T.s

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00344	Hts Comp						DIFF OUT f18 stop	FeNe Clear	15s
345	Comp						DIFFUSER IN now	FeAr Clear	200s
346	HD26162	04 03·3	+19 21	18 35 30	18 55	01 12 E			
347	Comp						Diff IN f18	FeAr Clear	200s
348	Comp						"	FeNe Clear	15s
349	FLAT						"	TUNG Clear	90s
350	BIAS (4)			1930					
351	Comp						Diffuser IN f18 stop	FeAr Clear	90s
352	HD Comp						"	FeNe Clear	15s
353	HD73665	08 34 21	+20 22	22 37 40	23 25 00	1 12 E			
354	Comp						f18 stop	FeNe Clear	15s
355	FLAT	[Diffuser out gives even illumination]		[Diffuser Taken out now]		1 05 E	f18 stop	TUNG Clear	50s
356	Comp for 4840 Å			Diffuser out for All sources now					15s
357	HD73665	08 34 21	+20 22	23 43 30	00 15 30	00 23 E			
Fn:00302	Tn "	"	"	00 18		00 18 E	"11" mode	[4x In+]	

Spectr. Temp. ...
Focus ... 7.1(
Spectr. Temp. ...

Exp Mtr	Seeing
	OK
33 Pls	OK
	OK
30	"A"
00	OK
31	

Spectr. Temp. ..... Dome Temp./Hum. ~10°C 62% Transparency Conditions Clear - Typically cloudy

Focus 7.10

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

CCD Temp → −100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. CASS CCD	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Blue fall ~~1800~~	1800/39.4*	~~250~~μ	3920Å		G4190		
	~~OK~~	~~5.50~~ V	~~K1 III~~							MAX ADU = 800	
28,800	OK	5.50 V	K1 III						Stilvel	cloud & tenuous MAX ADU = 520 MID λ ADU = 420	
										MAX ADU = 4100 MID λ ADU = 3000	
					1800/42.0	250μ	4350Å		G4468		
	OK	~~6.29~~ V 6.29	~~K0~~ K0 III						UBVRI std	B-V +0.98 MAX ADU = 1450 MID λ = 1300	
30000	~~4"~~										
										MAX ADU = ~~4650~~ 5500 MID λ = ~~4000~~ 4000	
					1800/45.0		4810Å		G4776		
21000	OK	6.29 V	K0 III						UBVRI std.	MAX ADU = 2200 MID λ = 1900	
31x31	"	"	"	4 frames - Dome SSW					Light SW	wind	

232

233 #2 Fri Sat

Date 1991 JAN 25/26 Observers P.D.C./T.A.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD 358	ffs Comp						f/8 stop	FeNe Clear	15s
359	Comp							FeAr Clear	90s
360	FLAT						Ap=1/2	TuNG ~~Clear~~	40s
361	Comp for 5170Å						f/8 stop	FeAr Clear	90s
362	HD 73665	08 34 21	+20 22	00 36	00 58	00 21 W			
363	Comp							FeAr Clear	90s
364	Comp							FeNe Clear	15
365	FLAT						Ap 1/2	TuNG ~~Ap 1/2~~	~~30~~
366	Comp for 5890Å							FeAR Clear	60s
367	HD 73665	08 34 21	+20 22	01 14	01 38 30	01 01 W			
368	Comp							FeAr Clear	60s
369	Comp							FeNe A-1/16	20
370	FLAT							TuNG A-1/4	30s
371	Comp for 6560Å							FeNe A-1/16	10sec
372	HD 73665	08 34 21	+20 22	01 50 30	02 16 30	01 39 W			

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

Exp. Mtr	Seeing
1/8 000	ok
1/2 sec	
1/8 000	
1/80	3"

Spectr. Temp. ..... Dome Temp./Hum. -12° 67% Transparency Conditions ... sl. hazy ... 234

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Blue Cdl	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/450	250μ	4810Å		G-4776		
							"				
							"			MAX ADU 10 000 MID λ ADU = 7500	
					1800/46.5		5170Å		G-5021	1122 ADU 600 Å+/ea	
18 000	ok	✓ 6-29	KO III				"		4 BVRI Stds.	MAX ADU = 3400 MID λ = 3200	
							"				
							"				
20sec							"			MAX ADU = ~~15000~~ 9 000 MID ADU = ~~12000~~ 7500	
					1800/51.5		5890Å		G-5527		
15 000		✓ 6-29	KO III				"		4 BVRI Stds	MAX ADU = 4200 MID λ = 4200	
										MAX ADU = 8000 MID λ = 8000	
					1800/560		6560Å		G-6027	MAX ADU = 2150 MID ADU = 2100 Range of slit length	
8700	3"	✓ 6-29	KO III		"		"			Some Cloud	

23 Pg#3 Fri SAT

Date 1991 JAN 25/26 Observers J. Hall

Emulsion Batches:

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Spectr. Temp. ..

Focus ... 7.0

Spectr. Temp. ..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
cc 373.fts	Comp for 6560Å							FeNe A=1/16	10s		
374	Comp for 6560Å							FeAr Clear	60s		
375	FLAT							Tung A=1/4	20s		
376	BIAS(4)	Bias.BAT	(Average	of 4 bias)							

Spectr. Temp. ..... Dome Temp./Hum. -12.5°C 68% Transparency Conditions .... Cloudy .....

Focus .... F/10 .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800/500	250μ	6560Å				
							"				
							"			MAX 6200 MID 6000	
										~~MAX 6200 MID 6000~~	

23 SAT SUN

Date 1991 JAN 26/27 Observers Pdr/Jm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00377.fits	Comp							DIFFIN f/8Stop	FeNe Clear
378	HD95735	10 57 54	+36 38	01 23	02 05	00 51E			
379	Comp							FeNe Clear	20s
380	FLAT					00 46E		A-1/2	20s
381	Comp							FeNe A-1/8	20s
382	HD95735	10 57 54	+36 38	02 17 15	02 47	00 01E			
383	Comp							FeNe A-1/8	20s
384	Flat							TUNG A-1/4	30s
385	BIAS(4)								
386	Comp							FeAr Clear	90s
387	HD95735	10 57 54	+36 38	03 24	03 35	00 39 W			
388	Comp							FeAr Clear	90s
389	Flat							TUNG A-1/4	20s

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

Exp. Mtr	Seeing
1500	3"
0940	3"
0940	2.5"

Spectr. Temp. ..... Dome Temp./Hum. -8°C 71% Transparency Conditions ... PART Cloudy 2.39
Gusty SW

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -9°C 74% 30 CGAIN T=-100C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion λ	P.H.	Program	Remarks	Quality
20secs					1800/465	250μ	5170Å			G=5021	
11500	3"	V 7.60	Mb	CASS CCD BlueColl					Asm Sp-kk	MAX ADU = 1400 MID λ = 1300	
										MAX ADU = 9000 MID λ = 7000	
9900	3"	V 7.60	Mb		1800/515	250μ	5890Å		Asm Sp kk	MAX ADU = 2200 MID λ = 1900	
										MAX ADU = 8800 MID λ = 7000	
				(CC FTS Backed Up To Here on Porgeas and Worm)						Cloud	
					1800/560	250μ	6560Å				
2080	2-3"	V 7.60	Mb		"	"	"		Asm Sp-kk	MAX + MID λ = 1000 ADU Clouds.	
							"				
							"			MID λ = 6000 ADU	
				still backed to WORM - KK							

239 Mon-Tues

Date 1991 JAN 28/29... Observers ..T.n./(m.ki.plane in).

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CCD0 390.fits	Comp						Diffuser [f18stop] IN	FeAr Clear	90s		
391	HD14386	02 14.3	-03 26	18 20.30	18 34.30	00 29W				1.0	OK 2.3"
392	Comp							FeAr Clear	90s		
393	Flat							Tung A=1/2	40s		
394	BIAS(4)										
395	HD14386	02 14.3	-03 26	19 04	19 24 30	01 19 W				1.00	OK 2"
396	Comp							FeAr Clear	90s		
397	Comp			19 38				FeAr Clear	90s		
398	HD14386	02 14.3	-03 26	19 42	19 57	01 47W				1.00	OK
399	Comp							FeAr Clear	90s		
400	Flat (redone after DARK)			20 56	~~20 07 redone~~			Tung A=1/4	30s		
401	DARK			20 14	20 44				1800		
402	DARK			21 07					1800		
CCF00054	Hartmann - comp							FeAr clear	30s		
55	Hartmann - stellar							"			

Spectr. Temp. ..... Dome Temp./Hum. -1°C 55% Transparency Conditions ..Clouding in..... 240

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -2°C 70%

CGAIN = 30 CCD Temp -102°C

510 0 40 1024 2 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD Blue Coll	G=477b 1800/450	350μ	4810H			medium cloud	
4900	OK 2"-3"		M						Mira pgm	min 17' 3 Hβ emission DMAX 229 HRCCD	
										1100 ADU for strongest line	
							4810Å			MAX 11300 ADU MID 7500 ADU	
2000	OK 2"		m				4810Å		mira pgm	uniform cloud Cloudy	
					G=6027 1800/560	350μ	6560Å			CCD FMT changed to 505 0 40 1024 2 1	
760	2"		m		"	"	"		350 ADU continuum 701 ADU HE	for better centering Still Cloudy	
										strongest Sii line 306 ADU	
										11600 MAX 4DU 7000 MID 4DU	
					Back all up to here				on Persons	/ CCD/ Cass	
					1800/ .5050		5170			T= -3.9 F = 7.10	-1.00
					"					VOT = 4.2	

241

Date 1991 Jan 29 Tues Observers KK

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CCFA00 56	Hartmann - comp							Fe A clear	30s		
57	" stellar							"	"		
58	" comp							"	"		
59	" stellar							"	"		
60	" comp							"	"		
61	" stellar							"	"		

Spectr. Temp. ..... Dome Temp./Hum. −3.8 ..... Transparency Conditions ..... 842 .....

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800/6050	250μ	CCD			rot = 4.1	Shift −1.08
					"	"					
					"	"				T = −3.8 rot = 4.4 F = 7.00	−0.6
					"	"					
					"	"				F = 6.90	+0.3
					"	"					

243 Thurs - Fri

Date 1991 Jan 31/Feb 1 Observers Jn./Pdr.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00403	Flats			16:40				Tungsten A 1/2	5s
→ 406								f/8 Stop	"
CCF00062	Comp Hartman test (Comp for MASK)			489.4	518.4	01 50E	+4212	FeNe A-Clear	30s
CCF00063	Comp "	" (Stellar for mask)		488.8	517.6	01 42E	"	FeNe A-Clear	30s
CC00407	Comp for Obs							"	30s
CC00408	HD 29587	04 34.5	+41 57	184010	1902	01 14E			
409	Comp							FeNe A Clear	30s
FINE 303 Tau	HD 29587	"	"	1927		0049E	+4213	"N" ride	
410	Comp							FeNe Clear	10s
411	MIRA HD14386	02 14.3 → 0326		192245	1947	1 54W			
412	Comp							FeNe Clear	30s
413	Comp							"	30s
414	18 Tau HD 23324	03 39.2	+24 32	2036	2048	1 29W			
415	Comp							FeNe Clear	30s
416	Comp for Orion Nebula							"	30s

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

Exp Mtr	Seeing
7560	3"
	OK
7600	OK
2043"	

Spectr. Temp. Dome T = -65°C Dome Temp./Hum. -4.4 57.6% Transparency Conditions Clearing — clouds in 24K

Focus 7.15

Spectr. Temp. ..... Dome Temp./Hum. ..... 30 cgain 546 0 40 1024 2 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. BlueColl	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	600/25.8°	250μ	4350Å			Flats from [illegible]	max 30000 e⁻
				"	"	"	"			Lamps & bias [illegible]	
				"	"	"	"		Actual Grating Angle 25.5°	CCDFMT 546 0 40 1024 2 1	
							G2625		Actual λ Center = 4300Å		
							"				
7500	3"	V 7.99	dG2				"		stdvel	min ADU 1260 = 10000 e⁻ MAX 1628	40000 e⁻
31×31 pixels	OK	V 7.99	dG2	4 frames	250μ slit	Hartl	(above slit,	Jacket	In)	Dome South wed 1/4 wind	
7200	OK	≈8	"				4350Å		G2625 pgm	cloud.	1000 e⁻
										CCDFMT change	
									~~UKIRT std~~	530 0 40 1024 2 1 CCDFMT	
8,200	2-3"	V 5.65	B8V				4350Å		UKIRT std	cloud min ADU 3200 MAX ADU 25000	
							4350Å			CCDFMT changed back to 546 0 40 1024 2 1	

245 #2

Date 1991 JAN 31/Feb 1. Observers Pdr. / T.T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
417	Orion nebula	05 30.3	-05 28	21 29	21 44	00 34 W	-5 17		
418	Comp							FeNe Clear	30s
419	SKY			21 50	22 20	01 08 W	-9 13		
420	Comp							FeNe Clear	30s
421	Comp							"	"
422	HD 73665	08 34.3	+20 22	22 34 45	23 02 30	01 11 E			
423	Comp							FeNe Clear	30s
424	Comp							"	"
425	HD 65934	07 56 05	+26 55	23 13 30	23 49	00 13 W			
426	Comp							FeNe Clear	30s
427	Comp							FeNe Clear	30s
428	HD 90861	10 24 18	+29 05	23 57 30	00 37 50	01 31 E			
429	Comp							FeNe Clear	30s
430	Comp							"	30s
431	HD 95735	10 57 54	+36 38	00 42	01 15	01 22 E			

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

Spectr. Temp. -7.5 Dome Dome Temp./Hum. -7.5°C 62% Transparency Conditions Part Cloudy 246

Focus 7.15

Spectr. Temp. Dome Temp./Hum. -7.6°C 65% 30 GAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Blue Cell CASS CCD	G 2625 600/25.5	34μ	4300Å			thin hazy	
139										clear to thick haze	
7110	2-3"	✓ 6.29	K0III						UBVRI std	NW star - slightly brighter Thin cloud Min = 900 ADU Max = 1900	
3500	3"	✓ 7.94	G8III				MID ADU = 660 MAX ADU = 900		std vel	thick haze to cloud	
9700		✓ 7.2	K2III						std vel	MID λ = 1200 ADU MAX = 1860 ADU	
10000	2-3"	✓ 7.60	M6						Asm Sp-K K	MID λ = 650 ADU MAX = 1300 ADU	

2147
pg #3

Date 1991 JAN 31/Feb 1 Observers T.n... P.d.s.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC00437	Comp for HD95735							FeNe Clear R	30s		
433	Comp							"	30s		
434	BIAS (4) Bias. Bat			0129							
435	DARK			0132					180s		
CCF00064	Comp Comp posn										
CCF00065	Comp stellar posn										

Spectr. Temp. ..... Dome Temp./Hum. -7.6°C ..66% Transparency Conditions ..Cloudy in gaps.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -7.5°C ..67%

248

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Blue Coll CASS CCD	G 2625 600/25.5	250μ	4300Å				
										while topping up: closing	
				All CC files backed up to PERSEUS : WORM						to CC00435.fts	

249 Fri/Sat

Date 1991 Feb 1/2 Observers MKi/Pdr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCOO 436	Comp								
437	Bias (4)								
438	Comp			22 48		3h 29 W		FeA clear	100s
439	V 471 Tau	03 44.7	+16 57	22 52 20	23 22 20	~~4~~ 03 W			
440	Comp							"	100s
441	V 471 Tau	" "	" "	23 27 55	23 57 55	4 37 W			
442	Comp			00 01 30				FeA Clear	100s
443	Bias								
444	Flat					4 37 W		Tung A=1/4	10s
445	Flat					4 37 W		"	"
446	~~Tung~~ Flat					1 31 W		Tung A=1/4	10s
447	Comp			00 27		1 31 W	clear	FeA ~~Tung~~	100s
448	MWC 560	07 21	-07 32	00 32 10	01 02 10	2 07 W			
449	Comp								

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

Exp Mtr. Seeing

Spectr. Temp. ..... Dome Temp./Hum. -6°C / 74.7% Transparency Conditions Clear 250

Focus 7.15 510 0 40 1024 21 ccdfmt

Spectr. Temp. ..... Dome Temp./Hum. ..... 30 Gain

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Cass	1800/56.2	250μ long	6570Å			G=6035	
799		V= 9.5								MIDλ = 350 ADU MAX = 350 ADU	
950										~~MIDλ = 350 ADU~~ ~~MAX = 350 ADU~~	
											6500
700		V ~10									

25' #2

Date 1991 Feb 1/2 Observers MK1/Pdr

Emulsion Batches:

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Spectr. Temp. ...

Focus ...7.15...

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
450	Comp							FeA Clear	50s		
~~451~~	MWC560			01-25							
~~451~~	~~Comp~~										

Spectr. Temp. ..... Dome Temp./Hum. -5.6 / 79.6 Transparency Conditions Cloudy 252

Focus 7.15

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1800/		4820Å			G=4770	
										Clouded in	
					1800/51.7		5880Å			G=5515	
										Clouded in	

253

Date 1991 Feb 2/3 Observers Fich/Pdr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC00 451	Comp							FeA Clear	100^s		
452	"							FeNe Clear	100^s		
453	Flat							Tung Clear	50^s		
454	S217 1ci	4 51 02	+47 49	20 15	20 45	0 20 W				59	
455	Comp							FeNe Clear	100^s		
456	SKY 4ci			21 04	21 34	0 36W				67	
457	Comp							FeNe Clear	100^s		
458	Bias (4x)										
459	Comp			22 05				FeNe Clear	100^s		
460	Flat					04^h W		Tung Clear	50^s		
461	HD 17520	2 43 32	+59 58	22 12 15	22 42	04 25W				140	
462	Comp							FeNe Clear	100^s		
463	Comp			23 08		02 46 W		FeNe	100^s		
464	S219 1ci	4 48 40	47 13 51	23 14	23 44	03 22 W				95	
465	SKY 2ci			23 57 30	00 27 30	03 34W				118	

Spectr. Temp. ..... Dome Temp./Hum. +9.7/79.6% Transparency Conditions ... Clear ... 254

Focus ... 7.15 ...

Spectr. Temp. ..... Dome Temp./Hum. 0.0/84.7

490 0 90 1024 2 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Cass	600/24.5°	250μ Full length	3700Å			G=2503	
										MAX ADU = 14000 MID = 5000	
89									HII Reg	Brightest line MAX =	1E3 ADU
87				done	30m East of Neb						
	~3"									MAX ADU = 14000 MID λ = 5000	
4120		V = 8.26							Spec phot Std	AIR MASS = 1.27 MAX ADU = 860 MID λ = 295 (Balmer jump)	
95									HII Reg	AIRMASS = 1.21 MAX = 18	
100				done 30m East of Nebula							

#2

255

Date 1991 Feb 2/3 Observers Fich/Pdr

Emulsion Batches:

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Spectr. Temp. ...

Focus 7

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc 00466	Comp			00 33		3 40 W		FeNe Clear	100s		
467	Flat					3 43 W	+47 23	Tung Clear	50s		
468	Comp			01 22		3 01 W	-00 29	FeNe Clear	100s		
469	S285 hab	6 50 10	-0 23	01 27 15	01 57 15	3 37 W				329	
470	SKY Tau			02 05 40	02 35 40	3 43 W	-00 31			224	
471	Comp							FeNe Clear	100s		
472	Flat					3 46 W	-00 31	Tung Clear	50s		
473	Bias (4x)										

Spectr. Temp. ..... Dome Temp./Hum. -0.2/86.1 Transparency Conditions Clear 256

Focus 7.15

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					600/24.5	250μ Full length	3700A				
229									HII Reg	AIRMASS = 2.22	
224					done 30m E of Nebula						
				All CC file backed up to Person & WORM						to CC00473.FTS	

257

Date 1991 Feb 3/4 Observers Fich / Pdr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CCF000 66	Comp comp position							FeNe Clear	100s		
CCF000 67	Comp stellar position							"	"		
CC00 474	Comp			18 59				FeNe Clear	100s		
CC00 474	Bias (4x)										
CCF00 68	Comp comp posit							FeNe Clear	50s		
69	Comp stellar posit							"	50s		
CC00 475	Comp			19:17				FeNe Clear	100s		
476	HD175204	24332	+59 58	19:26	19:56	1h 50 W					
477	Comp							FeNe Clear	100s		
478	Flat					1h 52 W		Twns Clear	25s		
479	Comp					0 34E	-5 22	FeNe Clear	100s		
480	Orion Neb 5ci	5 30 23	-5 28	20 27 35	20 42 35	0 15E					
481	SKY			20 47 30	21 02 30	0 15E					
482	Comp							FeNe Clear	100s		
483	Flat							Twns Clear	20s		
484	Bias (4x)										

Spectr. Temp. [illegible] Dome Temp./Hum. +4.0 / 69.5% Transparency Conditions Clear, Partial → Cloudy

Focus 7.15

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

A90 0 45 1024 4 1 258
ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD— cass	600/24.5	250μ Full length	3700A			30 c gain	
										Camera refocused to 7.00	
~2500?							MAX ADU = 730 MID λ = 280 (Balmer jump)			AIRMASS = 1.09	
										MAX ADU = 14400 MID λ = 4900	
327			(1 arcmin North of Trapezium)							Clouds	
325										Cloudy	
			All cc files backed up to Perseus & WORM to cc00484.fts.							MAX ADU ~ 12500	

254

Date 1991 Feb 4/5 Observers Fich / Pdr

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CCF 000 68	comp position							FeNe clear	20^s		
CCF 000 69	stellar position								"		
CC 00 485	Comp							FeNe Clear	100^s		
486	Bias (4x)										
487	HD 17520	2 43 32	+59 58	20 02	20 26	2 16 W				2.0	3"
488	Comp										
489	Flat							1 lens clear	20^s		
490	Flat					1 39 W	+51	"	20^s		
491	Comp										
492	S 209	4 03 32	50 54	21 13 30	21 43 30	2 13 W					1½
	No comparison done										
493	Comp							FeNe Clear	100^s		
494	Flat			22 12		0 49 W	+30 15				
495	S 241	05 57 33	30 15 33	22 20 50	22 43 30						
496	Comp.										

Spectr. Temp. ..... Dome Temp./Hum. +6.4/68.5% Transparency Conditions Partly cloudy 26"

Focus 7.00

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

490 0 45 1024 4 1
30 cgain ccd fmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD cass	600/24.5	250μ full length	3700Å			T=+6°.0 F=7.00	
										focus correct	
2070	3"									MAX ADU = 830 MID λ = 639(!!) (no balmer jump)	
										1.02 airmass clear sky	
										MAX ADU = 13505	
B.										MAX ADU = 13500	
176									HII Reg	Clouds	
				Backed up	to Perseus		all CCD files to				
					& WORM					CCD0496.FTS	

Emulsion Batches: ....

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Date .... **Observers** ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CEF 43	Hartmann IN							ThA	20
CEF 44	OUT								20
CEF 45	Hartmann IN								20
CEF 46	OUT								20
C									

Spectr. Temp. ....

Focus ....

Spectr. Temp. ....

Exp Mtr	Seeing

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... 262...

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						60μ				T= 4° F=.339	-.30
						"					
						"				T= 9.0 F=.235	-.46
						"					

263
pg #1 Thurs · Fri

Date 1.9.91. Feb 7/8 Observers Sr.t. Pdr. Tn

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
ce											
2168.fits	BIAS(4)			1810							
2169	DARK 15min										
2170	DARK 15min										
2171	BIAS (4)			2035							
2172	BIAS(4)			2040							
2173	Comp			2237				ThA	5sec		
2174	HD48329	06 37 46.7	+25 13 49	2245	2330	01 40 W				910	
2175	Comp							ThA	5sec		
2176	Comp			2340		01 34 W		ThA	5sec		
2177	HD62509	07 39 11.8	+28 16 04	2342	0027	01 36 W				1205	
2178	Comp			0028				ThA	5sec		
2179	Comp			0030					3sec		
2180	HD 74442	08 39 00	+18 31 19	0033	0118	01 27 W				1400	
2181	Comp								10sec		
2182	HD 74442	08 39 00	+18 31 19	0123	0208	02 18 W				1400	

Spectr. Temp. ..... Dome Temp./Hum. +2°C 81% Transparency Conditions ... Hazy - Cloudy ... 264 ...

Focus ..... Pg #1

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

CGAIN = 90

CCD T ⊙ = -101°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit Width	Emulsion	P.H. Height	Program	Remarks	Quality
		B		CCD Echelle	Echelle 16.55		CENTRAL SLIT		× Grating 1200l/mm 0.4150	0 0 256 1024 4 1 CCDFAST	
										Clearing again	
910	DIM = SI H	4.38	G8I		16.55	90µ 0.265	3934Å	600µ .205	E Gem Sit-pgm	Dome T = 0°C	
6295	POOR	2.14	K0III						B Gem Sit pgm ~~B Gem~~ ~~S Cnc~~ [Lightly touched while Sit adj when moving to Comp prism mk]		
400	≈ 2/3 SI Height	5.02	K0III						S Cnc Sit pgm	980 max ADU before ORDER	
400	2/3 SI Height	5.03	K0 III						Sit pgm	(out to DC during Sq)	

26h #2

Date 1991 Feb 7/8 Observers Sat-Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce02183.fits	Comp							ThA	10sec
2184	HD74442	08 39 00	+18 31 19	02 10	02 55	3 05 W			
2185	Comp			02 56				ThA	10sec
2186	Comp			02 59				"	10sec
2187	HD4932	12 57 12	+11 29 48	03 01	03 46	0 21 E			
2188	Comp			03 47				ThA	10sec
2189	HD4932	"	"	03 48	04 33	0 25 W			
2190	Comp			04 34				ThA	10sec
2191	HD4932 ~~Comp~~	12 57 12	+11 29 48	04 35	05 20	1 13 W			
2192	Comp	~~12 57 12~~	~~+11 29 48~~	~~04 35~~				ThA	10s
2193	HD4932	12 57 12	+11 29 48	05 21	06 03	1 54 W			
2194	Comp							ThA	10s
2195	Comp for α Boo							ThA	10s
2196	HD124897	14 11 06	+19 42 11	06 10	06 26	1 05 W			
2197	Comp							ThA	10s

Spectr. Temp. ..... Dome Temp./Hum. -1°C 85% Transparency Conditions ... clear ... 266 ...

Focus ..... Page #2

Spectr. Temp. ..... Dome Temp./Hum. ..... (Central / Echelle)

H ≈ 05 30 EST, I saw meteors emerge from (at N edge) behind moon. I did all that we were supposed to see as well as other meteors not along obs

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit (w/ OTH)	Emulsion	P.H. Height	Program	Remarks	Quality
10 sec Th A ≈ 100 cnts				CCD Echelle	16.55	90μ 0.265	3934Å	600μ .205	x grating 1200 l/mm @ 0.4150		
376	≈ 1/2 SI Height	5.02	K0 III								
1308	≈ 2/3 SI height	3.77	G8 III							CCD T = -102°C	
~~1308~~											
1323	≈ 2/3 SI height	3.77	G8 III								
973	2/3 SI II	3.77	G8 III							thin cloud now	
1053		3.77	G8 III							cloud at end	
										CCD T = -101°C	
1647		1.19	K2 III							PART cloudy → thick at end	

page #3
267

Date 1941 Feb 7/8 Observers S.E.T./J.T.H.

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
2198	~~Flat~~ DARK (15 min)					~~01 15W~~	~~+23°~~	~~TUNG~~			
2199	Flat (5)					01 00W	+20°	TUNG	5 min		
→ 2204											

Spectr. Temp. .... Dome Temp./Hum. .... Transparency Conditions ...Cloudy........... 268....

Focus .... #3

Spectr. Temp. .... Dome Temp./Hum. -2°C ... 86%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Echelle Grating/ Tilt	Slit width	~~Emulsion~~ λ	P.H. Height	Program	Remarks	Quality
				Echelle CCD	16.55	90μ	3934Å	800μ		Topupe 0650	
				"	·4	90μ	"	800μ ·185			

269 Fri Sat

Date 1991 Feb 8/9 Observers Sat - Tu

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE0220sifts	BIAS(4)			16 55					
2206	DARK(15min)	DARK.BAT							
2207	BIAS(4)								
2208	DARK(15min)								
2209	BIAS(4)			17 31					
2210	DARK(15m)	DARK.BAT							
2211	BIAS(4)								
2212	DARK(15m)								
2213	Comp			18 29				ThA	20sec
2214	HD 48329	063747	+25 1349	18 30	19 18	2 30E			
2215	Comp			1917				ThA	10sec
2216	HD 48329	063747	+25 1349	19 18	19 38	2 08E			
2217	Comp			19 41					10sec
2218	HD 48329	063747	+25 1349	19 42	20 02	1 44E			
2219	Comp			20 04					10sec

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

Exp. Mtr.	Seeing

Spectr. Temp. ..... Dome Temp./Hum. +3°C ..... 77% Transparency Conditions ..... Sl. hazy 270

Focus .....

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

CGAIN = 90
CCDT = -101 °C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	~~Emulsion~~ λ	P.H. Height	Program	Remarks 0 0 256 1024 4 1 CCDfmt	Quality
				CCD Echello	16·55	90μ 0·265	3934Å	600μ 0·205	X grating 1200 l/mm ε 0·4150		
2329	2/3 SI Magn	4·38	GSI						Srt pgm ε Gem	Srt ADU est 490 ADU near CaII K line	
1150		4·38	GSI							ADU est 340 near CaII K	
1200		4·38	GSI								

271 pg #2

Date ...1991 Feb 8/9... Observers ...S.t.—T.g.....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
2220 fls	HD48329	06 37 47	+25 13 49	20 07	20 27	01 19 E				1006	
2221	Comp			20 29				ThA	10s		
2222	HD48330	06 37 47	+25 13 49	20 30	20 50	00 55 E				1044	
2223	comp			20 52					10		
2224	Comp			20 55					10		
2225	HD62509	07 39 12	+28 16 04	20 57	21 06	01 42 E				1006	
2226	HD62509	"	"	21 06	21 15	01 33 E				1020	
2227	HD62509	"	"	21 16	21 27	01 21 E				1004	
2228	Comp							ThA	10sa		
2229	Comp							"	"		
2230	HD74442	08 39 00	+18 31 19	21 38	22 08	01 40 E				975	
2231	Comp							ThA	10sa		
2232	HD74442	"	"	22 10	22 40	01 04 E				988	
2233	Comp							ThA	10sa		
2234	HD74442	"	"	22 42	23 12	00 32 E				973	

Spectr. Temp. ..... Dome Temp./Hum. +1°C ... 85% Transparency Conditions .. Sl. Hazy ..... 272 .....

Focus ..... pg#2 med SW wind

Spectr. Temp. ..... Dome Temp./Hum. +0.8°C ... 87%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	~~Emulsion~~	P.H.	Program	Remarks	Quality
1006		4.38	G8 I	Echelle CCD	16.55	90μ	3934 Å		ε Gem Srt pgm	* grating still 0.4/150	
1044											
	~~0/3 sl hazy~~										
3106	2/3 SlitH	2.14	K0 III						β Gem		
3000	VAR V POOR								4		
3004	1/2 SlitH								4		
425		507	K0 III						δ Cnc		
488	1/2 Sl Hazy	5.07	K0 III								
673	1/2 Sl	5.02	K0 III								

273 pg 3

Date 1991. Feb. 8/9 Observers Th. Sr. t

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce 02235 fts	Comp							ThA	10s
2236	Comp							"	10s
2237	HD 71369	08 21 58	+61 0309	23 22	23 43	00 10 W			
2238								ThA	10s
2239	HD 71369	08 21 58	+61 0309	23 46	00 06	00 33W			
2240	Comp							ThA	10s
2241	HD 71369	08 21 58	"	00 07	00 27	00 54W			
2242	Comp			00 30				ThA	10s
2243	~~FLAT~~ (6 Flats)			~~01 35~~		Drive off 00 30W	+60°		120s
→2248				01 04					
ce 02249 - 2254	FLATS (6)			01 35		01 00E	+23°		120s
ce 2255	Comp			02 33				ThA	10s
2256	HD 113226	12 57 12	+11 2948	02 35	02 55	01 09E			
2257	Comp							ThA	10s
2258	HD 113226	12 57 12	"	02 57	03 17	00 47E			

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

Exp Mtr | Seeing

Spectr. Temp. ..... Dome Temp./Hum. +0.8°C 87% Transparency Conditions ... Hazy but good

Focus ..... pg 3 274

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H. Hi eff	Program	Remarks	Quality
				CCD Eqvlt	16.55	90μ	3440Å	600μ			
1488	≤½ slit	A-20	G5 III						OUMa		
1216										550 ADU MAX in central ORDER 1000 ADU MAX in bottom ORDER	
1300	≤½ Slit Height									570 ADU max in central (CO II K line order) order	
								800μ 1.85			
All Backed up to for sequence to							CO2254Å pts	800μ 1.55		Topup @ 02AM TE-101C	
							CO2254Å pts	600μ .205	note Topup hose shattered when rotated after topup. when Ladder humidity dirty.		
1100	½ slit	3.77	G8 III								
1239											

2nd pg 4

Date 1991 Feb 8/9 Observers S.t. Tq

Emulsion Batches:

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Spectr. Temp. ...

Focus .....

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
ceo2259fls	HD113226	12 57 12	+11 29 48	03 18	03 38	0 26 E					
2260	Comp							THA	10s		
2261	Comp							THA	10s		
2262	HD124897	14 11 06	+19 42 11	03 43	03 46	1 31 E				3150	
2263	"	"	"	03 47	03 57	1 20 E				4077	
2264	"	"	"	03 58	04 08	1 09 E				4000	
2265	Comp							THA	10s		

Spectr. Temp. ..... Dome Temp./Hum. 0°C ... 89% Transparency Conditions ... S.l. Foggy - Increasing

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 90%

27

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		377	G8III	CCD Echelle	16.55	90μ	3940Å	600μ			
3150		1.19	K2III						2 Bob		
4,027										max 404 a in central order = 1900	
11,000											
				Normal to		9 CCD 7265. f/s now 7m					

27 Pg 1 SAT-SUN

Date 1991 Feb 9/10 Observers S-t-T

Emulsion Batches:

Spectr. Temp.

Focus

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CE02266.FIT	BIAS(4)			17 20							
2267	DARK 15m										
2268	BIAS (4)										
2269	DARK 15m										
2270	DARK 15m			1808							
2271	BIAS(4)			1824							
2272	Comp						Th A		10sec		
2273	HD 23249	033827	-10 26 06	1828	1859	0017W				351	3/3 4
2274	Comp						Th A		10		
2275	HD 23249	"	"	1900	1930	0048W				353	
76	Comp						Th A		10		
77	HD 23249	"	"	1934	2000	0118W				357	poor
78	Comp						Th A		10		
CE02279.FIT	Flats			2008		0030W	-10°		120		
→ 02284)											

Spectr. Temp. ..... Dome Temp./Hum. +3°C ... 78% Transparency Conditions . Mostly Clear ... 278...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... control order

90 CGAIN T=-101°C

0 0 256 1024 1 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt (Echelle)	Slit width	Emulsion	C/I T P.H. Height	Program	Remarks	Quality
				CCD Echelle	16.55	90μ	3940Å	600μ .205		* grating 1200 l/mm @ 0.45°	
351	2/3 SI Night	4.46	110 IV						S Eri		
283											
227	poor									cloud + mud	
								600μ			
								800μ .135			

2nd pg 2

Date 1991 Feb 9/10 Observers Srf/Tn

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE02285	Comp							ThA	10s
2286	HD23219	03 3827	-10 06 06	20 33	21 03	2 21 W			
2287	Comp							ThA	10s
2288	HD23219	"	"	21 04	21 34	2 52 W			
2289	Comp					2 53 W	≈ -10°	ThA	10s
2290	Comp					1 50 E	≈ 60 50	ThA	10s
2291	HD71369	08 2158	+61 0309	21 43	22 03	1 26 E			
2292	"	"	"	2204	2224	1 05 E			
2293	Comp		"	~~22 26~~	~~22 46~~			ThA	10s
2294	HD71369	08 21 58	+61 0309	22 26	22 46	0 43 E			
2295	Comp							ThA	10s
2296	Comp							ThA	10s
2297	HD74442	08 3900	+18 3119	2252	2322	0 21 E			
2298	Comp							ThA	10s
2299	HD74442	083900	+18 31 19	2324	2344	00 01 W			

Spectr. Temp. ..... Dome Temp./Hum. +1°C 80% Transparency Conditions ..Clear again 280

Focus ..... pg#2

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit W	Emulsion J	Slit H P.H.	Program	Remarks	Quality
				CCD Echelle	16·55	90μ	3940Å	600μ			
350	1.2 SI H	4·46	KOIV						SEI1		
310	.05 SI Height										
									[note a 6 pixel line shift between these comps.]		
2366	.05 SI H	4·20	G5III						oUMa		
2705											
2250	.7 SI H	4·20	G5III							MAX ADU in central core = 950 ADU	
1120	.5 SI H	5·02	KOIII						S Cnc	continuum max = DMAX in cen/bl/sk/ds 4304 ADU	
674	.5 SI H	5·02	KOIII						S Cnc		

28¹ pg #3

Date 1941 Feb 9/10 Observers Sct/TA

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2300	~~HD 74442~~ comp	~~08 34 00~~	~~+18 31 19~~	~~23 45~~		W		ThA	10s
2301	~~Comp~~ HD 74442	08 34 00	+18 31 19	23 55	00 15	00 32 W		~~ThA~~	~~10s~~
2302	Comp							ThA	10s
2303	Comp							ThA	10s
2304	HD 76294	08 50 06	+06 19 34	00 22	00 42	00 48 W			
2305	"	"	"	00 43	00 04	01 10 W			
2306	Comp							ThA	10s
2307	HD 76294	08 50 06	+06 19 34	01 05	01 25	01 31 W			
2308	"	"	"	01 26	01 46	01 57 W			
2309	Comp			01 47					
CE 2310 → CE 2315	Flats (6)					0100 E	+61°	TUNG	120s
2316	Comp			03 04				ThA	10s
2317	HD 94264	10 47 43	+34 45 14	03 05	03 25	01 35 W			
2318	"	"	"	03 27	03 47	01 57 W			
2319	Comp							ThA	10s

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

Exp Mtr	Seeing
	<.5 5/4
~~5~~ 44	.5 5/4
2307	.5 5/4
2310	
2313	
2317	.4 5/4
2318	

Spectr. Temp. ..... Dome Temp./Hum. 0°C 82% Transparency Conditions .. Part Cloudy ..... 282.

Focus ..... pg #3

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	<.5 SI H			CCD Echelle	1655	90μ	3440A	600μ		Some cloud	
544	.6 SI H	6.02	KO III						S Circ		
748	.5 SI H	4.11	G9 II-III						zeta Hya		
750											
620											
573											
					[WC Pinwheel ε ftp to Perseus				to 2309] Tue	Cloud by 2 AM	
								500μ	Height	Point T = -0.4°C	
								600μ .205			
1207	.4 SI Hi sht	4.87	KO III-IV						46 LMi	46 ADJUSTED IN MIDDLE OF DEC Continuous area.	
1250											

283 Pg #4

Emulsion Batches:

Date 1991 Feb 9/10 Observers S.T.-T.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce02320	HD 94264	10 47 43	+34 45 14	03 48	04 08	2 18 W			
2321	"	"	"	04 09	04 29	2 39 W			
2322	Comp							Th A	10s
2323	Comp							Th A	10s
2324	HD113226	12 57 12	+11 29 48	04 35	04 55	00 55 W			
2325	"	"	"	04 56	05 16	01 16 W			
2326	Comp							Th A	10s
2327	HD113226	12 57 12	+11 29 48	05 21	05 41	01 41 W			
2328	"	"	"	05 42	06 02	02 03 W			
2329	Comp							Th A	10s
2330	BIAS (1)								

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

Exp Mtr.	Seeing
1952	04 5/4
1130	
1930	06 5/4 High
1818	
1735	08 5/4
1755	

Spectr. Temp. ..... Dome Temp./Hum. -1.5°C 60% Transparency Conditions . Really Clear 284

Focus ..... #4 And Temps & Humidity dropping Fast

Spectr. Temp. ..... Dome Temp./Hum. -3°C 50%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. Hi gh!	Program	Remarks	Quality
1052	0.4 SI H	4.87	K0III-IV		16.55	90m	3940Å	600m	46 LMi	4200Å MIDORDER max cont	
1120											
980	0.6 SI High	3.77	G8III							7500Å for comp max, midorder	
1018		"	"								
735	0.8 SI High	3.77	G8III						ε Vir		
775		✓	"								
							Workmanship To Perkins to end now				

285 page #1

Date 1991 Feb 10/11 Observers Sut - Tn

Emulsion Batches:

BG-3 filter for Flat source

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce02331.fts	BIAS(4)			1718	Topup @ 1710, T⇒		to -19°		
2332	15 min Dark								
2333	Bias (4)								
2334	15 min Dark								
2335	Bias (4)			1803					
2336	15 min Dark								
2337	Bias (4)								
2338	15 min Dark								
2339	Comp			1839				ThA	10s
2340	HD 23249	033827	-100606	1842	1912	00 33 W			
2341	Comp							ThA	10s
2342	HD23249	033827	-100606	1914	1945	01 06 W			
2343	Comp							ThA	10s
2344	HD23249	033827	-10 0606	1946	2016	01 38 W			
2345	Comp							ThA	10s

Spectr. Temp. ...
Focus Note from
Spectr. Temp. pre

Exp. Mtr | Seeing

Spectr. Temp. ..... Dome Temp./Hum. −28°C 59% Transparency Conditions ... Clearing, after snow

Focus ... Note Echelle focus still unchanged/~~pg#1~~ pg#2 2k6

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

from KKs last set ie 0-270

previous to Feb 7/8/91

90CGAIN - Temp ≤ −100°C

0 0 256 1024 4 1 CCOFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ λ	P.H. Height	Program	Remarks	Quality
				CCOEchelle	1655	90μ	3940Å	600μ	xgrating 1200 l/mm @ OA 150		
≈ 400	0.5 Sl Hazy	4.46	KO III						δ Eri 6s	360 ADU at near continuum 650 max ADU in star before saturation	
420	.7 Sl H	4.46	KO III								
395	.7 Sl Hazy										

28

pg #2

Date 1991 Feb 10/11 Observers S.t. - Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce02346fls	HD 23249	03 38 27	-10 06 06	20 19	20 49	2 11 W			
2347	Comp							Th A	10s
2348	Comp							Th A	10s
2349	HD 40035	05 51 18	+54 16 37	20 57	21 17	0 23 W			
2350	"	"	"	21 18	21 39	0 45 W			
2351	Comp							Th A	10s
2352	HD 40035	05 51 18	+54 16 37	21 42	22 07	1 08 W			
2353	HD 40035	"	"	22 03	22 23	1 29 W			
2354	Comp							Th A	10s
2355	Comp							Th A	10s
2356	HD 76294	08 50 06	+06 19 34	22 31	22 51	1 57 W			
2357	Comp							Th A	10s
2358 - ce0236	Flats (6)			2311		01 W	-10°	Tung	120
ce02364 - 02369	Flats (6)			0351		00 15 W	+53°	"	"

Spectr. Temp. ...
Focus ...240...
Spectr. Temp. ...

Exp Mtr	Seeing
026	.7 Sh
045	
87	
079	.8 Sh

Spectr. Temp. ..... Dome Temp./Hum. -1.7 62% Transparency Conditions ... SI. hazy - Smoke
Focus .240 ..... pg#2 Sto Am
Spectr. Temp. ..... Dome Temp./Hum. -5.5° 72%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit Width	Emulsion	P.H. Hi gal	Program	Remarks	Quality
				CCC Echelle	1655	90μ	3940Å	600μ		1,200 ln/mm X grating @ 0.4150	
										(~~Thought he'd~~ might be)	
									Note - This Comp's stronger than previous,		
1026	.7 SI H	472	KO III						S Hur		
945											
1087											
579	.8 SI H	4.11	G9 II-III							Snow ~~Snow~~ Sqm ~~Snow~~	
										CCD T = -101.8° C	
				All OBs worked to Here now Ia						Typo 00 20 Am	
			All	to Perseus			CCD Echelle Also				

289 pg #2

Date 1991 Feb 11/12 Observers Srt/Tm/Pdr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD 2370	Bias (4x)			17:15					
2371	Dark								15m
2372	Bias (4x)								
2373	Dark								15 min
2374	Comp.			18:28				Th-A	10s
2375	HD 40035			18:30	18:50	2:00 E			
2376	" "	05 51 18	+54 16 37	18:51	19:11	1:39 E			
2377	Comp							Th A	10s
2378	HD 40035	"	"	19 14	19 34	1 16E			
2379	"	"	"	19 35	19 55	0 55E			
2380	Comp							Th A	10s
2381	~~Comp~~ HD 48329	06 37 47	+25 13 49	20 00				Th A	10s
2382	HD 48329	"	"	20 01	20 19	1 15E			
2383	Comp			20 20				Th A	10s
CCD 2384 - 2389	Flats (6)					01 15E	+54°		

T for -10°
Spectr. Temp. ...
Focus .240
Spectr. Temp. ...

Exp Mtr. Seeing

T for −10°C from "setup"

Spectr. Temp. ..... = .2450 Dome Temp./Hum. −8.6/52.9% Transparency Conditions ..... Clear, Partly cloudy...

Focus ..... .240 pyα1 290

Spectr. Temp. ..... Dome Temp./Hum. −9°C 60%

Exp. Mtr.	Seeing	Ptg. Mag. (B mag)	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	P.H. Height	Program	Remarks	Quality
				CCD echelle	16.55	90μ .265	3940A	600μ .205		1200 ln/mm × grating @ .4450	
646		4.72	KOIII				Star				
682							"				
850	poor										
844											
	~~poor~~	~~4.38~~	~~G8I~~				~~6 Gem~~				
	poor	4.38	G8I				6 Gem			Clouds same detail	
	All dicted up for calm spectra blurie							8.xx .205 set ? .185 probably, Tol		BG-3 filter used	

291

pg #2

Date 1991 Feb 11/12 Observers J.A. Ilfelt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cefx01.fts	0°D, 6E, Ech. flex	cefx0001.fts		2229		06 E	0°	ThA	10s
~~cefx02.fts~~	0°D, 5E, Ech_flex	cefx0002.fts				05 E	0°		
~~cefx03.fts~~	0°D, 4E, Ech flex	Cefx0003.fts				04 E	0°		
Cefx0004.fts	3E					03 E	0		
cefx0005.fts	2E					02 E	0		
cefx0006.fts	1E					01 E	0		
cefx0007.fts	0E					00	0		
Cefx0008.fts	1W					01 W	0°		
cefx0009.fts	2W					02 W	0°		
cefx0010.fts	3W					03			
11.fts	4W				23	04			
cefx0012	45 Dec, 9E			2315		09E	+45°		
0013	8					8	"		
0014	7					7	"		
0015	6					6	"		

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

Exp Mtr | Seeing

Spectr. Temp. ..... Dome Temp./Hum. -8.5 58% Transparency Conditions ..... snow 292

Focus .....

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

Flexure Tests – 90 Cgain s t:11
T = -102°
32 0 64 1024 81 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Edelle	16.55	90u 200uH	3940Å	2ci	✓	.	
								3ci	✓	-.13 -.48	
								2ci	✓	-.15 -.85	
								3ci	✓	-.14 -1.27	
								2ci	✓	.02 -1.61	
								3ci	✓	.26 -1.82	
								.	"	.71 -2.04	
								1ci	"	1.16 -2.71	
								2ci	"	1.62 -4.16	
								3ci	"	2.10 -4.00	
								4ci	✓	2.43 -3.78	
								1		.62 .91	
								2		.47 .70	
								3		.28 .38	
								4		0 0	

293

Date 1991 Feb 11/12 Observers T.n. - Pdo

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
cefx00 16	Flex Test Const 45Dec, 5					05E	+45°	ThA	10s
17	4			2323		04E			
18	3					03E			
19	2					02E			
20	1					01E			
21	0					00			
22	1W					01W			
23	2W					02W			
24	3W					03W			
25	4W					04W			
26	5W				2350	05W			
27	45Dec 5,50W					05 50W	+45°		
cef 47	Hartmann - IN		T2 -6.0	F = .240				ThA	30
48	- OUT								30

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

Mtr Seeing

All ce

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions . More snow 294

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Echelle	16.55	90u	3940	5ci	v	-.17 -.31 .+150 x grating 1200k/mm	
								6ci	v	-.24 -.64	
								1ci	v	-.32 -.91	
								1ci		-.27 -1.23	
								2ci		-.05 -1.56	
								3ci		.29 -1.63	
								4ci		.70 -2.00	
								5ci		1.13 -2.61	
								6ci		1.60 -2.70	
								1ci		1.81 -2.51	
								2ci		2.19 -2.90	
All cefx files backed up to Perseus ccd/ccdtest											

295

Date 1991 Feb 12/13 Observers KK/SrA/PdT

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

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Tr. Mtr	Seeing
cef0050	Hartmann - IN							ThA	20s		
51	" - OUT										
cef0052	Hartmann - IN				20 10	3 W	0°	ThA	20s		
cef0053	- OUT					"	"	"	"		
54	Hartmann_IN					00	0°	"	"		
55	_OUT					"	"	"	"		
56	Hartmann_IN					00	+45°	"	"		
57	_OUT					"	"				
58	Hartmann_IN					3W	+45°				
59	_OUT				21 00	"	"				
60	Hartmann - IN	Feb 14	12h		on platform			ThA	20s		
61	Hartmann - OUT										
CCf0070	Hartmann - comparison							FeNe	20s		
71	" - stellar							clear	20s		

Spectr. Temp. ..... Dome Temp./Hum. -5.3/60.1 % Transparency Conditions Overcast 2%

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. height	Program	Remarks	Quality
				16.55	1200 ℓ/mm 3930 Å	90 μ			T = -5.5	00 256 1024 4 1	shift
									F = .250		
						90μ .265		200μ .245	T = -5.3 F = .250	00 256 1024 4 1	-.27
									"		
									T = -5.3		-.44
									"		
									"		-.52
									"		
									T = -5.3		-.45
									"		
all	cof	files	backed	up	to	Perseus	(Pdc)		T = -2.3	0 0 170 1024 6 1	+.71
				Cass	600/2650	250μ			T = -7.8	F = 7.10	
										535 0 16 1024 5 1	

297

SAT Sup

Date 1991 Feb 16/17 Observers T.w./P.d.S.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCM0001.fts	FeNe MAP	4400Å					Diffuser IN	FeNe Clear	a 20s
0002	FeNe MAP	3930Å						FeNe Clear	20s
0003	FeNe MAP	a 3450Å						FeNe Clear	40s
0004	TiNe MAP	3450Å						TiNe Clear	10c
	~~FeA~~							FeAr	
1991	Feb 18	More Maps for > ID		after	Re mounting	600 l/mm		grating	
CCM0005	FeA	4600Å Center					Diffusik IN	FeA Clear	60s
CCM0006	FeNe							FeNe Clear	60s
0007	TiNe							TiNe Clear	90s
	~~FeAr (Comp)~~								
CCF0007[1].fts	Comp posn			21 50				FeA Clear	60s
CCF0007[3].fts	Stellar posn							"	"
74	Comp							"	80s
75	Stellar							"	80s

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

Trans. Mir. Seeing

Spectr. Temp. −7.8°C Dome Temp./Hum. −7.8°C 68% Transparency Conditions 2½

Focus 7.10

Spectr. Temp. ..... Dome Temp./Hum. ..... 535 0 16 1024 5,1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	600/25.8	250μ	4400Å			G2650	
				"	600/25.0	"	3930Å			G2550	
				"	600/24.3	"	3450Å			G2450	
					600/24.3		3450Å			G2450	
					600/						
									520 0	16 1024 4 1 CCDFMT	
				CCD CASS	600/26.3		4600Å		G=2690		
					"		"		"		
					"		"		"	MAX ADU / column ≈ 370 ADU 2-10 PCOLS MAX ADU	
					600/26.3	350μ	"		"	T = −1.6°C Focus 7.10	
450	0	24	1024	CCDFMT S 1	"	"	"		"		
					"	"	"		"		
446	0	24	1024	S 1	1800/565	250μ	6600Å		G=6045	T = −1.4°C Focus 7.10	
					"	"	"		"		

209 pg #1 Sun mon

Date 1991 Feb 17/18 ... Observers Fds.-Tq .....

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00497 fts	BIAS								
498	"								
499	Comp							FeAr Clear	90s
500	HD 11415 eCAS	1 47 11	63 10	18:~~31~~:00	18:~~24:53~~ 32:45	2 12W			
501	Comp			18:34.50				FeAr Clear	90s
502	comp Fe-A			18:39.50				"	"
503	HD 16908 MR501	02 37 36	27 16 54	18:43:20	1851	0140W			
504	Comp			18:52:00				FeAr	90
505	comp			18:56 45				FeAr	90
506	HD 22428 Open	03 35 48	47 28 04	18:55:20		00 50W			
507	comp			19:01:40					90
508	comp			19:05:12					90
509	HD 22951 MR1123	03 36 02	33 38 39	190800	191750	0108W			
510	comp			19:18.25					90s
511	comp			19:22:55					90s
512	HD 26326	04 04 45	-16 38 58	19 26 25	19 51 48	116W			

Spectr. Temp. -5°C ..... Dome Temp./Hum. -5°C ..... 56% Transparency Conditions FINE ..... 30 .....

Focus 7.10 ..... pg #1

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

30 CCGAIN T → -102°C
510 0 40 1024 21 CCDFAST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Blue coll	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CHSS	*1800/-6.5 [Slit Length intermediate]	250μ	*Hα	X	Central λ 6600Å	*G-6045	
										G 6045	
~~30000~~ 25000	OK	3.38	B3 III								
30000		4.66	B3 V								
30000		3.00	B5 II								
30000		4.97	B0.5 II								
		~~5.37~~	~~B4 I~~								
30 000		5.37	B4 V								

30" pg #2

Date 1991 Feb 17/18 Observers Fds - Th

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00513	fts Comp			19 53 00			Diffuser IN	FeAr Clear	90s
514	comp			19 56 48					90
515	HD 23793	03 42 47	+10 50 09	19 59 30	20 09 57	1 55 W			
516	Comp			20 10 48					90
517	comp			20 14 15					90
518	HD 26912	04 10 06	05 38 31	20:17 05	20 27 30	1 40 W			
519	comp			20:23:17					90s
520	comp			20 26 25					90s
521	HD 28375	04 23 22	01 9 32	20 29	20 48 00	1 53 W			
522	Comp			20 48 31					90s
523	comp			20 52 45					
524	HD 37650	05 59 30	+1 05 58	20 55 30	20:56 30	1 24 W			300s
525	comp			20 57 27					
526	comp			21 01 20					
527	HD 34503	05 12 45	-6 57 09	21:03 48	21:05:15				300s
528	comp			21:08 50					

Spectr. Temp. ..... Dome Temp./Hum. -65° 57% Transparency Conditions . Thin cloud coming.....

Focus ..... 7:10 pg 2 307

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CASS	1800/56.5	250μ	6600Å				
		5.07	B3V								
	5050	4.24	B3IV					5ci		guided 2 of center	
		5.55	B3V					6ci			
		3.17	B3V					2ci			
		3.60	B5III					3ci			

303 pg #3

Date 1991 Feb 17/18 Observers Eds-Tom

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
529	comp			21:12:05				FeAr Clear	90s
530	HD 34816	05 14 58	-13 16 48	21 13 45	21:24:45	1 38 W			
531	Comp			21:25:17				FeAr Clear	90s
532	comp			21:25:30				"	"
533	HD 35149	05 22 50	03 32 40	21 31 00	21:45:06	1 44 W			
534	comp			21:45:42				"	"
535	comp			21:48:40				FeAr Clear	90s
536	HD 36960	05 30 98	-6 04 07	21:51:16	22 24 42	2 22 W			
537	Comp			22 25 20				FeAr Clear	90s
538	HD 36959	05 30 77	-6 04 33	22 27 40	23 00 09	2 59 W			
539	comp			23:01:20				FeAr Clear	90s
540	comp			23 03 39				"	"
541	HD 42690	06 06 59	-6 31 39	23 06 00	23:30:00	2 51 W			
542	Comp			23 30:55					
543	comp			23:33:43				"	"
544	HD 42545	06 06 17	16 09 11	23:36 13	23 49 45	3 11 W			

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

Exp Mtr	Seeing
00	poor
000	
	V
00	poor
00	
	V
3 hrs	poor

Spectr. Temp. ..... Dome Temp./Hum. -7°C 58% Transparency Conditions ... Clouding in from WSW

Focus ... 7:10 ...

304

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/86.5	250μ					
30000	poor	4.29	B0.5 III								
30000		5.00	B1 V					5ci			
30000	v poor	4.78	B0.5 V							Some Cloud	
20000		5.67	B1 V								
20000	v poor	5.05	B2V								
		4.55	B5 III								

305 pg 4

Date 1991 Feb 17/18 Observers E.d.s.-T.m.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00545	ffs comp			23:50:50					
546	comp			23:53:45					
547	HD74280	08 37 59	03 45 28	23:56:00	00:04:57				
548	comp			00:05:54					
549	comp			00:09:13					
550	HD83754	09 35 31	-13 52 43	00:12:32	00:35:00				
551	comp			00:35:47					
552	comp			00:39:40					
553	HD87901 x60	10 03 03	+12 27	00:42:07	00:47:50				
~~554~~	~~comp~~			~~00:44:15~~	overwritten (lost)			FeA	90s
554	comp			00:53:35				"	90s
FM00304	seeing test HD90861	10 24 17	29 05 35	00 53		00 03E	(4x Int)	"N" mode	
CC00555	HD90861	"	"	00 56 20	01:35:00	W			
556	Comp			01:35:35					
557	comp			01:41:42					
558	HD120315 74mm	13 43 04	+49 48 45	01:45:10	01:46:00	2 28E			

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

Exp Mtr | Seeing

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Hazy = thin cloud

306

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -8.6°C ... 57.5% 510 0 40 1024 2 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Blue Coll	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/ 56.5	250μ	6600Å				
30000		4.30	B3 I								
20000		5.0	B5 I								
30000	poor	0	B7 III								
4 frames		V= 6.9	K2 III	(Dome SW)		250μ Slit Hand			stovel	NE wind ahead of storm	
		6.9	K2 III	CASS CCD	1800/	250μ	6600Å		stovel		
30000											

307 pg #5

Date 1991 Feb 17/18 Observers Fds - Tm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Spectr. Temp.	Exp. Mtr.	Seeing
559	comp			01:47:55				FeAr	90s			
560	comp			01:51:25				clear	90s			
561	MD 147394 3 Hen	16 16 44	+46 33 05	01.55.15	02 01.20	4 46 E					140	
562	comp			02:02:18				FeAr clear	90s			
563	comp			02:05.22				"	"			
564	MD 160 7602 iHen	17 36 35	+46 04 00	02:09:35	02 34 36	5 33 E					100	
565	comp			02:36:13				FeAr clear	90s			
566	comp			02:40 30				"	90s			
567	MD 163506 3 Hen	17 51 23	+26 04	02:46.51	02 58.07	5 20 E					000	
568	MD 163506 ~~comp~~	"	"	02.59:35	03:13 27	5 05 E					000	
569	comp			03.13 52				FeAr	90s			
570	comp			03 20:13				"	90			
571	MD 166182 103 Hen	18 04 29	20 47 56	03:23:10	0339.32	04 56 E					120	
572	Comp			03:40:31				"	40			
573	Comp			03:45.15					90			
574	MD 120515 7 Hen	13 45 04	49 48 45	03 47:49	03.48 32							

Spectr. Temp. ..... Dome Temp./Hum. -8.2C 53% Transparency Conditions Clouding in again.....

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				ccd CASS	1800/5805	25μ	6600Å				
		~~3.84~~	~~B5II~~								
30 000		3.54	B5II								
30 000		3.60	B3V							Cloud at start	
10 000		5.46	F2Ia							Sky Hen	
11 000		5.46	F2Ia								
30000		4.36	B2II								
30 000											

309 146

Date 1991 Feb 17/18 Observers Fels-Tan

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CCD0575 fls	Comp for 2 4m4			03:49:54				FeAr Clear	90s
576	HD120315	13 4304	49 48 45	03 52 35	03 53 17	00 20 E			
577	comp			03:54:40					
578	HD120315	13 4304	49 48 45	03:57:00	03 57:48	00 15 E			
579	comp			03:59:00					
580-589	10 flats @ 8s	1/2 Aperture.		04:05:00					
590	comp			04:17:40					
591	HD120315	13 4304	49 48 45	04:20:45	04:21 34	00 07W			
592	comp								
593-602	10 flats @ 35s	1/8 Aper.		04:29:00				TUNG	60s
603	comp			04:38:54				FeA	90s
604	HD120315	13 4304	49 48 45	04 41 35	04 42 21	00 28 W			
605	comp							FeAr	90s
606	HD120315	13 43 04	49 48 45	04 47 15	04 47 21	00 35 W			
607	Comp								

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

Focus 30

Spectr. Temp. ..... Dome Temp./Hum. -85°C 35%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CASS	1800/56.5	250μ	6600Å				
~30000		1.89	B3V								
~30000											
~30000		1.89	B3V								
										CCD T stable -102°C	
30000		1.89	B3V								
30000											

311 pg 7

Date 1991 Feb 7/8 Observers F.d.s. / T.v.

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00608	BIAS (x4)								
609	BIAS (x4)								
610	BIAS (x4)								
611	Comp							Fe A	90s
612	HD120315	13 4304	+49 4845	04 57 45	05 02 50	00 49 W			
613	Comp							Fe A Clear	90s

Spectr. Temp. ...
...cous.....
Spectr. Temp. ...

Mtr	Seeing
B.C.	

Spectr. Temp. ..... Dome Temp./Hum. −8.5°C ..... 59% Transparency Conditions . Finally... extra. cloud.....

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800/56.5	25μ	6600A				
10,800		1.89	B3V								

313

Date 1991 Feb 20/21 Observers F.D.S. - T.A.

Emulsion Batches:
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.....

Spectr. Temp. ....
Focus 7:10
Spectr. Temp. ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC00614	BIAS (4)										
615	Fe-Ar							Fe Ar Clear	50s		
616	HD 35149	05 17 35	03 26 54	21 00 05	21 40 05	2 01 W					3 Slight
617	Fe-Ar			21 42 50				Fe Ar Clear	50s		
618	BIAS (4)										
619-638	20 Flats @	8 sec each				0 7 05 W	+3° 38	Tung A-1/2			
639	BIAS (4)			22 05 00							

Spectr. Temp. ..... Dome Temp./Hum 0°C ... 67% Transparency Conditions .... Cloudy, mostly 314

Focus .... 7:10 .....

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

30 CGAIN T = -101°C CCD

510 0 40 1024 2 1 CCDFLAT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Blue Coll	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CASS	1800/565*	250u	6600A			* G = 6045	
	3 Slit Length	5.00	B1V						Fds - pgm	mid Slit Length used	
				Stellar	Spectrum	showed apparent			scattered Light in Central Region		

315 Thurs - Fri pg #1

Date 1991 Feb 21/22 Observers W.K. - Fds - Pdc - Tq

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SS0001.fts	HD34029	05 09 18	+45 54 00	19 06	19 09	00 19E	2000x	seq	
2.				≈ 19 10 30	19 13	00 15E	4000x	"	
3.				19 28 10	19 ≈ 30	00 02 W	4000x	"	
BIAS1.PIF	BIAS			~~20 08 30~~	~~20 03~~		500x	Seq	
BIAS2.PIF							"	"	
BIAS3.PIF							"	"	
Fm 305. Tq	Capella New Camera			20 29		=01 W	4 frames	"N" mode	
Fm 306. Tq	"	"		20 33		01 05W	5 frames.		
SS0004.fts	Comp				20 40			FeNe	90s
cc00640 640	~~Com~~ BIAS (4)			20:54:00					
641	BIAS (4)			20:55:00					
cc00642	Fe_Ar			21:25:54					
643	HD 35149	05 17 35	03 26 54	21: ~~30 18~~	21 13 35	2 11W			
644	Fe_Ar			21 45 48					
645	HD 35149	05 17 35	03 26 54	21 48 50	22 03 30	2 30 W			

Spectr. Temp. ..... Dome Temp./Hum. +4°C 75% Transparency Conditions Hazy 3/6

Focus 6.85

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

CCD Temp = -100°C
100 c gain
CCD Rotated 90° CCW from NORMAL

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Blue Cell	Grating/ Tilt	Slit	~~Emulsion~~ λ	P.H.	Program	Remarks	Quality
				CCD CASS Speckle setup	600/25.0	10μ Dia Hole	3930Å		KK Speckle pgm	CCDFIMG 0 0 5121 92 G=2550	
										0 0 340 1 3 3 CCDFMT ~~same FMT~~	
										0 0 340 1 3 3 CCDFMT	
New camera ON										" " "	
New Camera OFF											
New Camera ON cables away											
1st one for etched circle										8 megachotz for ~~FMT~~	
										5 megachotz for ~~FMT~~	
							3930Å				
										30 c gain CCDT = -100°	
				CCD CASS	1800/36.5	250μ	6600Å		Fds-pgm		
20000		5.00	B1V								
20000		5.00	B1V								

#2 Thurs-Fri

317 Date 1991 Feb 21/22 Observers Fds/Tw/Pdr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD0646	Fe Ar								
647	HD 35149			22 14 45	22 30 20	2 57 W			
648	Fe Ar			22 31 50					
~~649~~	~~HD 35149~~			~~22 37 37~~	~~22 53 56~~	~~3 20 W~~			
649	BIAS (4)								
650	BIAS (4)								
CCD0651–CCD0662	Flats (12)					0 0	+43°		TUNG A=1/2
CCD0663	BIAS (4)								

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

Hyp. Mtr.	Seeing
2.000	
2.100	

Spectr. Temp. ..... Dome Temp./Hum. 86.1%/2.5 Transparency Conditions ... Cloud/by 2230

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 87%...2.5°C → best focus 6.90

3.14

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD CASS Blue	1800/565	750μ	6600Å				
30 000		5.0	BIC							CCD window frequently fogged up.	
24 500											
				All	CC.Fts files to Perseus and WORM TO HERE.						
				All	speckle frames to Perseus/cass						

319

Date 1991 Feb 23/24 Observers Fds/Pdr

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00664	Bias (4)			18 55					
665	Bias (4)								
666	Fe Ar			18 57				Clear	90s
667	HD 35149	05 17 35	03 26 54	19 02 39	19 16 49	0 10 E			
668	Fe Ar			19 17 59				Clear	90s
669	Fe. Ar			19 20 55				Clear	90s
670	HD 35468	05 19 46	06 15 33	19 23 40	19 25 10	0 03 E			
671	Fe Ar			19 25 14				Clear	90
672	~~HD 35149~~ Fe Ar			19 29 30				Clear	90
673	HD 35149	05 17 35	03 26 54	19 32 10	19 49 58				
674	Fe Ar			19 51 27					
675	Bias								
676	Bias								
CC00677-686	Flats					00h	-35°	A = 1/2	14s
CCF00076	Comp poss			21 16		00h	+30°		90s
77	Stellar poss					"	"		

Spectr. Temp. ..... Dome Temp./Hum. 55.2%/-7.5°C Transparency Conditions Clear → Partial

Focus ~~6.90~~ 6.90 320

Spectr. Temp. ..... Dome Temp./Hum. ..... 500 0 50 1024 2 1 ccdfmt 30gain

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Cass	1800/56.5	250μ	6600Å			C=6045	
		~~5.0~~ ~~B1V~~				55μ projected					
30000		5.0	B1V								
40000			B2III								
				Found hartmann masks in comparison position at the end of observations.							
10000										Clouds coming in	
				All CC.FTS files to Perseus + WORM to here							
				+ CCF.FTS to Perseus ~~b~~, + WORM to here							
											8500 2D.
	T=-6.9°C				1800/56.5	250μ	6600	380	0 24 1024 16 1	ccdfmt	
	Focus=6.90										

321

Date 1991 Feb 26/27 Observers [B Inj/ Pdr

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

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC 00687	Bias (4)								0s		
688	Dark							Clear	1200		
689	Bias (4)								0s		
690	Dark B!							Clear	1200		
691	Comp			20 23				Fe Ar clear	120s		
692	HD 37468	05 37.42	-2 39	20 24 40	20 48 15	~1 20 W				2.500	
693	Comp — spectrum!			20 49				Fe Ar clear	120s		
694	Comp			21 17				Fe Ar clear	120s		
695	HD 36485	05 26 54	-00 22	21 24 05	22 04 05	2 41 W				5.500	
696	Comp							Fe Ar	120		
697	HD 36485			22 46 00	23 16 00	3 53 W				1.500	
698	Comp							Fe Ar	120		
699-706	Flat					2 40 W	-00 22	Tung A=1/16	10s		
707-714	Flat					" "	" "	" "	20s		
715-722	Flat					" "	" "	Tung A=1/8	16s		

Spectr. Temp. ..... Dome Temp./Hum. 59.0% / -7.4°C Transparency Conditions Partly cloudy

Focus 6.9 30 cgain 322

Spectr. Temp. ..... Dome Temp./Hum. ..... ccdfmt 500 0 24 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Cass	1800/56.5	250μ	6620Å			G=6055	
				Second longest slit used for spectra							
22 500		B= 3.51	09.5 V			MID λ = 3200 ADU MAX λ = 3200				Through clouds	3200
										Focus: ~~7.00~~ 6.90	
5650		B= 6.7	B2 V p			MID λ = 1260 ADU MAX λ = 1260 ADU				Tried to adjust focus unsuccessfully back to ~~best~~ original focus.	
4430						MID λ = 980 ADU MAX λ = 980 ADU				Restarted program CCD2A hung up when doing <> rlist!!	
	Longest slit used for flats					MAX λ = 1200 ADU					
						MAX λ = 2500 ADU					
						MAX λ = 6700 ADU					

323, #2

Date 1991 Feb 26/27 Observers [Bln] / Pdr

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCOO 723	Comp							Fe for clear	120s
724	HD 112028	12 48 23	+83 57	01 40 15	02 17 15	00 24E			
725	Comp							Fe A Clear	120s
726-733	FLATS					00 15 E	+83° 30	Tung Clear	40s
734-	Bias (4)	} longest slit used							
735	Bias (4)			03 13					

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

Exp Mtr	Seeing
3200	

Spectr. Temp. .... Dome Temp./Hum. 68%/-9.2 Transparency Conditions Hazy

Focus 7.05

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Cass	1800/422	250μ	4398Å			G – 4482	
32900		V 5.3	A0 Shell							Spect refocused to 7.05	

FLATS MID λ = 12500 ADU

All cc files to CC00735.FTS copied to WORM + Perseus

375

Wed-Thurs

Date 1991 Feb 27/28 Observers P.d.r.-Tn. [Bln]

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Sky Mtr	Seeing
CC00736	Comp							FeAr Clear	120s		
737	HD36485	05 26 54	-00 22 00	18 50 10	19 17 00	00 6 E				0200	Fine
738	Comp							FeAr Clear	120s		
739	Comp			19 25 18	19 25 10			"	120s		
740	HD37468	05 33 44	-02 39 30	19 25 10	20 07 40	00 41 W				30	Fine
741	Comp							FeAr Clear	120s		
742-749	FLATS			20 20		0 0	-2 30	TUNG A=1/4	8 sec		
750	Bias (4)	(average of 4)									
751	DARK 20m										
752	BIAS (4)										
753	DARK (20m)										
CCF00078	Ft. Comp posn	Focus Set @ 6.9		~23 38		0 0	-23°	FeAr Clear	90s +30		Format
CCF 79	Stellar posn		6.9			0 0	-23°	"	90s +30		

Spectr. Temp. ..... Dome Temp./Hum. -4°C H-59% Transparency Conditions ..Clouding in.....

Focus ...6.9.....

Spectr. Temp. ..... Dome Temp./Hum. 500 0 24 1024 4 1 CCDFMT 30 CGAIN CCD Temp = -101°C 326

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD-CHSS Blue Coll	1800/565	* 250u	6620Å			* second longest slit 0.9mm G=6055	
3200	Fine	6.70	B2V p						He-Rich Blu-pym	Cloud at end	1000
										Clouding	
6100	Fine	3.51	09.5V						SB-Blu Blu-pym	(clouding 1st half of exp)	
					1800/565 *	250u 1.2mm length	6620Å			* Longest slit Length	
FORMAT [350 0 24 1024 16 1]					1800/565	250u	T = -4.1°C			2nd longest slit length	

327

Date 1991 Feb 27/28 Observers Tn/Pdr

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00 754	Comp							Fe Ar clear	120s
755	HD 112028	12 48 23	+83 57	02 39 30	03 01 42	0 24 W			
756	Comp							Fe Ar Clear	120s
~~757~~	~~Comp~~							~~Fe Ar Clear~~	~~120s~~
758	~~HD 80360~~	~~09 52 57~~	~~+12 55~~	~~03 15 45~~		~~W~~			
CC00757 764	Flats	[Note	Source was TUNG, A=½ Tn]			00 30W	+83°		35s
CC00765	Bias (4)								
766	Bias (4)								
	1991 Feb 28/1		Pdr/Tn						
CC f00080	Comp posn			~00 15		00h	+34°	Fe Ar clear	50s
81	Stellar posn					"	"	"	"
82	Comp posn					"	"	"	120s
83	Stellar posn					"	"	"	"

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

Mtr	Seeing
600	3.0

Focus = 6

All

Spectr. Temp. ..... Dome Temp./Hum. -6.7°C 73% Transparency Conditions . Hazy ..... 328..

Focus ....6.9.....

Spectr. Temp. ..... Dome Temp./Hum. -7.3C 71%

30 CGAIN . CLOT = -101.8 C

500 0 24 1024 41 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	G 4482 1800/42.2	250μ *	4398Å		* Slit Length 2nd Longest		
33 000	SOSO	5.2%	AO shell						Shell - Bln	SE star of pair, also SL brighter of pair	@ 4000 ADU MAX
									(Too cloudy - No go) Near Full moon. + Cloud		
				CCD CASS Blue Coll	1800/42.2	(Slit Length max)	4398Å				
Focus = 6.9				Dome Temp/Hum -2.0 / 88.5 %							
									380 0 24 1024 12 1 CCDFMT		
				Cass CCD	G=4482 1800/42.2	250μ *	4398 Å°			* Third longest slit	
					" "		" "				
					G=6055 1800/56.5		6620 Å				
	All focus tests to Date on Perseus/CCD/CASS/TEST : Worked to "Focus"										

29 Fri-Sat

Date 1991 MAR 1/2 Observers Tn /

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
ccf00084.fts	Comp posn			Diffuser in -		0 0	0°	FeA clear	120s
ccf00085.fts	Stellar posn			~2000		"	"	"	"
	MAR 2/3 Dome T=		+8°C	Tn set	same as previous night, ie Focus = 67				
ccf00086.fts	Comp posn			≈1845		0 0	-22°	FeA clear	130s
ccf00087.fts	Stellar posn					0 0	"		130s
	MAR 3/4 DOME T=		-2.0°C	Tn set	same as previous night, Cloudy again				
ccf00088.fts	Comp posn			1850		0 0	-22°	FeA clear	130
ccf00089.fts	stellar posn					0 0	"	"	130

Spectr. Temp. +3.9°C Dome Temp./Hum. +3.9°C 84% Transparency Conditions ... Cloudy ... mostly ...

Focus .... 6.7 ....

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

CGAin = 30
CCD T = -125°C

330

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Blue Cdl	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
FORMAT ~~380 0 24 1024~~				CASS CCD	G=6065 1800/565	250u *	6620Å			380 0 24 1024 1 2 1 CCDFOOT * 3rd longest slit	
	Note Header says Comp65n 6620ii for "OBSERVER": disregard									"OBJECT" correct	
										CGAin = 30 CCDT = -140°C	
[Signal seems weak]		? MAYbe		CASS CCD Blue Cdl	G=6035 1800/563	250u *	6590Å			380 0 24 1024 12 1 CCDFOOT	
				more moisture on window? It is humid at 95%						wet to some degree	
H = 73%		Focus =	6.7						CCD Temp =	-87°C CGain = 30	
(Signal 4000ADU strongest)				~~CASS~~ CCD CASS Blue Cdl	G=6035 1800/563	250u *	6590Å	*3rd	longest slit	380 0 24 1024 12 1 CCDFOOT	
Signal up ≈ 10x tonight.				"	"						
										Focus tests copied to "focus" on workn } up to date	
										and to CCD \ Tests on personal)	TG

33" #1 Thurs- FF1

Date 1991 MAR 7/8 Observers ...P.d.t.-.Tn..... (K/K service obs)

Emulsion Batches: .....

.....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Mtr.	Seeing
ceo 239D.fts	Comp							ThA	10s		
2391	HD 34029	05 09 18	+45 54	20 16 16	20 19 10	01 46W				2150	3
2392	Comp							ThA	10s		
2393	Comp							ThA	10s		
2394	HD 47105	06 31 54	+16 29	20 42 13	20 0625	01 12W				2150	2.3*
2395	Comp								10s		
2396	Comp								10.		
2397	HD 62509	07 39 12	+28 16	21 18 00	21 3215	00 30W				2150	3.3W
2398	Comp								10s		
2399	Comp								10s		
2400	HD 74874	08 41 30	+06 47	21 4450	22 2700	00 24W				2150	4.7*
2401	Comp								10s		
2402	Comp								10s		
2403	HD 61421	07 34 04	+5 29	22 58 00	23 0455	02 10W					
2404	Comp								10s		

Spectr. Temp. ..... Dome Temp./Hum. +5.9°C 52% Transparency Conditions ..... Mostly Clear .....

Focus ..... 0.0 256 1024 4 1 ccdfmt Note Slit Position changed from 0.223 → 0.200

Spectr. Temp. ..... B ..... Dome Temp./Hum. ..... CGAIN = 30 CCD Temp = −101°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Echelle	18.95	.276 70μ		X	Grating = .4510 [Should be to .4555 to fully get Hδ] H=400μ = 0.225 on MRC		
5100	≈	+0.89	G8 III + F				4471-81Å		Cygella	@ 4490Å AVG Sum ADU ≈ 7200 ADU	
9,150	≈2"	1.9	A0 V	(2" seeing or ≈ ½ 400μ slit height)					Asm-Sp-Kit	@ 4490Å AVG Sum ADU ≈ 18000 ADU	
13,800	≈3"	2.15	K0 III						Std	@ 4490Å sum of 7 brightest pixel columns AVG Sum ADU ≈ 39,400 ADU	
3100	<2"	4	G0 III + FOV						Asai-Sp-Kit	AVG Sum of 7 cols = 7100 ADU CCD T = −100.8°C	
≈14000	2"	0.74	F5 IV						Std	@ 4490Å AVG Sum of 7 cols ≈ 10,000 ADU	

33? #2 Thurs-Fri

Date 1991 MAR 7/8 Observers T. — Pdt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ceo 2405	Comp							Th Ar	10s
2406	HD 99028	11 18·7	+11 05	23 14 40	23 47 22	0 55 E			
2407	Comp							Th Ar	10s
2408	HD 99028	11 18·7	+11 05	23 46 15	00 17 15	00 28 W			
2409	Comp							Th Ar	10s
2410	Comp			2				n	10s
2411	HD 137909	15 33·7	+29 27	00 26 05	00 48 40	03 55 E			
2412	Comp								10s
2413	Bias (4)	average of 4 bias							
2414 ceo 2416	FLATS (3)	as CCD Temp rising				03 20 E	+29 05		60s
ceo 2417 -> 2422 ~~ceo~~	FLATS	(after Topup + Temp stab)		01 42		01 0 W	+16°		30s
cef 0062	Hartmann - IN								10s
63	- OUT								10s

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

Exp. Mtr	Seeing
	2"
50	2"
10	2"
2	3"

Spectr. Temp. ..... Dome Temp./Hum. -7.2°C 55% Transparency Conditions FINE 334

Cloud Bg @ 45

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -7.8°C 60%

Slit Posn @ start = .223 on micrometer/ set TO 0.200

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	2"			CCD Echelle	18.95	.276 70μ	4471-4481Å	Slit H=400μ Xgrating=0.4510		HR Justin in Top ORDER	
1180	<2"	4.3+	F2 IV						Asm-Sp Att	AVG SUM ADU = 4000 @ 4490Å	ADU
1310	2"	4.3+	F2 IV							AVG SUM ADU = 3800 ADU @ 4490Å	
									Note CCD Temp starting to Rise		
1620	3"	3.93	Fcp		AVG SUM ADU = 3800 ADU	@ 4490Å				CCD Temp = -90.5 @ 00 25 EST CCD T = -86.3 @ 00 45 EST	
										-86.6°C @ 01 EST	
	AVG Sum of 7 columns ≈ 30000 ADU					.276 70μ	Slit H=600μ, .205 set			-86.5°C @ 01:15	
						~~.276~~	~~H=600μ~~			Top up finished @ 01 30	
	AVG Sum of 7 cols ≈ 37000 ADU					70μ	H-600μ			CCD T = -101.3°C	
				All ftgd to Perseus,					-3.8 C	after adjusting in-plane rotation of X-grating	Stars - 02 pixels!
				"		"			F = .230		

237 Pgm#1 Fri - Sat

Date 1991 MAR 8/9 Observers P.d.r. - T.n

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
~~CeO2423 Fls~~	~~Comp~~	Lost						ThA			
2423	HD47105	063154	+16 29	192957	193718	00 13 E				1130	4"
2424	Comp							ThA	10sec		
2425	HD47105	063154	+16 29	194005	194900	00 01 E				120	4"
2426	Comp							ThA	10s		
2427	Comp							ThA	10s		
2428	HD61421	073404	+5 29	195600	195900	00 53 E				1130	4"
2429	Comp								10s		
2430	Comp								10s		
2431	HD62509	073912	+28 16	200540	201100	00 47 E				1130	4"
2432	Comp								10s		
2433	Comp								10s		
2434	HD74874	084130	+06 47	205827	213641	00 32 E				1150	1½"
2435	Comp							ThAr	10s		
2436	Comp							"	10s		

Spectr. Temp. ..... Dome Temp./Hum. -2.4 ... 55% Transparency Conditions .. Fine ..... 356 ...

Focus .... .230 pg #1 CGAIN = 30

Spectr. Temp. ..... Dome Temp./Hum. ..... 600 l/mm X Grating set to .4560 * 5th ORDER FROM TOP

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Central λ Emulsion	P.H. Slit Height	Program	Remarks	Quality
				CCD Echelle 600 l/mm X	18.97	70μ .276	4481Å	400μ .225		CCDT = −100.2°C	
9730	<2"	1.09	A0 IV						Asm SP-KK Meridian Observing - no Dome Turning	≈ 14700 ADU AGC SCAN @ 4490Å	
11,200	<2"	1.9	A0 IV						Asm Sp KK	@ 4490Å 19,600 ADU AVG SCAN of 7 cts ±	
214600	<2"	0.74	F5 IV						Procyon Std	Should be ±25K w/ Seeing low 11,000 ADU	
13,700	<2"	2.15	G0 III +F0V	K0 III b					Beta Gem Std Vel	16000 ADU	
5350	1.5"	4	G0 III +F0 V						Asm Sp KK		

351 pg #2

Date 1991 MAR 8/9 Observers Pdr. Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CEO2437	HD 34029	05 09 18	+45 54	21 39 00	21 42 10	3 13 W			
2438	Comp							ThAr	10 sec
2439	Comp								10 sec
2440	HD95689	10 57 36	+62 17	21 51 20	22 07 00	02 09 E			
2441	Comp								10 sec
2442	Comp								10 sec
2443	HD99028	11 18.7	+10 05	22 36 10	23 16 10	01 19 E			
2444	Comp							ThAr	10s
2445	Comp							?	10s
2446	HD121370	13 49.9	+18 54	23 24 00	23 53 00	03 14 E			
2447	Comp							ThAr	10s
2448	Comp							?	10s
2449	HD137909	15 23.7	+29 27	23 59 40	00 34 20	04 05 E			
2450	Comp							ThAr	10s
CEO2451 → 2455	Flats			00 16		02 00 E	+29 06	TUNG	20s
2456	Bias (4)			00 54					

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

Temp Mtr	Seeing
300	
300	15"
400	<2"
60	2"
400	2"

Spectr. Temp. ..... Dome Temp./Hum. ~33°C 57% Transparency Conditions ...51...Hazy.....338...

Focus .....230..... pg#2

Spectr. Temp. ..... Dome Temp./Hum. ~42..60%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Central λ	S1 T P.H. Height	Program	Remarks	Quality
14,500		1.89	G8III +E	CCD Echelle 5000Å grating	18.97	70μ	4481	400μ .225	K grating .4560	brt Continuous @ 4490Å AVG Sum of 9 cols 27000 ADU	
19,300	1.5"	V comb. 1.79	K0IIIa							@ 4463 Å AVG SUM of 9 cols 19900 ADU	
4800	<2"	4.34	F2 IV							AVG Sum of 10 cols 10600 ADU	
10,100	<2"	3.27	G0							new R 4472Å AVG Sum of 10 cols 14,500 ADU	
1600	2"	3.93	F0p						Asm Sp - KK	Avg Sum - 10 cols 8300 ADU	
						76μ .276	4481Å	800μ .185		AVG Sum of 10 cols 5960 ADU CCD Temp = −102°C	

33a #3

Date 1.9.91. MHR. 8.1.9... Observers .Tn..Pdr.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
ce02457	Flts Comp			01 20 05					
2458	HD137909	15 23.7	+29 27	01 20 05	01 44 05	2 55 E			10 s
2459	Comp								20 s
2460	HD137909			01 48 05	02 07 00	2 32 E			30 s
2461	Comp								1 m
ce2462 - 2466	Flats (while on HD137909)			02 15		2 20 E			
2467	Comp			02 27					10 s
2468	HD137909			02 38 20	02 40 40	1 58 E			
2469	HD137909			02 47 30	02 59 33	1 40 E			
2470	Comp							ThAr	10 s
2471 - 2475	Flats (while on HD137909)					1 30 E	+29 06	TUNG	
2476	Comp								5 s
2477	HD137909			03 47 50	04 28 34	0 10 E			
0478	Comp							ThAr	5 s
2479	HD137909			04 32 50	4 43 29	0 05 W			

Spectr. Temp. ....
Focus ... 1230 ...
Spectr. Temp. ....

Exp Mtr.	Seeing	
3500	1"	3
3500	1"	3
	1"	3
	4"	3

Spectr. Temp. ..... Dome Temp./Hum. ~43°...60% Transparency Conditions ..... Hazy...~part. cloudy....

Focus ...230..... #3 340

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion (contra)	P.H. Height	Program	Remarks	Quality
				CCD Echelle	18.70	70µ .270	* 5185Å	400µ	x grating = .3963	* 4th complete ORDER from Top	
3500	1"	3.93	FOp							2,700 SUM AVG ADU @ 5185Å	
3600	1"	3.93	FOp							20300 Sum AVG ADU	
						70µ	5185Å	600µ .205		of 10 columns 56,500 Sum AVG ADU	
					18.70	70µ	5890Å	400µ .225	x grating = .3407	4th complete order from Top	
2000	1"	3.93	FOp							of 10 columns 19,400 Sum AVG ADU	
										16 800 Sum AVG ADU	
2000										AVG 116K ADU Sum of 10 columns	
							5890Å	600µ .205		CCD T = -102.0°C	
			F		*16.70	70µ	6700Å	600µ .205	x grating = .2812	* Can't see 10 lines on other side of blaze [Exposure Time Sum 1000 Lines 19.4]	
740	2.3"	3.93	FOp				13 200 Sum AVG ADU @ 6700Å			Thick cloud at beginning	
	2"	3.93	FOp					600µ .205		12,200 Sum AVG ADU 7th clear	

341 pg 4

Date 1991 MAR 8/9 Observers Pdr. T.H.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
ce02480	Comp						+29 06	ThA	5sec
ce02481 ->ce02485	Flats (5)					00 08W	+29 06	THAR	1.5sec
2486	Bias (4)								

Spectr. Temp. .....
Focus .....1230...
Spectr. Temp. .....

Ext. Mtr	Seeing	

Spectr. Temp. ..... Dome Temp./Hum. -5.5°C 64% Transparency Conditions .. Fair. Cloudy ..... 342 .....

Focus ..... 1230 .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD Echelle	18.70	70µ	6700Å	600µ .205		CCDT = -1020°C	
								800µ .185			
										CCDT = -1020	
					All	To	Perseus	Echelle	pow.		
					All	ce files	to	ce02486.fts	copied		
					to	WORM		(Mar 10)		DIR 03 91-03	

3rd pg #1 Sun - moon

Date 1.9.91. MAR. 10/11.... Observers .Th.....KK.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2487	BIHS (4) average			18 56					
2488	Comp							Th AR	20s
2489	Capella	05 09 18	+45 54	19 09	19 12 40	00 50W			
2490	Capella	"	"	19 14 30	19 15 45	00 54W			
2491	Comp							Th AR	20s
ce 02492 2493	FLATS (2)	While on Capella						Th AR	1-6sec
2494 2495	FLATS (2)								20s
2496	Comp								10s
2497	Capella	05 09 18	+45 54	19 49 45	19 53 20	01 32W			
2498	Comp							Th AR	10s
2499	Comp							Th AR	10s
ce 02500	HD 47105	06 31 54	+16 29	20 06	20 26	00 44W			
2501	Comp							Th AR	10s
2502	Comp							Th AR	10
2503	HD 61421	07 34 04	+5 29	20 34	20 44	00 01W			
2504	Comp							Th AR	10

Spectr. Temp. ..... Dome Temp./Hum. -4°C 52% Transparency Conditions ... Fine ... 344

Focus ... .230 ... pg #1

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

CGAin = 30

CCDT → -101 °C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H. Hieght SLIT	Program	Remarks	Quality
				CCD Echelle	19.60	70μ	6707Å	.1	5000Å, 600ℓ	X grating = .2812	
								400μ .225			
10K		0.89	G8 III + F							S/ saturated in red	
4,530											
								600μ .205			
					18.97	70μ	4481Å	600μ .205	~~X grating =~~	≈ 13K ADU MAX/pixel X grating = .4560	
								400μ .225			
12 000		0.89	G8 III + F							17K ADU S/N AVG of 7 cols	
7700	3"-4"	1.9	A0 IV							2c: 18K ADU S/N AVG of 5 cols	
1/2 500	3"	0.74	F5 IV						std Procyon	3c: 30K ADU S/N AVG of 9 cols 5c:	

345 Pg #2

Date 1991 MAR 10/11 ..... Observers ... KK - TM .....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
ce02505	Comp							Th-Ar	10s
2506	HD 62509	07 39 12	+28 16	20 54	21 04 30	00 05 W			
2507	Comp							Th-Ar	60s
2508	Comp							"	10s
2509	HD 74874	08 41 30	+06 47	21 25 37	22 02	00 11 W			
2510	Comp							Th Ar	10s
ce02511 2512	FLATS (2)	white on HD 74874				≈ 00 15 W		TCHIG	10s
	SBIG Tracking Camera Tests								
	HD 94601/02	10 50 12	+25 17	23 36		≈ 00 20 E			
ce02513	COMP for 1 COR BOR							ThAr	10s
ce02514	HD 137909	15 23 7	+29 27	00 03	00 33	04 00 E			
ce02515	Comp							Th Ar	10s
ce 2516	BIAS (4) Avg			≈ 00 40					

Spectr. Temp. ....
Focus 235
Spectr. Temp. .....

Mtr. Seeing

30 3"

? 3½"

43"

Afte

Spectr. Temp. ..... Dome Temp./Hum. -4.3°C 56% Transparency Conditions Sl. hazy 346

Focus 230 pg #2

Spectr. Temp. ..... Dome Temp./Hum. -5.6°C 42%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Echelle	18.97	70µ	4481 5 thr'der ↓	400µ			
11,500	3"	2.15	KOIIIb							✓ Sci = 14K ADU Sum Avg of 7 cols	
									All to Perseus @ 21 EST to here		
7000?	3-4"	4	GO III +FOV							GCi @ 400 ADU Sum Avg of 7 cols	
								600µ		≃ 12,800 MAX / pixel	
		V 4.51 V 6.30	A I V A In	Sep 6.8"	Δm = 2.0		Tel Focus		SBIG cam = 2244 [SAME focus as Ideal for Echelle]		
2950	<3"	3.93	FOp	CCD Echelle	18.97	70µ	4481 ✓	400µ 225	X grating Still @	≃ 8K ADU Sum Avg of 7 .4560	
Note		I notice I now that Haider Times are about 4.5 min behind Times noted here (Astrobot Times)									
				All To Perseus \ Echelle now / Up to date on UCORM TOO To							

347 pg #1 Mon - Tues

Date 1991 MAR 11/12 Observers T. [Blk]

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CCD0767.fts	Comp			19 20				FeAr Clear	120s
768	HD 36485	05 26 54	-0 22	19 23 20	19 43 00	01 10 W			
769	Comp							FeAr Clear	120s
770	Comp							"	120s
771	ADS 4241 D	05 33.7	-2 39	19 59 30	20 18	01 39 W			
772	HD 37468 ~~Comp~~	"	"	20 19	20 21 46	01 42 W		~~FeAr Clear~~	~~120s~~
773	Comp							FeAr Clear	120s
774	Comp							"	"
775	HD 36485	05 26 54	-00 22	20 35 30	20 59	2 26 W		"	"
776	Comp							FeAr Clear	120s
777	BIAS (4) Average								
CCD0778 780	Flats (5)	et	+5 °Dec			F02 W	ND 0.6	TUNG Clear	10 sec
FM 00307.fts	HD 82582.	09 27 46	+47 21			00 20 E	4x int		
CCD0783.fts	Comp						Clear		
784	HD 197433	20 38.6	+75 14	22 35 30	22 51 03	10 47 E			

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

Exp Mtr	Seeing
5:00	4"
15:00	
19:00	
21:00	4"
27:00	6"

Spectr. Temp. ..... Dome Temp./Hum. -5.9 50% Transparency Conditions ... Fine ... 548

Focus ... 6.7 ... pg #1 500 0 24 1024 4 1 CCDFinT

Spectr. Temp. ..... Dome Temp./Hum. ..... 30 CGAIN

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. (SLIT Length)	Program	Remarks	Quality
					G=6055		6620Å	* 0.9mm	* 2nd longest.	CCD T = -101.3°C	
9000	4"	G70	B2Vp	CCD CASS BlueCoil	1800/56.5	250µ	6620Å		Ha. Rich	6700 ADU summed 8 coll's	
										CCD T = -101.7°C	
15000		6.4	B2V						VB Bln	guided @ Left edge to avoid	
18000		3.51	09.5V						a ORI AB	bright Star. (5 ORI AB)	12K ADU
										Hβ	
										~~G1 5600 Sum 4 coll's ADU~~	
8600	4"	G70	B2Vp						He Rich	Sci 5600 Sum 4 coll's ADU 8 coll's	
~~6 6??~~											
										Top up @ ~22 EST ~~offset~~ Flats	
							6620Å	1.2mm	Length		
3 x 3L	poor pixels		(Light NN Wuinkel)		250µ			1.2mm	Dark Nov	image above slit	
		V									
2711	6"	73-77	G3							6470-6730Å	

3m9 pg #2

Date MAR 11/12, 91 Observers Tn Hdy

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
785	Comp							Fe Ar Clear	
786	Flat			2315			No filter	TUNG Clear	2 sec
787	Comp							Fe Ar clear	120s
788	HD 197433			23 3850	23 54 15	9 44E			3400
789	Comp							Fe Ar Clear	150s
790	Flat						Clear	TUNG	3s
791	Comp.								
792	HD 197433			00 1715	00 32 15	9 06 E			3469
793	Comp							Fe Ar Clear	120s
794	Flat.						Clear	TUNG	-
795	Comp							Fe Ar Clear	90s
796	HD 197433			00 5000	01 05 10	8 33 E			
797	Comp							Fe Ar Clear	90s
798	Flat							TUNG Clear	3 sec
799	Comp						Clear	Fe Ar	90s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Clear 350

Focus ..... pg #2

Spectr. Temp. ..... Dome Temp./Hum. ..-8°C..50%

Using 1.2 mm Length Slit for All Exps

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CASS	1800/	250μ					
							6690Å		G=6055		
					1800		6400Å		G=5870		
3400	5"	V= 7.3-7.7	G3					1ci		6280-6510Å	
							6225Å		G=5760	6130 - 6320	
3469								2ci		~5000Å/hr SNR AVG = 50/s	
								3ci			
								4ci			
					1800/		6050Å	7ci	G=5630	5960 - 6150	
3310								5ci		~1500 Å/hr SNR = 50/s	
	1"-6"							4ci			
								4ci		1.25 Å/px/hr	
							5590Å		G=5505	5780 → 5975	

351 PM #3

Date MAR 11/12 '91 ..... Observers ..Hdy-Tuy.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CC00800	HD197433	20 38.6	+75 14	01 28 50	01 44 20	E				30	A+
801	HD197433			01 48 35	02 03 35	E	clear	~~FeA~~	~~90s~~	~~30~~	4+
802	~~Flat~~ Comp						clear	FeA	90s		
803	Comp								90s		
804	HD197433			02 32 10	02 37 20	E				30	4+
805	Comp							FeA	90s		
806	Flat						clear	TUNG	3s		
807	Comp						clear	FeA	90s		
808	HD197433	20 38.6	+75 14	02 53	03 08 36					5H	
809	Comp						clear	FeA	90		
810	FLAT						clear	Tung	3ss		
811	Comp						clear	FeNe	60s		
812	HD 197433			03 25 50	03 40 50					5H7	
813	HD 197433			03 46 43	04 02 00					4H5	
814	Comp						clear	FeNe	60s		

Spectr. Temp. ..... Dome Temp./Hum. -8.2°C 50% Transparency Conditions ..... Fine ..... 352.

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3708	4"			CCD CASS Blue Coll	1800/	250μ 1.2mm L	5890Å	7c;	G=5505	4500 sec AVG 004 7 cols 1.2 mm long slit	
3000	4"			"	"	"	"	8c;	"	5780 - 5975 Å	
							"	1c;			
							~~5890Å~~	2c;	Note Grating got moved from last to 5505		
3881	4"						5890Å	2c;	G=5505		
							"				
							"	3c;		~~5700Å~~	
							5700Å	4c;	G=5380	5500 - 5900 Å	
4071								5c;			
							3950Å	4c;	G=4200	3800 - 4000Å	
3817								6c;	"		
2995								1c;			

353 pg #4

Date 10 Aug 1991 Observers HDG + TJG

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC00815	FLAT						clear	TUNG	60s
816	Comp						clear	FeNe	40s
817	HD197433	20 38.6	+75 14	04 28 35	04 44 40	E			
818	Comp								40s
819	Flat						clear	TUNG	30s
820	Comp						clear	FeNe	~~30~~
821	HD197433	20 38.6	+75 14	05 04	05 19 30	E			
822	Comp						clear	FeNe	60s
823	FLAT						clear	TUNG	50s
824	Comp						clear	FeAr	90s
825	HD197433	20 38.6	+75 14	05 34 16	05 49 25	E			
826	Comp						clear	FeAr	90s
827	FLAT						clear	TUNG	10s
828	Comp						clear	FeAr	90s
829	HD197433	20 38.6	+75 14	06 00	06 08 32	E			

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

Exp Mtr	Seeing
2140	5

Spectr. Temp. ..... Dome Temp./Hum. -9°C 53% Transparency Conditions ..... Fine .....

Focus ..... 6:7 .....

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

pg #4

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD CASS	1800/	250μ	3950Å		G=4200	4-7K 40μ/pixel	
					1800		4340Å	3ci	G=4450	G=4450	
3160	5"	V 7-3-79	G3+K7				"	4ci		CCD T = -101.8°C	
							"		G-4450	4295 — 4445Å	
							"		"	6-10K Adu/pixel	
60 sec					1800/		4120Å		G-4300	4020-4220 A	
3320							"				
										5-9K Adu/pixel	
					1800/	250μ	4860 Å		G-4500	5 ~~9K~~ 4	
3326								2ci			
										MAX 10,766ADU	
					1800/		6730Å		G-6150	6640Å - 6820Å	
2960											

355 pg 5

Date 1991 MAR 11/12 Observers Hdy - T.M

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
830	Comp @ 6730Å						clear	FeAr	90s
831	Flat @ 6730Å			10.7k	ADU/pixel		clear	THG	2.5s
832	BIAS(4) average of 4								

echelle focus tests 0.01 on camera focus micrometer

= 0.6 pixel shift on Thomson CCD (19μ pixels)