Flexure Tests	June 30/July 1	SHS	Echelle	CCD	
	July 18/19/90	" Eds	"	"	
	Aug 8/9/90	Jenison	"	"	E-W & N-S orientation

file names

SP xxxxxx.	Photon counting Reticon
TAG xxxxx.	same, in time tagged mode
CF xxxxx.	CCD on fiber-linked spectrograph
CE xxxxx.	CCD on echelle spectrograph
CC xxxxx.	CCD on Cassegrain spectrograph

bare Reticon files are organized by night, rather than spectrum

3

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 65
Plate Nos 207 - 491
April 1990 - September 1990

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Date 1990 April 23/24 Mon/Tue Observers SAS/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.	Exp. Mtr.
207. MKi	Flat			16:27??			ND 2.0	Tung 1/8	1300	40/2210
208	Comp			20:24				FeA 1/4	200s	5/60
209	Comp @ Hα			21:11				FeA clear	200s	
210	HD 52961	6h 58.1	+10° 55'	21:19	22:22	05h 16w	Reversed +10° 44'			10/250
211	Comp			22:28				FeA clear	200s	10/60
212	HD52961	"	"	22:34	23:00	05h 47w	Reversed			5/100
213	Comp			23:01				FeA Clear	200s	5/60
214	α Leo (Regulus)	1950 10h 07	+12° 01	23:17	00:03	03h 46w	Reversed +12° 03	ND 2.0	2700s	15/200
215	Comp			00:04				FeA clear	200s	10/60
216	HD 109995	1950 12h 36 26	+39° 34' 58"	00:34	01:14	02h 27w	Reversed +39° 18	NO ND	2400	10/10/250
217	Comp			01:15				FeA clear	200s	10/60
218	HD 114762	1900 13h 07.5	+18° 02	01:33	01:43	02h 23w	Reversed +17° 30		600s	15/350
219	Comp			01:44				FeA clear	200s	10/30
220	Flat @ 6560Å			01:55	02:55	02h 28w	"	Tung 1/8	3600s	30/1000
221	Comp			03:10				FeA clear	200s	7/90

Spectr. Temp. ..... Dome Temp./Hum. 11°/.52% Transparency Conditions Cirrus 6

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Fireball in SW @ 19:49

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/2210				PTS Red Coll	1800/ 50°.8	BS	λ=4820		Mki prgm		
5/60											
					1800/ 62.7	BS	λ=6560			changed λ region	
10/250	5"	6 7.92								tagged	
10/60											
5/100	"	"								tagged	
5/60											
15/700	3"									No tag	
10/60											
10/250	3"	7.6							Sp phot std	No tag	
10/60											
15/350	3"	7.31	dF7						St. Rad. Vel	No tag	
10/70											
30/1600	ND	2.0	+0.7								
7/90											

7 Page 2

Date ~~19~~ 1990 April 23/24 Observers SAS/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.
222.Mki	BM Cass	$00^h 48.6$	$+63° 33$	03:16	04:16	$06^h 45$ E			3600^s
223.mki	Comp (tagged)			04:16.5				FeA Clear	200^s
224.mki	Flat			04:39			ND 2.0+02	Tung 1/8	7200^s

Spectr. Te
Focus ....
Spectr. Te

Exp. Mir.
5/80
10/70
30/600

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. Scattered cloud & haze 8

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .. 9°/55% ..

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5/80	4"	v≈ 9		PTS Red Coll	1800/ 62°.7	BS	λ=6560		Hkiprgm	No tag.	
10/70										TAGGED FOR Sc	
30/1600											

9

Date 1990 Apr. 24/25 (Tue/Wed) Observers SAS

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.
225.KK	Flat	platform					No ND.	Tung 1/16	7200s	1200
226.KK	Comp	"						FeNe clear	~90s	250/250
227.KK	HD95689 α UMa	10h57.6	+62°17	21:46	22:00	00:50				250/250
228.KK	Comp			22:02				FeNe clear	200s	250/250
229.KK	Flat			22:18			No ND	Tung 1/16	1200	1200/1200

Spectr. Temp. ..... Dome Temp./Hum. 13°/53 Transparency Conditions. Mostly cloudy 10

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1200				Speckle	1800/ 57°.0	300μ	71=5800Å		KK prgm		
60/250										diff ⊻	
250/250	3"-6"	V Cond 1.79	K0 III a							cloud again (·1 mag.	
250/250											
200/1200											

11

Date 1990 April 25/26 Wed/Thur Observers KK - SAS

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.
230. KK	Comparison							Fe Ne A 1/2	360
231. KK	HD95689 α UMa	10^h 57.6	+62° 17	19:45	20:00				
232. KK	"	"	"	20:01	20:23				
233. KK	"	"	"	20:24	20:43	00^h 22E			
234. KK	"	"	"	20:44	21:10				
235. KK	"	"	"	21:13	21:18				
236. KK	"	"	"	21:27	~21:33				
237. KK	"	"	"	21:37	21:39				
238. KK	Comp			21:53				Fe Ne A 1/4	360s
239. KK	Tungsten							Tungsten A 1/8	7200s

Spectr. Temp. ..... Dome Temp./Hum. 20°/51% 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
170/170				Spectle	830/39°8	300μ	6600Å		KK pcgm	f/18 stop bar no filter	
2100/2100	2"-3	V comb 1.79	KOB2	(10x dis.						12 meg.	
				150 mm						18.5 meg; no check	
2700/2700				tube length						16.0 meg.	
3100				aperture						8.0 meg to drive h. (problem?)	
3500				≈ 0".07)						7.0 meg	
										Power Failure: lost data	
3000										2 meg	
260/260										No stop	
2600/2600											

13 Pg #1 Thu/Fri

Date 1990 April 26/27 Observers SAS/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.
240. KK	Tungsten			15:10				Tung A 1/8	7200
241. KK	Comp			20:02				FeNe V4	360
241. SAS	HD 82582 seeing test α UMa	(2000) 09h 34.3	(2000) +46° 54		19 54	00 30 W		1/15sec	Int x4
242. KK	HD 95689	(1900) 10h 57.6	(1900) +62° 17	20:13	20:33	0h 28 E			
243. KK ✓	"	"	"	20:34	20:59	0h 02 E			
244. KK ✓	"	"	"	21:00	21:24	0h 22 W			
245. KK ✓	"	"	"	21:25	21 47	0h 46 W			
246. KK ✓	"	"	"	21 48	22:01	01h 00 W			
247. KK ✓	"	"	"	22:02	22:13	01h 12 W			
248. KK	Comp							FeNe V4	360
249. KK	Flat	platform		05:23				Tung A 1/8	7200
0	Prompted Flat			22:42					20s
1	Comp			22:43		(Tel E of Pier = Reversed)		Th-Ar	20s
2	Polaris	01h 22.6	+88° 46	22:44	23 14	11 12 W +			
3	Comp							Th Ar	20s

Spectr. Temp. ..... Dome Temp./Hum. 24°/55% Transparency Conditions .. Hazy ..... 14.

Focus .....

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

Exp Mtr A B	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1450/1400				Speckle	1200/47.8	300μ	λ: 6600Å		KK prgm		
160/170											
4 Frames		V 6.39	A5				Light SSW breeze		Dome West	ON MK III	
1000/1300		~~B~~	~~A5~~ K0III							to h: drive 6 meg	
1200		1.79 Kcmb								to e: drive 10 meg	
600		"	"							to e: 6.6 meg	
700/700		"	"							to a: 7.0 adjusted focus	
1000		"	"							to e: 6.4 meg	
1300		"	"							to f: 5 meg	
160											
1400/1450											
		B 2.0		Echelle/ Reticon	17.110	50μ .281	.4377 λ: 5160Å	110	KK prgm	Topped Dewar @ 22.30	2172
											1209
5000		B 2.02	F8V							hazy	1920
600											1142

15 pg #2

Date 1990. APR 26/27.... Observers SAS/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.
4	Polaris	01 22.6	+88 46	23 17	23:48	11 43 W	89°09		
5	Comp			23:49				Th AR	20
~~6~~	~~HD 137909 β CrB~~	~~15 23.7~~	~~+29 27~~						
6	Comp			23:55				Th A	20s
7	HD 137909 β CrB	15h 23.7	+29°27	00:01	01:01	00 24 E			
8	Comp			01:02				Th Ar	20s
9	Comp			01:04				Th Ar	20s
10	HD 124897 α Boo Arcturus	1900 14h 11.1	+19°42	01:07	01:13	01h 08W			
11	Comp			01:13.5				Th-Ar	20s
12	Comp			01:15.5				Th-Ar	20s
13	HD 121370 η Boo	13h 49.9	+18°54	01 18.5	01 42.3	01 52W			
14	Comp							Th A	20s
15	Comp			01 54				Th A	20s
16	HD 121370 η Boo	13 49.9	+18 54	01 57.2	02 50	02 59W			
17	Comp							Th A	20s

Spectr. Temp. ..... Dome Temp./Hum. +21°C 58% Transparency Conditions hazy 16

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5000		B 2.02	F8K	Echelle Refrac	Echelle 1740	50u .281	5160A	110	KK pgm	(X grating .4376 intended)	1804
494											1159
											1205
1513		B 3.93	F0p								695
											1244
											1270
5000		B 1.19	K2III								1598
											1238
											1321
2000		B 3.27	G0							Dewar T = -0.375	600
										Dewar T = -0.554 @ 01 39	
										T = -0.690 @ 01 44	1338
										Top up done 1st @ 01 50 T = -0.850	1301
5000		B 3.27	G0							T = -0.700 at start exp	
										T = -0.440 at 02 13	1582
											1468

17 #3

Date 1990. Apr. 26/27 Observers SAS./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.
18	Comp							TRA	20s
19	HD 15961 α Oph	$17^h 30.3$	$+12° 38$	02:58	0333.4	00 02W			
20	Comp							TRA	20
21	Comp			03:37				TRA	20s
22	HD 182640 δ Aql	19 20.5	02 55	03:41	04:32	$0^h 48E$			
23	Comp			04:33				TRA	20s
	Flats	4 @	17s		2034, 2020, 1998, 1977				
		4 @	14s		1615, 1615, 1613, 1601				
		4 @	6		693, 697, 702, 693				
	Backed up to	Apr 26 90. DAT							

Spectr. Temp. ..... Dome Temp./Hum. 19°/65%. Transparency Conditions . hazy 18

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 18.5°/65%

Exp. Mtr	Seeing	Ptg. Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	~~D.H.~~	Program	Remarks	Quality
				Echelle/ Reticon	17.10	50μ × 0.291	~~0.4977~~ 3=5166Å	110	K.K pigm		1445
5000		B 2.2	A5III							T=+0048 e 0325	1702
											1363
											1371
1800		B 3.48	F0IV								575
											1388

19 pg#1 Fri/Sat

Date 1990 April 27/28 Observers SAS/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
250.KK	Comp			20:07			with F18 Stop	FeNe clear	360s
242.SAS ~~[illegible]~~	HD82582 Seeing test	(2000) 09h34.3	(2000) 46°54	19:55	4 frames 31x31 int x4				
251.KK	HD95689 αUMa	(1900) 10h57.6	+62°17	20:17	20:48	00h09E			
252.KK	"	"	"	20:51	21:10	00h13W			
253.KK	"	"	"	21:11	21:28	00h31W	+61 51		
254.KK	"	"	"	21 29		W			
255.KK	"	"	"	21:43	21 57	01 00W			
256.KK	"	"	"	21:58	22 06	01h09W			
257.KK	Comp			22:07			with F18 Stop	FeNe clear	360s
258.KK	Flat	platform					"	TUNG A-1/8	
0	Prompted Flat			22:24					20s
1	Comp			22:31				Th-Ar	20s
2	HD88990	01h22.6	+88°46	22:39	23 18	11 19 W			
3	Comp							Th Ar	20

pectr. Temp. ..... Dome Temp./Hum. 22°/45% Transparency Conditions .. hazy 20

ocus .....

pectr. Temp. ..... Dome Temp./Hum. .....

Dome opened & Fans on by ~~19EST~~ 1915

xp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
A/B 250				Speckle	1200/ 47.2	3.9μ	λ=6600Å		KK prgm	Topped up 19:00	
Dome west, light SSW breeze [on spectrofiber bed]										on MK III	
700										10 meg	
1400										Refocused 11meg	
1300										9meg	
1500										6.8Pog	
1600										10 meg.	
1700										6 meg	
250										} with filter holder UP	
1400	F. Her TRAY in place as it was for comps.									but empty.	
				Echelle/ Reticon	17.10	Scum 0.29"	x .4376 Δ 5160Å	110	KK prgm	topped up -0.228	2487
											1348
3000		B 2.02	F8I							Offset -00 17m	3124
134											1418

21 pg #2

Date 1990 April 27/28 Observers SAS/JR

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.
4	HD 8890 Polaris	01h 22.6	88°46	≈ 23:20	23 50	11 50 W			
5	Comp			23:51				ThA	20s
6	Comp			23:56				ThA	20s
7	HD137909 βCrB	15 23.7	29° 27	23:59	00:59				
8	Comp			01:00				ThA	20s
9	Comp			01:02.5				ThA	20s
10	HD124897 α Boo	14h 11.1	19°42	01:05.5	01:12	01 03 W			
11	Comp			01:12					
12	Comp			01 19				ThA	20
13	HD121370 η Boo	13h 49.9	+18°54	01 25	02 22	2 35 W			
14	Comp							ThA	20
15	Comp			0226				ThA	20
16	HD15961 20 Oph	17 30.3	+12 38	02 32	03 09	0h 18 E			
17	Comp			03:10				ThA	20
	Flats	4 @ 26s	3188, 3163, 3137, 3120		4@ 20s 2387, 2369, 2351, 2356				

Spectr. Te
Focus....
Spectr. Te

Exp Mtr.
5100
1051
2037
1381
500
4@ 14

Spectr. Temp. ..... Dome Temp./Hum. 21°/48% Transparency Conditions hazy 22

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 18°/55% cloud @ 3h

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2100		B 2.02	F8I	Echelle/ Reticon	17.10	50μ 0.251	x A376 D 5708	110	KK Orion		2490
											1230
											1153
1051		B 3.93	F0p								873
											1221
											1231
2037		V -0.04	K1 III								1705
										topped up T=+0.008	1215
											1238
1381		B 3.27	G0								1077
											1208
											1172
1500		B 2.2	A5 III							some cloud	1143
											1203
4@ 14s 1647, 1638, 1636, 1645 / 4@ 8s 943, 939, 945, 942											

23

Date 1990 Apr. 28/29 (Sat/Sun) Observers SAS/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.
259.KK	Comp						with f/18 stop	FeNe clear	360s
260.KK	HD 124897 α 1300	14h 11.1	19° 42	23 37 40	23 46 50	00 18 E			
261.KK	"	"	"	23:59	00:15	00 10 W			
262.KK	"	"	"	00:16	00:29	00 24 W			
263.KK	"	"	"	00:30	00:41	00 36 W			
264.KK	"	"	"	00 42 45	00:55	00 51 W			
265.KK	Comp						With f/18 Stop	FeNe clear	360s
FH000243.Tn	HD 128718 Seeing test	14h 36.9	42° 50	≈ 0 1 15	4 frames	00 42 W int x 4	(39x39)		
266.KK	Flat			01:22			with f/18 stop	Tung A 1/8	7200s
	APR 29/30	SAS-Tn	- Turned out cloudy after all,						
267.KK	Flat			20 29 18		0 0	With Filter stop	Tung H=1/8	7200

Spectr. Temp. ..... Dome Temp./Hum. 20°/57% Transparency Conditions Hazy - part cloudy 24

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 17.6°C 55% Dome opened, Fans on by 23 EST

2 Tours earlier - no observing -

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
12/200				Speckle	1200/ 47.8	300μ	6600 Å		KK pgm 1		
200→1000		V -0.04	K1 III						std vel calibration	2.48 mag Cloud by 23 50	
80→3000	visible									cints to 3000 10 mag	
1600-3200										Less haze 10 mag	
										8 mag	
300-3000										VER cloud/hazy clear	9.5 mag
200											
		V 6.7	F2	Speckle fiber head					Light SSE breeze	Dome West/Hazy	
1500											
1500				Speckle	1200/478	300μ	6600 Å		Optical "blip" in B̄C 22 EST near LHS plot	ON DE	

25

Flat noted on previous page

Date 1990 Apr. 29/30 Sun/Mon Observers TM/SAS

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.
268. KK	Comp			23:42			With F/18 stop	FeNe Clock	360s	1/8 200
269. KK	HD124897 α Boo	14h 11.1	19° 42	23:51	00:10	00 08 w				1400
270. KK	"	"	"	00:10.5	00:31	00 29 w				1400
271. KK	"	"	"	00:31.5	00:48	00 47 w				1200
272. KK	Comp			00:50			F/18 stop	FeNe Clock	360s	200
273. KK	Flat	platform		01:31.5			"	Tung A 1/8	7200s	1500

Spectr. Temp. ..... Dome Temp./Hum. 17°/.59%. Transparency Conditions. Hazy, cloud 26

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 15°/.66%.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
N/B 220				Spectle	1200/ 47.8	300μ	Tl: 4600		KK pgm		
1400		V 004	KIII							10 neg on E:	
1400		"	"							12.5 on E	
1200		"	"							7 on E.	
220											
1500											

27

Date 1990 April/May 30/1 (Mon/Tue) Observers SAS/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.
0	Prompted Flat			20 04					
1	Comp							Th-A	20s
2	α Aur Capella	1990.5 05h 16.0	+45° 59	20:08	20:11	05 12 W			
3	Comp							Th-A	20
4	α Aur Capella	"	"	20 13	20:20	05 21 W			
5	Comp			20:22				Th-A	20s
~~6~~	~~HD47105 γ Gem~~	~~06h 31.9~~	~~+16° 29~~						
6	Comp							ThA	20s
7	HD47105 γ Gem	(1900) 06h 31.9	+16° 29	20:29	20:58	04 39 W			
8	Comp			20:58.5				ThA	20s
9	Comp			21:06				ThA	20s
10	HD76644 i UMa	08h 52.4	+48° 24	21:08	21:59	03 18 W			
11	Comp			21:59.5				ThA	20s
12	Comp							ThA	20s
13	HD 8890 Polaris	01h 22.6	+88° 46	22:08	22:19	10h 29 W			

Spectr. Temp. ..... Dome Temp./Hum. 17°/65% Transparency Conditions 5% Hazy 28

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ Reticon	17.10	50μ ·281	λ ·4377 λ 5130Å	110	KK pigm	Dewar tilt 3°.2	2069
2200		V 0.08	G6 III+ G2 III								567
											1125
5200		"	"							(I bumped intbitm) Dewar was bumped	1445
											1130
											—
											1125
2800		B 1.9	A0 IV								898
											1130
											1040
2500		B 3.32	A5								641
											1060
											1186
572		B 2.02	F8 V							Cloud	223

P2: 29

Date 1990 Apr/May 30/1 Observers SAS/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.
14	Comp			22:20				Th-A	20^s
15->	Flats	4@ 13^s	1491,	1491, 1492,	1507				
	Flats	4@ 6^s	670, 668,	678,	678				

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ...Cloudy..... 30

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 15°/71%.

Exp. Mtr.	Seeing	Ptg. Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											1240

31

Date 1990 May 1/2 Tue/Wed Observers Tn/SAS

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.
0	Prompted Flat						Filter in for all exposures	λ_c=5104 Filter	20s
1	Comp			19:51					20s
2	α Leo Regulus	1990.5 10 07.5	12 01	19:55	20:05	00 18W		λc 5104 Filter	
3	Comp			20:06				Th A	20s
4	α Leo Regulus HD 87901	10 03 03 (1900)	+12 27	20:07	20:47	01h 00 W		Filter	
5	Comp			20:48				Th-A	20s
6	Comp			20:49				Th A	50s
7	HD 87901 α Leo	"	"	20:50	21:35	01 49 W			
8	Comp			21:36				Th A	50s
9	Comp			22:2054				Th A	40s
10	HD 87901 α Leo	"	"	22:2422	23:14.5	03h 29 W			
11	Comp			23:16				Th A	40s
12	Comp			23:22				Th A	40s
13	HD 137909 βCrB	15h 237	+29 27	23.27	00 25 35	E			
14	Comp							Th A	40s

Spectr. Temp. ..... Dome Temp./Hum. 12°/45% Transparency Conditions Clear, some cirrus 32 windy

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ Reticon	17.90	80μ 0.281	X: 0.4411 λ: 5104Å	111	KK pgm	Dewar filled @ 19:30	12.97 T=2096
											407
1100	bad	V 1.35	B7V							4pt pattern Not completely dark	251
											396
5000	bad	"	"							bad 4pt pattern	966
											401
		"	"								892
5000		"	"							Discovered saddle bag heaters were not plugged in	830
										Plugged in heater.	1070
										Dewar topped check @ ground [OK]	867
5000	poor	V 1.35	B7V							part cloudy (No significant 4pt)	818
											847
											840
998	poor	B 3.93	F0p						(looks OK)	Dew on T = +0.137 Clear now	220
1100											849

33 #2

Date 1990 MAY 1 1 2 Observers TB / SAS

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.
15	HD137909 β CrBor	15 23.7		00 28	01:28	$0^h 24$ W			
16	Comp			01:30				Th AR	40
17	Comp			01:40				Th A	40^s
18	HD 8890 Polaris	$01^h 22.6$	+88° 46	01:41.5	02:41	$09^h 25$ E			
19	Comp			02:42				Th A	40^s
20	HD 8890 Polaris	$01^h 22.6$	88° 46	02:43	03:43	$08^h 25$E			
21	Comp			03:44				Th A	40^s
	Flats	4@ 19^s	937, 929, 924,		920				
		4@ 10^s	482,	481, 478,	481				
	backed up	MAY0190.DAT							

Spectr. Temp. ..... Dome Temp./Hum. 45.2°C 50% Transparency Conditions. CLEAR 34

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 4°/55% spectral Comet Austin as early as 02 30 EST

Exp. Mtr.	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1147		B 3.43	F0p	Echelle Refractor	17.90	52μ .281	X=.4911 λ 5104.9	111	44 pgm		224
											805
											814
3450		B 2.02	F8V								767
											807
3600		"	"								769
											823

35

Date 1990 May 2/3 Wed/Thur ..... Observers SAS .....

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.
274. MKi	Comp			20:37				FeA 1/4	200s
275. MKi	MWC 560	07h 21m 01s	-07° 32' 12"	20:49	21:08	04h 04w			
276	Comp			~21:09				FeA 1/4	200s
277	Comp at new λ			21:27				FeA clear	200
278	HD 52961	06h 58.1	+10° 55'	21:36	21:51				
279	"	"	"	21:53	22:10				
280	Comp			22:12				FeA clear	200s
281	HD 109995	1950 12h 36m 26s	+39° 34' 58"	22:45	23:26	01h 11w			240s
282	Comp @ 6530			23:27				FeA clear	200s
283	Comp @ 4820			23:36				FeA 1/4	200s
284	HD 109995	1900 12 34 00	+39 51	23:40	00:10	01h 56w			180s
285	Comp			~00:11				FeA 1/4	200s
286	HD 144579	16h 01.5	39° 24	00:24	00:34	01 07 E			
FH000244 SAS	Seeing Test HD 144579	"	"		39x39	4 frames	unf x4		
287	Comp			00:43				FeA 1/4	200s

Spectr. Temp. ..... Dome Temp./Hum. 7°/44% Transparency Conditions .. Scattered Cloud 36

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 5°/46% 1st quarter moon

Exp. Mtr	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60/7				PTS	1800/ 50.8	BS	λ = 4820		Mki pgm	Note A channel is the higher	
30/10										No tag	
60/2											
					1800/ 62.7	BS	true λ_c = 6530			changed λ region	
80/15		V 7.40								tagged	
50/15										refocused	
90/20	4"	V 7.6							Sp. pluck stö	some cloud	
50/15										forgot header	
80/10					1800/ 50.8	BS	λ = 4820		"	Changed λ region	
~~80~~/30	3-4"	V 7.6								cleaning	
80/10		~~V 6.66~~	~~G8~~								
900/60	3-4"	V 6.66	G8						Stand Vel		
80/10											

37 P2

Date 1990 May 2/3 Observers SAS

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.
288. Mki	Flat			00:59	02:59		ND 2.0	Tung 1/8	
289	Flat			03:05			ND 2.0	Tung 1/8	
	MAY 4/5/90	Tests TN							
290. TN	Flat			20 35	21 35		ND 2.0	Tung 1/8	360
291. TN	Flat			22 42			"	"	360
292. TN	Flat			0025			"	"	300

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
1700/80				PTS	1800/ 50.8	BS	λ=4820				
1700/180					1800/62.7 ~~65.8~~	BS	λ=6530				
A B	Before Newtonian Rotation, Signal was on A=1700, B=180 as on previous Exp.										
45 1880				FTS	1800/62.7	BS	λ6530			After Newtonian Rotation	
1880 35				"	"	"	"			Rotation to max in "A"	
40 1900				"	1800/63	"	λ4320			Newtonian Rotation to "B"	

39 SAT-SUN

Date 1990 MAY 5/6 Observers 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.
FIT00293mki	Comp	1950		23 38			Diff IN	Fe AR CLEAR	200
294.mki	HD 109995	12 36 26	+39 34 58	23 49	001755	0219 W	+39 26		
295.mki	Comp	1900						Fe AR CLEAR	200
245.TN	HD109995	12 34 00	+39 51 00	00 37		0238 W	+39 26	Int x4	1/15sec
FIT00296mki	Flat			01 25		0 0	platform	TUNG A 1/8	720
	MAY 6/7/90 Sun-Mon - Cloudy after all								
Fit00297mki	TUNG (Flat)					0 0	platform	TUNG H 1/8	7200

Spectr. Temp. ..... Dome Temp./Hum. +9°C ....63% Transparency Conditions . PART. Cloudy 40

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +8°C 74%

2 medium Tours. Looked at moon

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
15	70				PCS Red Cell	1800/62.7	BS	6530Å				
10	260	5"	V 7.58	FHB A	"	"	"	"		M.K. pgm	Cont only to 300 in clear sky Sp Phot Std	
10	70											
39x39 pixels			V 7.58		Dome west, sl hazy, light west breeze					Fans turned on @ 00 EST. cloudy in		
30	1800	ND 2.0				1800/27	BS	6530Å				
						Backed up APRIL THROUGH FIT 00296.MKI on 3½ Floppy Tape						
A	B											
40	1900	ND 2.0			PCS Red Cell	1800/50.8	BS	4820Å			forgot Header stuff	

4 pg #1 Tues- Wed

Date 1990 MAY 8/9 ..... Observers J.n./M.Ki. .....

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.
FIT00298.mki	Flat			19 34	20 12			TUNG A=1/8	-
299	Comp			20 16				FeAR A=clear	200
FM 246.TN	seeing Test HD103095	11 472	1900 +38 26	20 24		00 38 E	+37 50	Int x 4	
FIT00300.mki	HD103095	11 4702	+38 26	20 2625	20 4510	0018E			
301.mki	Comp							FeAR clear	200
302.mki	Flat			21 29	22 54			TUNG A 1/8	
303	Comp			22 56				FeAR A clear	200
304	HD161817	17 4246	1900 +25 46 49	23 0234	23 41	03 16 E	From DRUM +25 48		
305	Comp			23 42				FeAR clear	200
306	HD144579	16 01.5	+39 24	23 49 22	00 07		+		
FM 247.TN	seeing test	"	"	00 10			4 Frames	~~4x Int~~	20
307	Comp								
FM 248	HD144579	seeing Test (Repeat)		00 16		00 59E	4 Frames		
308	HD171232	18 2830	+25 25	00 22 50	00 51	02 52E	+25 30		
FM 249.TN	Seeing test HD171232			00 53		02 50 E	4 Frames		

Spectr. Temp. ..... Dome Temp./Hum. +15°C ... 75% Transparency Conditions PART Cloudy 42

Focus .....

Gusty SSW wind V warm

Spectr. Temp. ..... Dome Temp./Hum. ..... Dome & Fans on only by 20 EST, due to Flat Running

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30	1900	ND = 2.0			PCS Red Coll	* 1800/62.7	BS	* 6580			Slight λ change for same angle	
8	70	No ND, Diffuser IN as usual										
4 Frames 31×31 pixels		Dome facing SSE					Fiber Head, (clear hole in cloud)				V Gusty SW wind Seeing test Dome T +18°C now	
20	500	V 6.45	6.45	G8 V p						std vel	cut only to 800 in clear sky	
30	1950	ND	2.0		PCS Red Coll	1800/62.7	BS	6580 A			while cloudy	
10	75										Fans on, Dome opening again	
15	400	5" poor	V 6.99	FHB A						Sp plot std	VERY gusty ∴ poor tracking	
15	65											
20	800	* 5"	V 6.66	G8						std vel	* But Telescope bobbing in wind	
31×31 pixels		"		"	Note Int × 0. PCS Red Coll	1800/62.7	1/60 sec by mistake BS	6580 A		Sky V clear	still s/windy but not so bad	
10	65											
31×31			V 6.5	G8	Int × 4 = 1/5 sec						gentle SW wind now	
10	300	5"	V 7.73	G8 III						std vel	Then cloud	
											light SW breeze now	

43 #2

Date 1990 MAY 8/9 Observers J.n./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.
FIT00309.MKi	Comp							FOAR CLEAR	200
~~310, MKi~~	~~Flat~~					0 0	platform	TUNG A 1/8	T200

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..Cloudy..Haze..... 44

Focus .....

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

Exp. Mtr. A B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RCS Red Coll	1800/627	0.5	6580Å				

45

Date 1990 May 11/12 Fri/Sat Observers SAS/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.
	Hartmann tests 1990.5 coord								
AC (1)	Regulus	10 07.9	+12 01			02h 00 W			
AD (2)	"								
AE (3)	β Gem	07 44.8	+28 03			04h 33 W			
AF (4)	α UMa	11 03.2	+61° 48		21:25	01h 22 W			
AG (5)	η UMa	13 47.1	+49° 22		21:45	01h 00 E			
AH (6)	α Cub	15 34.3	+26° 45		21:56	02h 36 E			
AI (7)	α Oph	17 34.6	+12° 34		22:13	04h 20 E			
AJ (8)	ε Boo	14 44.5	27 07		~22:25	~1h 18 E			
AK (9)	α Cep	21 18.3	62° 32		22:46	07h 30 E			
00310.MKi	Comp			23:43				FeA clear	200s
311	HD 109995	12h 36 26 (1950)	39° 34' 58	00:06	00:37	03h 00 W			
FM00025[illegible].SAS	HD 109995	"	"	00:39		1nt x 4	31 x 31	4 frames.	
312	Comp			00:45				FeA Clear	200s
313	Comp			01:34				FeA Clear	200s

Spectr. Temp. ..... Dome Temp./Hum. 9°/55% Transparency Conditions ... Clear 66

Focus .....

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

Exp. Mtr.	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		V							KK	Spectrum Analysis Type 1 film	
		1.35								Trail on? 10, 20, 30, 40 sec	
										10 20, 30 40	
		1.14								10, 20, 30, 40	sl wk
		1.79								10, 20, 30, 40	wk
		1.86								10, 20, 30, 40	sm
		2.2								10, 20, 40, 60	
		2.08								10, 20, 30, ~~60~~ 40	
		2.37								10, 20, 40, 60	
		2.44								10, 20, 40, 60	
5/70				PTS	1800/ 62.7	BS	λ=6580		Mki pgm		
10/170	4-5"	V 2.58							Sp Phot Std		
										Seeing test	
5/60											
5/60											

47

Date 1990 May 11/12 Observers SAS/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.
314. Mki	VW Cep HD 197433	$20^h 38^m 46^s$	+75° 14'.3	01:39					
315	Comp			02:08				Fell Clear	200^s
316	Pu Vul	1987 $20^h 20^m 39^s$	+21° 31'.8	02:13	02:50	$2^h 28$ E			
317	Comp			02:51				Fell Clear	200^s
318	HD 171232	18^h 28.5	+25 25	03:01	03:21	$00^h 09$ E			1200^s
319	Comp			03:22				Fell Clear	200^s
320	BM Cass	60 48.6	63° 33	03:37	03:57				1200^s
321	Comp			03:59				Fell Clear	200^s
322	Flat	platform		04:17			ND 2.0	Tung 1/8	10800^s

Spectr. Temp. ..... Dome Temp./Hum. 5°/57% Transparency Conditions Clear 48

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5/40		8.2		PCS Red Coll	1200/ 62.7	BS	λ: 6550 Å		Mk. Prism		
5/60											
15/220	3-4"	~9.5							"	Fld drawn in book	
~~10/500~~											
10/500	3"	~7.73	G8III						St Rad Vel		
7/60											
5/90	3-4"	V~9									
7/60		~~V~~									
25/1900											

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Date 1990 May 13/14 Sun/Mon Observers SAS / 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.
323. MKi	Comp			20:29				FeA Clear	200s
324	HD52961	6h 58.1	+10° 55'	20:35	20:45		"Reversed" 10° 45'		600s
325	"	"	"	20:45	21:39	5h 45 W			
326	Comp			21:40				FeA Clear	200s
327	HD 109995	(1950) 12h 36m 26s	+39° 34' 58"	22:02.5	22:32.5	01h 03 W			
328	Comp							FeA Clear	200s
329	HD 87901 α Leo	(1900) 10h 03m 03s	+12° 27	22:53	23:23	04h 25 W	Reversed 12° 07'	ND 2.0	
330	Comp			23:24				FeA Clear	200s
331	HD 114762	13h 07.5	+18° 02	23:44	23:51	01h 48 W		No N.D.	400s
332	Comp							FeA Clear	200s
333	HD 174638 βLyr	18 46 23	+33 15	00:13	01:13:10	02h 26m E.		N.D. 0.6	3600s
334	HD 174638 βLyr.	" "	"	01:16	02:16	01h 24 E		ND 0.6	3600s
335	Comp			02:17				FeA Clear	200s
336	BM Cass	00h 48.6	+63 33	02:35	03:06	06h 38 E		No N.D.	
337	Comp			03:07	03:11			FeA clear	200s

Spectr. Temp. ..... Dome Temp./Hum. 10°/71% Transparency Conditions Some Cirrus 50

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5/60				PTS Radcoll	1800/ 62°.7	BS	n=6580		Hki pigm		
10/200		V 7.40								Sky still slightly bright	
10/ 200→50		"									
7/50											
10/250		V 7.58							Sp. Phot Std	Refocussed. (2712)	
10/60											
15/500		V 1.36	B7V							N.D. filter 2.0	
7/60											
10/500		V 7.31	dF7						St Rad.Vel		
10/65											
30/2500	3-4"	V 3.4	Bpe							Tagged. to D	
35/2000	3-5"	"	"							Tagged to H.	
10/70											
10/100		VV 9									

P251

Date 1990 May 13/14 Observers SAS/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.
338 Mki	HD 5679	1990.5 01^h01^m26	$+81°49.5$	03:18	03:57	05^h56E			
339	Comp			03:57.5				FeA Clear	200s
340	Flat	platform					ND 2.0	Tung 1/8	
FIT00341.fts apparently done next evening. In Notes Nov 96									
	MAY 18/19 Cass Photographic focus test								
50711 F	Focus Test (400 secs comp/200 stellar)			03 50	00 04	2 27W	+19	FeNe Clear	400s 200s
50711 will be next stellar exp #									

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. Clear 52

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 08/73°/.....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/250		~ 6.5		PTS Red Coll	1800/ 62°7	BS	7n=6580		Mkr fogm	need finder field, unsure if we got the right star Fld down in book	
10/70										Checked fld - OK	
30/1900										Made finder - 815	
Do filter before xpose meter. ("B" normally in for Blue work)											
CBS Photographic											
5300					G 5430		IIaO*		Temp 51°F	* not evacuated, but cold	Center
3385		(Diffuser OUT)		Blue Coll	1200/5015	BS	Blue	#1	Set 388		vs Red
										Note Comp exp s/weak	
					Total Comp (Fe Ne) full aperture should be ≈ 200 secs in this setup (with evacuated IIaO)						
										Serveneely mottled upon drying next day.	

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Date 1990 May 21/22 (Mon/Tue) Observers TM/SAS

8th 68° Emulsion Batches: IIaO-e 118 17 May 90

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
50711	HD 99028 (LED)	11h 18.7	+11° 5'	20:19	20:36	Actual 0 55W ~~(0h 47 W)~~ (encoder)	+10 37	FeNe Clear	100 100
50712	HD 103095	11 47.2	+38 26	20 59	21 38	01 29 W	+37 52	FeNe Clear	60 60
50712T	Spot Calib for 50711		-17		15min @ 15V	D4 3900	D3 4300	D2 4810	
50713	HD 137909 (PCrB)	15 23.7	+29 27	22 07	22:24	01 25E	+29° 13	FeNe Clear	100 100
50713F	Focus test					0 0		FeNe Clear	400 200
50714	HD 137909 (PCrB)	15 23.7	+29° 27	23:41	00 05	00 18 W		FeNe Clear	100 100
50715	HD 122742	13 58.6	+11 16	00 15	02 34	04 13 W	+10 54	FeNe Clear	70 70
50716	HD 165908	18 03.2	+30 33	02 41	03 30	01 03W	+30 38	FeNe Clear	70 70
50717	HD 186791	19h 41.5	+10° 22	03 46	04 01	00 04E		FeNe Clear	100 100

Spectr. Temp. 53°F Dome Temp./Hum. 11°/75% Transparency Conditions Clear! to part. cloudy. 54

Focus Set 388 for 1200/508, Set 391 for 830/40.2

Spectr. Temp. 47°F Dome Temp./Hum. 16°C/83%

Exp. Mtr. B filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
11 000	3"	B 4.34	F2IV	CASS Phot. Plates (BC)	1200/ 50°.8	BS	IIaO-e	1	Asm/Sp KK prgm	1166 FeNe cats NO DIFFUSER 1220	ok
1500	3"	7.20	G8II	"	830/40.2	BS	IIaO-e	1	KK pgm	Gosen FeNe - 727 cats some cloud Fld Drown *	weak
							IIaOE			very cloudy from NE	
780 4900	3	3.93	Fop	BC	1200/508.	BS	IIaO-e	1	KK pgm	Set 388 [@ 2215 Cloud again]	v weak
5,700				"	"	"	IIaO	1	IIaO from FeB/14	batch from frig	right on
11 650 2300	3"	3.93	Fop	"	"	"	IIaO-e	1	KK pgm	100 = 1187 exp water	ok
2170 5900	3"	6.8	G8V	"	"	"	"	1	"	Hazy RA on circle 14 03.2	slwk
5900		5.5	F7V	"	"	"	"	1	"	70 = 875 counts	ok
9000		B 4.24	K3III	"	"	"	IIaO-e	1	Std. Vel		ok

All FeNe comps: slweak (give 50% more)

* I remember this as an isolated star, brightest in field.

Note MAY 25. SAME Fld noted But H0103095 is very predominant.

55 Thurs - Fri Pg #1

Date 1990 MAY 24/25 Observers Fds - Tn - Dif

Echelle Reticon

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
0	Prompted Flat	while moving telescope						TUNG	20s	
1	Comp							ThAr clear	10s	381
2	Comp							"	10s	392
3	HD 147394 TWHER	16 16.7	+46 33	20 38	21 31	E	+46 23			4000
4	Comp							ThAR	10s	500
5	HD 147394	16 16.7	+46 33	21 36	22 15	E				3990
6	Comp							ThA	10s	
7	HD 147394	16 16.7	+46 33	22 22.3	23 05	E				4030
8	Comp							ThA	10s	530
9	HD 147394	16 16.7	+46 33	23 11.5	23 53.8	0033 E				4000
10	Comp								10s	
11	Comp							ThA	10s	
12	HD 147394 Then	16 16.7	+46 33	00 04	00 35					4000
13	comp							ThAR	10s	
14	HD 147394	"	"	00 37	01 13		+46 24			4000

Spectr. Temp. ..... Dome Temp./Hum. +13°C ..... 60.8% Transparency Conditions Part. Cloudy 56

Focus .....

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

Dewar Tilt +3.0

Exp. Mtr.	Seeing	Ptg Mag	Sp.	Inst Echelle P.H	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality 4DCU
				17.60	600, 4922	.271 754	4922		x grating 4567		2659
381						Set .271					381
392						Set .261 100μ				Slit width changed to 100μ	
4000	Fine	6 3.74	B5 IV			Set .261 100μ			Fds - pgm		1367
500											385
3990	Fine	3.74	B5 IV							T = +0.096, OK	1265
											403
4030	Fine	3.74	B5 IV								1331
530											390
4000	8 50 50	3.74	B5 IV							Dome North now. It was East for prev exp	1055
										Topup after @ 2357	404
										T = +0.096	392
4000	OK	3.74	B5 IV							Dome NW	1210
											382
4000	OK	3.74	B5 IV							Dome West ↓	1275

57 pg#2

Date 1990 MAY 24/25 Observers Tn Fds

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.
15	Comp							THAR	10s
16	HD 147394	16 16.7	+46 33	01 17	01 54	1 28W			
17	Comp							THAR	10s
18	HD 147394	16 16.7	+46 33	01 56.5	02 38.5	2 12 W			
19	Comp							THAR	10s
20	HD 147394	16 16.7	+46 33	02 44	03 34.5	3 08 W			
21	Comp							THAR	10s
	Flats x 4			1275, 1260, 1264, 1258				TUNG	9s

Spectr. Te
Focus....
Spectr. Te
Exp. Mtr.
4000
537
4158
4230
582

Spectr. Temp. ..... Dome Temp./Hum. +11.5°C 79% Transparency Conditions ... Fine 58

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... no wind at all all night

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Echelle Tilt	Grating/ Tilt	Slit	~~Emulsion~~ D	P.H. ORDER	Program	Remarks	Quality
						100μ	4922Å				392
≈4000		B 3.74	B5IV						Fds pgm	T = +0.097	1142
537											379
4158		B 3.74	B5IV						Fds pgm	T = +0.096	1203
											285
4230		B= 3.74	B5IV						Fds pgm	T = +0.083	1238
582											422
									backed up & sent to Vela (Fds)		

59 Fri-SAT Pif = JAMES DiFRANCESCO 8" 680 Emulsion Batches: IIa-O-e 118 MAY23

Date 1990 MAY 25/26 Observers T.A. - P.I.F.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
50718	HD 137909	15 23.7	+29 27	20 41	~~20~~ 21 ~~4~~ 06	2 22 E		FeNe Clear	130 130
50719	HD 8890	01 22.6	+88 46	21 31	22 11	11 58 W	West SIDE +88 11	"	130 130
50719T	Spot Calib for	50718-24			15 min	15V D4 3900	D3 4300 D2 4810		
50720	HD 8890	01 22.6	+88 46	22 18	22 28	11 45 E		FeNe Clear	130 130
50721	HD 165908	18 03.2	+30 33	22 47	00 06	02 05 E	+30 37	FeNe Clear	130 130
50722	HD 196524	20 32.9	+14 15	00 21	01 15	03 26 E	+14 36	"	130 130
50723	HD 209790	22 00.9	+64 08	01 27	02 53	03 15 E	+64 36	"	80 80 80
50724	HD 186791	19 46	+10 22	03 09	03 52	00 04 W	+10 31	"	130 130
50724F	Focus Test	SAT Night	MAY 26/27			0 0	+43°	FeNe Clear	300 200
Fmoo 255 BS	Whirlpool galaxy (SOUTH end)				≈01 EST				
Fmoo 257 TN	HD 153399	16 57.3	+43 41		01 12	00 20 W	+43 43	"N" mode	INT ×4
	2 Rey Sat Night To ARS, earlier with				Sloan = Shelton		M3 viewed very good		

Spectr. Te
Focus...
Spectr. Te

Exp. Mtr.
13000
10,600
1,600
8600
8940
3045 4:0
7950
3446 5600
16 stones
31 x 31

Spectr. Temp. 63°F Dome Temp./Hum. +17°C 48.5% Transparency Conditions Hazy - cloudy 60

Focus 388

Spectr. Temp. 57°F Dome Temp./Hum. +12°C 66%

D.F. OUT FOR FeNe Comps

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
12000	OK	3.93	F0p	CCD Ad-sepc BC	1200/508	BS	IIaO-e	1	Asn Sp KK	FeNe comp 130 secs = 1200 cts	Fine
10,600		B 0.02	F8V	"	"	"	"	1	"	cloudy	Fine OK
											"
11,600	so so	B 2.02	F8V	BC	1200/508	BS	"	1	Asn Sp KK	cloudy	Fine OK
8600	OK	B 5.5	F7V	"	"	"	"	1	"	very cloudy	OK
8940	OK	V 3.78	F5IV	"	"	"	"	1	"	cloudy	S/w K
3045 4100	so so	B 4.63	A3m	"	"	"	"	1	"	secondary well sep from primary, Δsep = 7.6" very cloudy	S/w K
7950	OK	B 4.24	K3III	"	"	"	"	1	Std vel	v hazy Set 386 T = 58°F	OK
3446 5600	D. Fraser OUT			BC	1200/508	BS	IIaO	1	Set 388 T = +63°F		Red contaminated
16 frames	OK	Sloan experiment with guide CCDs filters in beam. [Fans on since Tour end ≈ 2300 EST]									
31 x 31	OK	V 7.6	G5IV	Dome West,	120μ	no dexter		(1st 4 s/str) (2nd 4 with less gain			
									No wind at all, medium Aurora		

61

sun mon

Date 1990 MAY 27/28. Observers Tn ..... KK. on 24" ...

8m 680 Emulsion Batches: II a.O.-e. I.I.8 ... MAY 23

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FM000 258TN	HD 113811	13 01.2	+40 08	~20 40		0017E	+39 26	"V" mode	INT x 8*
~~50725~~	~~HD103095~~ **	~~11 47.2~~	~~+38 26~~	21 07	22 52	03 04 W	+37 51	FeNe arc	80* 80
259TN	HD 135891	15 12.5	+37 26		2303	0008E	+3709	"N" mode	Int x4
260TN	HD 136028	15 13.3	-00 06		23 20	0005W	-00 24	"N" mode	Int x4

** Unfortunately, grating cover & corr cover left on. ∴ ~~discarded~~ I hate plates ~~now~~ now Tn

In case I'm wrong, I put it with other undev plates, Tn

I'm not, it's blank MAY 28

MAKE next plate # 50725

Spectr. Temp. +63°f Dome Temp./Hum. 17°C 60% Transparency Conditions FINE - slhazy 62

Focus 3.86

Spectr. Temp. 160°f Dome Temp./Hum. 15°C 60%

Dome opened & Fans on by 1950
Logtemp "started at begin of night

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
23x23 B filter	OK	V 7.31	K5 III	4 Frames		120μ	Dome West		Seeing test	* Pole (Int in Real time this time)	
3000 3000	SOSO	B 7.20	G8 III	BC	G=5430 1200/508	BS	IIaO-e	1	Atm Sp-KK	* 80 sec Pole (no Difference) = 840 cm⁻¹	
31x31 photo		V 7.01	F8 V	4 Frames	Dome	120μ S W, no wind			Field of HD 103095 checks with one chron		MAY 21
31x31		V 6.09	g K5	4 Frames	Dome	120μ South	no wind		Seeing test for low dec meridian	(no comparison noted in BS cat)	

W 63 Tues-Wed

Date 1990 MAY 29/30 Observers D.I.F./J.T.

Emulsion Batches: Kodak I.I.8 MAY 23 / Kodak 2.H.9 MAY 26 25hrs

5m 68°

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Fmoog 261.TN	Seeing Test HD 113811	13 01.2	+40 08		20 46	00 08 E	+39 25	1/15 Int sec	Int x4
50725	HD103095	11 47.2	+38 26	21 00	23 33	03 53 W	+37 49	FeNe Clear	80 80 80
50726	HD122742	13 58.6	+11 16	23 44	02 01	04 11 W	+10 52	"	80 80 80
50726T	Spot Calⁿ for 50725-27.				15 min @ 15V	D4 3900	D3 4300	D2 4810	
50727	HD137909	15 23.7	+29 27	02 10	02 27	03 11 W	+29 11	FeNe Clear	130 130
50728	HD159561	17 30.3	+12 38	02 35	02 53	03 31 W	~~+12 38~~	"	160 160
50728T	Spot Calⁿ for 50728-29				15 min @ D4 3900	17.5V 4300	15V 4810		
50729	HD182640	19 20.5	+25 5	03 03	03 58	W	+3 07	FeNe Clear	130 130 130
50729F	Focus test			Comp/Stellar		"	"	"	200 100

Exp Mtr Offset

39.39

2890 2100

2450 1900

10000

3580

17000

Spectr. Temp. +59°F Dome Temp./Hum. 13°C 55%H Transparency Conditions Part. Cloudy & hazy

Focus 388 - 388

Spectr. Temp. 50.5°F Dome Temp./Hum. 7.5°C 58%H

Dome open & Fans on by 20:10 EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~B Fiber~~											
39+39	OK	V 7.31	K5III	4 frames, "N" mode		Dec	(DOT Bb/dos on PKIII in stage)		Hazy sky	Dome WSW [Light North wind]	
2870	8.50	B								80 sec Fe/Ne, no Diff 938 cts	
2100	~~OK~~	7.20	G8VI	BC	1200/508	BS	IIaOe	1	Asen-Sp	Fld checks OK	✓ slwk
2450		B									
1900	poor	6.80	G8V	"	"	"	"	1	"	Set 386 T=54°F	
							IIaOe				✓
10000	poor	B 3.93	F0p	BC	1200/508	BS	IIaO-e	1	Asen-Sp	(set 388 focus)	
3550		B 2.02	A5III	"	"	"	IIIaJ-dg	1	"	T=52°F Set 385 still	OK
							IIIaJ-dg				✓
16919		B									
17000	poor	3.68	F0IV	BC	1200/508	BS	IIIaJ-dg	1	Asen sp.	Note mayhue been labeled "28" instead of "29" Should be obvious anyway	OK
~~2450~~	Set 388, T=+50.8°F			"	"	"	IIaO-e	1			✓

65

Date 1990 May/Jun 31/1 (Thur/Fri) Observers K.K./SAS./D.i.F.

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.
C00001									
00002									
3									
4									
5									
6	Comp							FeNe Clear	90s
7	Arcturus HD 124897	14h 11.1	19° 42						90s
8	"			20:37					~45s
9	Comp			20:40:50				FeNe Clear	90s
10	Comp							FeNe Clear	90s
11	~~HD 87901~~ (Regulus)	10h 03m 03	12° 27	~20:51	20:53:40	03:05:20W			
12	"	"	"	20:54:30	20:57:15	03:08:50W			
13	Comp			20:58:30				FeNe Clear	90s
13	Flat							Tung clear	10s
14	Comp								

Spectr. Temp. ..... Dome Temp./Hum. 17°/45% Transparency Conditions ....Clear.... 66

Focus .....

595 0 1 1024 20 1 ccdfmt

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD fibre-fed	1800/ 50.8	PS	λ= 4860Å				
30										with exp mtr filter	
500										(without exp mtr filter)	peak 4950
500											
350											
											R200

P267

Date 1990 May/Jun 31/1 Observers KK/SAS/DiF

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.
c 15	HD 136202	$15^h 14.2$	$+2°09$	~21:10	21:30	$1^h 28$ E			
16	Comp			21:33				FeNe Clear	90s
17	Comp							FeNe Clear	90s
18	HD 130109	(1950) $14^h 43^m 43^s$	$+02°06'09''$	21:42	21:47:50	$00^h 38^m 20$ E			
19	Comp				21:55:30			FeNe Clear	90s
20	Comp			22:06				FeNe Clear	90s
21	HD 123782	$14^h 04.6$	$+49° 56$	22:09	22:25	$00^h 38^m 11$ W			
22	Comp			22:26				FeNe Clear	90s
23	Comp			22				FeNe Clear	90s
24	HD 172167 Vega	$18^h 33^m 33^s$	+38 41	22:	22:41				~10 s
25	"	"	"	22:44:25	22:44:50	$03^h 32$ E			
26		"	"	22:45:45	22:46:13				
27	"	"	"	22:47:00	22:47:46				
28	"	"	"	22:49:00	22:49:06				
29	"	"	"	22:50:05	22:50:45	$03^h 26$ E			

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. Clear 68

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Mean Quality
100		B 5.60	F8IV	CCD Fibre fed	1800/ 50.8	BS	4860Å		Std. vel.		2900
108	4"	V 3.74	A0I						Sp. Phot. Std.		
100		V 5.25	M2III ab								
100		V 0.04	A0V								3360
200											6200
300											12300
400										saturated	—
50											1410
350											9470

P3 69

Date 1990 May/Jun 31/1 Observers SAS/DiF/Fds

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.
30	Comp			22:52:38				FeNe Clear	90s
31	Comp			~~23:07.5~~				FeNe Clear	90s
32	HD 147933 e Oph A	16h 19m 35s	-23° 13	23:07.5	23:24	0h 40 E			
33	Comp			23:25				FeNe Clear	90s
34	Comp			23:33				FeNe Clear	90s
35	HD 146051	16h 09.1	-3° 26'	23:36.5	23:42	0h 11 E			
36	Comp			23:45				FeNe Clear	90s
37	Comp			23:52				FeNe Clear	90s
38	HD 145001	16h 03.6	+17° 19	23:55.5	00:10	0h 22 W			
39	Comp			00:12				FeNe Comp	90s
FM 0002625 SAS	HD 144579 Seeing test			~00:20	31x31	pixels	int x4		
40	Comp							FeA Clear	120s
41	flat			01:23				Tung ½	8s
42	flat			01:25				Tung ½	8s
43	flat			01:26				Tung ½	8s

Spectr. Temp. ..... Dome Temp./Hum. 15°/47% Transparency Conditions ... Clear ..... TD

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD fibre fed	1800/ 50.5	85	4860Å				
60		v 5.22	B3 III								
350		B 4.32	M0 5 III						Std Vel		4200
150		v 5.00	G5 III							brighter of pair	3400
					1800/ 62.17		6600Å				
											9300

71
P4

Date 1990 May/Jun 31/1 Observers SAS/MKi/DiF

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.
44	HD 172167 Vega	18 33 33	+38°41	01 41					15s
45	HD 172167	"	"	01:42:30					20s
46	"	"	"	01:44.23					20s
47	Comp			01:48				Fed Clear	120s
48	HD 197433 YW Cep			02:38	03:15				
49	bias frame.			03:23					1s
50	bias frame.			03:23					1s
~~51~~	~~bias frame~~			03:24					1s
51 52	Comp.			03:24	03:26			Fed. Clear.	120s.

BACKED UP to 5¼ floppy

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

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 13°/53%

Exp. Mtr	Seeing	Ptg. Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
240				CCD fibre fed	1800/ 62:7	BS	6600 Å				7400
280				"	"						12000
280				"	"						9000
~30				"	"						
~18				"	"					CCD Warmed up.	
—											
—											
—											

73

Date 1990 June 1/2 Observers SAG | DiF

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.
CF 52	(4x) bias			15:08					
53	darks			15:11					7200
54	(4x) bias			00:40					
55	Flat			00:53			F18 stop diff IN	Tung Clear	40s
56	Flat			00:54					40s
57	Flat			00:55					40s
58	Flat			00:56					40s
59	Comp						F18 stop	Fe/Ne Clear	300s
60	HD 124897 Arcturus	14h 11.1	19° 42'	01:24					10s
61	"	"	"	01:46	01:47				30s
62	"	"	"	01:48		3h 57m W			60s
63	"	"	"	01:50					120s
64	Comp			01:54			f/18 stop	Fe/Ne Clear	310s
65	HD172167 Vega	18h 35m 37s	+38° 41'	02:01					10s
66	"	"	"	02:03					30s

Spectr. Temp. ..... Dome Temp./Hum. 16°..... Transparency Conditions. hazy, partly cloudy 74

Focus .....

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

593 0 1 1024 20 1 ccdfmt

T = −100°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD fibre fed	1800/ 50° 8	85	T1= 4860Å				
										mean 79 = 4 ADU/pix/hr	
											<267>
											10000
											10000
											10000
											10000
											13000
										What?	350
										(these quality values do not seem to match	380
										those from last night)	900
										different gain used	1300
										(inadvertently)	1500
7000											570
											1240

P2/ 75

Date 1990 JUNE 1/2 Fri/Sat Observers SAS/DJF

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.
67	HD172167 (Vega)	$18^h 33^m 23^s$	$+38° 41'$	02:04.5		$7^m 9^s$ E			60^s
68	"	"	"	02:06.5		$6^m 6^s$ E			120^s
69	bias (4x)			02:09					
70	Comp			02:13			F18 stop	FeNe Clear	300^s
71	Flat			02:30			F18 stop diff IN	Tung clear	40^s
72	Flat			2:31					40^s
73	Flat			02:32					40^s
74	Flat			02:33					40^s
75	Flat			2:34					3^s
76	Flat			2:35					3^s
77	Flat			02:37:00					3^s
78	Flat			2:38					3^s
79	Comp			02:53			F/18 stop	FeNe Clear	300^s
80	HD 186791 (Tarazed)	$19^h 41$	$+10° 22$	02:59	03:09				10 min.
81	"	"	"	03:10	03:30	$9^m 36^s$ W			20^m

Spectr. Temp. ..... Dome Temp./Hum. 16°/52%. Transparency Conditions Thick haze. 76

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
19000				CCD Sitore Red	1800/ 50:8	00	λ = 4860				1500
38200					"						3000
										Cloud	<267>
											1900
											10 000
											10 000
											10 000
											10 000
											1 000
											1 000
											1 000
											1 000
											1 900
28500		2.72							Std Vel		1300
48300		"							"	intermittent clouds ... an ambitious exposure	2000

PB 77

Date 1990 June 1/2 Observers D.F./SAS

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.
82	Comparision			03:33			f/18 stop	FeNe clear	300 s
83	Bias (4 in 1)			03:42.					
	Backed up to floppy.								

Spectr. Temp. ..... Dome Temp./Hum. 15.9°C / 15% Transparency Conditions partly cloudy 78

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											1960 park

79

Date 1990 June 4/5 Mon/Tue Observers SAS / Nancy Masocco / Fds

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.
0	Prompted Flat								
1	Comp			20:32				Th-Ar	10^s
2	HD 147394 ζ Her	$16^h 16^m 44$	$+46° 33$	20:37	21:17	$2^h 27$ E			
3	Comp							Th-Ar	10^s
4	HD 147394	"	"	21:21.5	22:02	$1^h 42$ E			
5	Comp							Th-Ar	10^s
6	HD 147394	"	"	22:07	22:47	$0^h 56$ E			
7	Comp							Th-Ar	10^s
~~8~~	~~HD 147394~~	"	"						
8 - 11	Flats	A@ 3^s	593, 593, 599, 587						
12	Comp at new slit width: 125μ		-251					"	"
13	HD 147394	$16^h 16^m 44$	$+46° 33$	22:59.5	23:39.5				
14	comp							ThAr	10^s
15	HD 147394	"	"	23:45	00:25	0 41 W			
16	comp							ThAr	10^s
17	HD 147394	"	"	00:27	01:07	$01^h 24$ W			

Spectr. Temp. ..... Dome Temp./Hum. 11°/55%.. Transparency Conditions Some cirrus 80

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	BAD			Echelle/ Reticon	17.60	100 μ .261	x = .4556 λ = 4922Å		Fds prgm	Dewar fill = 3.0 Dewar topped 19:45	
											405
1440		B 3.74	B5IV								598
											410
1490		"	"								587
700											408
1700											627
274											406
						125 μ .252					405
2099											769
											461
2685											748
											477
2390	Really Bad										671

P2/81

Date 1990 June 4/5 Observers F.D.S./S.A.S./M.A.S.A.C.D.

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.
18	Comp			01:08				Th Ar	10^s
19	HD 147394	16 16 44	46 33	01:14	01:54	2 12 W			
20	Comp							Th Ar	10^s
21	Comp							Th Ar	10^s
22	HD 193237 (P Cyg)	20 14	+37 43	02:09	03:05				
23	Comp							Th Ar	10^s
24	Comp							Th Ar	10^s
25	HD 147394	$16^h 16^m 44^s$	$+46° 33$	03:12	03:47	$04^h.05$ W	$+46° 25$		
26	Comp								10
	4 × flat @ 3.2s	706, 708,	701, 702						
	4 × flat @ 2.4s	518, 510,	511, 514						

Spectr. Temp. ..... Dome Temp./Hum. ...8°/64%. Transparency Conditions ...Clear, some cirrus.

Focus .....

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

82

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	Rainy, Rainy 300			Echelle/ Reticon	17.60	125μ =251	x = 4556 λ = 4422Å		Fds pigm		479
1943		B 3.74	B5V							topped 01:14	593
											494
1000		V 4.33 —	Bp								384
											408
											497
2000		B 3.74	B5V							4 Pt	492
											500

83

Date 1990 June 6/7 Wed/Thu Observers SAS / Masocco

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.
0	Prompted Flat								
1	Comp			00:57				Th Ar	10^s
2	HD 147394	$16^h16^m44^s$	$+46°33$	01:06	01:46	02^h19 W			
3	Comp			01:47				Th Ar	10^s
4	HD 147394	"	"	01:48.5	1:59				
5	comp								
6-10	4 Flats @ 2.5	654, 648, 664, 653							

Spectr. Temp. ..... Dome Temp./Hum. 16°/66% Transparency Conditions Partly Cloudy

Focus .....

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

84

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	ADCU Quality
				Echelle/ Reticon	17.60	.125 .251	λ = 4956 λ = 4922Å		Fds pigm	Dewar fill 3:0	
											446
1880		B 374	B5II								686
											420
343		"	"								139
											413

85

Date 1990 June 7/8 Observers SAS/Masocco/Fda

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.
0	Prompted Flat			20:21					10^s
1	Comp			20:22				Th-Ar	10^s
2	HD 147394 τ Her	$16^h 16^m 44^s$	+46° 33	20:29	21:09	$2^h 23$ E			
3	Comp							Th-Ar	10^s
4	HD 147394 τ Her	"	"	21:13	21:53	$01^h 38$ E	+46° 25		
5	Comp							Th-Ar	10^s
6	Comp								
7	HD 120315	$13^h 43^m 36^s$	+49° 49	22:02	22:14	$01^h 15$ W			
8	Comp							Th-Ar	10^s
9	Comp				22:22			Th-Ar	10^s
10	WD124897	$14^h 16.1$	+19° 42	22:24	22:25.5	$00^h 57$ W			
11	Comp			22:26.5				Th-Ar	10^s
12	Comp			22:31				Th-Ar	10^s
13	HD 147394 τ Her	$16^h 16^m 44$	+46° 33	22:34	23:05				
14	Comp				23:06			Th-Ar	10^s

Spectr. Temp. ..... Dome Temp./Hum. 18°/53% Transparency Conditions Thick haze, cloud 86

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	ADCO Quality
				Echelle/ Reticon	17.60	128μ .251	λ = .4556 n = 4.3 Å		Fds fig m	Tapped 19h/Dir. 1.14 3.0	2711
											401
2070		B 3.74	B5IV								841
555											398
1152											484
550											396
											404
5013		B 3.5									1991
314											402
											402
5000		B 1.19	K2III						Std Vel		1128
618											412
											413
5003		B 3.74	B5IV								1285
600											709

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Date 1990 June 7/8 Observers SAS/Masoco/Fds

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.
15	HD 147394 τ Her	$16^h 16^m 44^s$	$+46° 33$	23:08.5	23:37	00:07 E			
16	COMP							Th-Ar	10^s
17	HD 147594	"	"	23:39.5	00:19				
18	Comp			00:20				ThAr	10^s
~~19~~	~~HD 172167~~	~~$18^h 33^m 33$~~	~~$+38° 41$~~						
19 ~~20~~	Comp			00:25				ThAr	10^s
20	HD 172167	$18^h 33^m 33$	$+38° 41$	00:29.5	00:42	1:07 E			
21	Comp							ThAr	10^s
	4 flats @ 2.0	499, 509, 504, 511							
	4 flats @ 4.0	1059, 1062, 1054, 1055							
	4 flats @ 7.4	2021, 2012, 2012, 2011							
	4 flats @ 12	3318, 3318, 3299, 3319							

Spectr. Temp. ..... Dome Temp./Hum. 16°/57% Transparency Conditions Hazy 88

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 15°/55%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3000		3.24	B5V	Echelle/ Reticon	17.60	125μ 0.25"	x 1.0556 λ=4722Å		Fds pigm		1054
											407
2310		"	"	"							860
											400
		~~0.04~~	~~A0V~~								
											403
10024		0.04	A0V								3457
~~1000~~											405

89

Date 1990 June 10/11 Sun/Mon Observers Mki / SAS / Dif

Emulsion Batches:

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.
Cf000 84 (Dif)	4x BIAS			~20:30					
* 85	Flat						Filter Holder UP for all Exp.	Tung Clear	2s
86	Flat							Tung Clear	2s
87	Comp							FeNe clear.	2s
88	Comp			23:35				FeNe Clear	20s
89	Flat			23:40				Tung Clear	20s
90	Flat			23:43				Tung Clear	40s
91	Flat			00:06			With Red Filter	Tung Clear	40s
92	Comp			00:10			"	FeNe Clear	40s
93	bias 4x			00:15					
94	Flat			00:19			"	Tung Clear	40s
95	Comp			00:21			"	FeNe Clear	40s
X 96	HD 172167 Vega	18h33m33s	38°41	00:52			"		300s
97	Comp						"	FeNe clear	40s
X 98	HD 172167 vega	"	"	01:03			"		300s

Spectr. Temp. ..... Dome Temp./Hum. 15°/76% Transparency Conditions Windy, some Haze 90

Focus .....

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

T= -100 90 cgain

608 0 4 1024 18 1 ccdfmt <ADU>

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Fiber fed	830/ 39°.5		6600 Å		Hi-i CCD tests		
					830/ 46°.5		7044 Å				10000
					"						7000
					830/ 48°.0		9572 Å				5000
					831/ 46.5		9044				10000
					"		"				14000
					831/ 48°.0		9572 Å				5000
					"		"				1600
	5"	0.04	ND		"		"				4600
					831/ 46°.5		9044 Å				10000
	5"	"	"		"		"				7000

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Date 1990 June 10/11 Observers MKI/SAS/DIF

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Filters Declination	Comparison Type/Filter	Exp.
							f/18 stop	Tung	
~~99~~	~~Flat~~			01:13			Red filter	Clear	40s
99 ~~100~~	Flat			01:16			"	Tung Clear	200s
100 ~~101~~	Comp			01:24			"	FeNe clear	200s
101	Comp			01:26			"	FeAr clear	20s
x 102	HD 172167 Vega	18h 33m 33s	+38° 44	01:29			"		300s
x 103	"	"	"	01:40			"		150s
104	Comp			01:45			"	FeNe Clear	10s
105	Flat			01:46			"	Tung clear	20s
106	BIAS 4x								
107	Flat			01:54			"	Tung clear	10s
108	Comp			01:57			"	FeNe Clear	2s
109	Comp			02:00			"	FeA clear	100s
110	HD 172167 Vega	18h 33m 33s	+38° 44	02:06		0h 30 W	"		60s
111	"	"	"	02:09			"		30s
112	"	"	"	02:11					15s

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
				CCD + Dio fiber	831/ 46°.5		9044Å		MKE - CCD tests	Forgot to write	9000
					831/ 49°.3		10 025Å				7000
					"		"			Only one line	350
					"		"			two lines	430
	6"	0.04	AOS		"		"				1500
	6"	"	"		831/ 45.0		8509Å				10 000
					"		"				10000
					"		"				8000
											<207>
					831/ 39°.7		6575Å				7000
					"		"				10 000
					"		"				360
	6-7	"	"		"		"				10 000
		"	"		"		"				5200
		"	"		"		"				2700

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Date 1990 June 10/11 Observers SMS/MKI/DiF

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	~~Declination~~ Filter	Comparison Type/Filter	Comparison Exp.
113	HD 172167 Vega	$18^h 33^m 33^s$	+38° 41	02:12.5			Red filter		7.5^s
114	DARK			02:14.5			"		60^s
115	DARK			02:17					5^{min}
116	HD 172167	"	"	02:25			"		100^s
117	Comp			02:30			Red filter F/18 stop	Fe-Al Clear	60^s
~~118~~	~~Comp~~			~~02:36~~			"	Fe-Ne Clear	~~30s~~
118	Comp.			02:37			"	Fe-Ne Clear	200s.
119	Flat			02:46			"	Tung Clear	20s
120	4x Bias			02:50			"		
121	Flat			02:55			"	Tung Clear	300s
122	Comp			03:04			"	Fe-Ne Clear	400s
x 123	HD 172167 (Vega)			03:18.			"		300s
124	Comp			03:25			"	Fe-Al Clear	60s
125	Comp.			03:28			"	"	60s
126	~~Comp~~ Flat			03:31			"	Tung Clear	60s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions . Windy, bad seeing : 94

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 18-13°C/73.0-88%

Exp. Mtr.	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	ADU ~~Quality~~
	6"	0.04	AOV	CCD - Fibre fed	831/ 39°7		6575Å		Mk. - CCD tests		1500
					"		"				<200>
					"		"				
	6"	0.04	AOV		831/ 43°6		8004Å				12000
					"		"				
					"		"				
					"		"				
				CCD Fibre-fed	831/ 43.6		8004Å				
				"	831/ 50.7		10507Å				
				"	"		"				370
	3-6"	0.04	AOV	"	"		"				600
				"	"		"				
				"	831/ 35.8		5175 .109				<200>
				"	"		"				

PY 95

Date 1990 June 10/11 Observers SAS/MKI/DIF

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	~~Declination~~ Filter	Comparison Type/Filter	Comparison Exp.
127	Flat			03:36		f/18 stop Red Filter	Red Filter f/18 stop	Tung clear	300s
128	Comp			03:43		(order separation filter removed)	No Filter	Tell Clear	100s
129	Flat			03:46		" "	"	Tung clear	60s
130	Flat			03:51		" "	"	Tung clear	
131	Dark			03:57					60s
132	Bias 4X			04:01					

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions Windy, bad seeing 96

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ wavelength coverd	P.H.	Program	Remarks	~~Quality~~ ADU
				CCD Aire-Ed	831 / 558		5115.109 Å		Mki CCD-tests.		
				"	"		"		"		
				"	"		"		"		
					831/49.3		10075 Å		"		12000
										Mean of 4 Scans.	

97

Date 1990 JUNE 11/12 (Mon/Tue) Observers SAS/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.
FM000263.SAS	Seeing Test HD120245	$13^h 43^m 18^s$	$+38° 23' 33''$	20:45					
cfop133.pif	Bias (4X)			22:33					
134	Flat			22:36			Red Filter F/18 Stop	Tung Clear	35^s
135	Comp			22:40			"	FeNe Clear	120^s
136	HD124897 Arcturus	$14^h 11.1$	$+19° 42$	22:46		$01^h 34$ W	Red Filter		40^s
136	BIAS 4X			23:50			"		
137	HD124897	"	"	23:54		$02^h 43$ W	Red Filter		60^s
138	DARK			23:58					60^s
139	Comp			00:05			Red Filter F/18 stop	FeNe Clear	60^s (?)
X 140	BIAS 4x	Not written	noted Tu (Oct 91)	00:45					
X 141	Comp	not written		00:48			"	FeNe Clear	120^s
142	HD172167 Vega	$18^h 33^m 33$	$+38° 41$	00:52		$0^h 39$ E	Red Filter		60^s
143	"	"	"	00:56			"		120^s
144	"	"	"	01:00			"		120^s
145	Flat			01:10			" F/18 stop	Tung clear	35^s

Spectr. Temp. ..... Dome Temp./Hum. 16°/65% ... Transparency Conditions Clear .....

Focus .....

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

90 again

614 Ø 4 1024 20 1 CCDFMT

Exp. Mtr.	Seeing	Ptg Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality (ADU)
				CCD - blue fed	821 / 49°.3		10025Å		MK	31x31 ; int x 4 (suspect film) (26/06/90) - due to pre-2 ret blowup	~~[illegible]~~ ~~[illegible]~~ ~~[illegible]~~
											14,000 ~~[illegible]~~
											8300
50 000	5"	0.09	K15							CCD Problems - did NOT WRITE	8000
154 000 ~~[illegible]~~										HAD to reboot ALL systems - some sort of hardware failure	12.500
											155
										CCD warming - topped up	7000
											8500
102 000	5"	0.04	A02								4500
	4"										9000
											8000
										Grating moved off region then back.	1300

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Date 1990 JUNE 11/12 Observers MKi / SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Filters Declination	Comparison Type/Filter	Comparison Exp.	Exp Mr.
• pif Cf 00146	Flat			01:25			Red Filter F/18 stop	Tung clear	2^s	
× 147	Comp not written			01:27			"	FeNe 1/4	2^s	
148	HD 172167 Vega	$18^h 33^m 33^s$	+38° 41	01:31		$0^h 02$ E	Red Filter		10^s	21000
149	"	"	"	01:33		$0^h 0^m$	"		15^s	22500
150	8145 (4X)			01:44						
151	HD 206267	$21^h 35^m 51^s$	+57° 02	01:48	01:58	$02^h 37$ E	"		10^{min}	4200
152	"	"	"	02:00	02:10	$02^h 25$ E	"		10^{min}	5100 4900
153	"	"	"	02:11.5	02:21.5	$02^h 12$ E	"		10^{min}	5550
154	Comp.			02:24			" F/18 stop	FeNe 1/4	2^s	
155	Flat			02:27			"	Tung clear	2^s	
156	Flat			02:35			"	Tung clear	35^s	
157	HD 206267	"	"	02:41	02:51	$01^h 42$ E	Red Filter		10^{min}	6070
158	"	"	"	02:54	03:04	$01^h 30$ E	"		10^{min}	6200
159	"	"	"	03:06	03:16	$01^h 18$ E	"		10^{min}	6100
160	Flat			03:17			" F/18 stop	Tung clear	35^s	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. Clear, bad seeing 100

Focus .....

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

CCD T=-92.0

90 GAIN

Exp. Mtr	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	ADU ~~Quality~~
				CCD. Fibre fed	831/ 39°.7		6575Å		MKi - CCD Tests	Re Binned to 592 0 4 1024 30 1	7500 ccd/fmt
										NOT written?	7200
21 000											8600
27500											14000
4200	5"	V 5.62	06 V								3400
5200	5"	"	"								4000
5550	4-5"	"	"								3700
											6000
											9000
					831/ 49°.3		10025Å			RE BINNED TO ccd/mt 614 0 4 1024 20 1	14800
6070	3-4"	"	"								400
6200	3-4	"	"							No COSMIC RAYS!	450
6200	3-4"	"	"							"	450
											13000

P3 101

Date 1990 JUNE 11/12 Observers Mki/SAS

Emulsion Batches:

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.
•pif cf00161	Comp			$03^h19.5$			Red Filter F/18 stop	FeNe clear	120^s
162	BIAS (4x)			03^h23					
163	HD 206267	$21^h35^m51^s$	+57°02	03^h25	03^h35	0^h59E	Red filter		10^{min}
164	"	"	"	03^h40	03^h50	0^h44E	"		10^{min}
165	Comp			03:52			" F/18 stop	FeNe clear	120^s
166	Comp			03:57			"	FeNe Clear	120^s
167	Flat			04:00.5			"	Tung clear	35^s
168	Bias (4x)								
169	DARK			04:05	04:15				600^s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ....Clear..... 102

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..14°/71%..

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality (ADU)
				CCD- Fibre Fed	831/ 49°.3		10025Å		MKi- CCD tests	614 × 4 1024 20 1	7000 ~~1400~~
6500	3-4"	V 5.62	06I							Cosmic Rays.	440
		"	"		831/ 50°.1		10300			Did not re-bin	460
										50°.1 is the better Area	1000*
										* cosmic rays made it high	860*
											12000
											168

103

Date 1990 JUNE 13/14 (Wed/Thur) Observers SAS/DIF

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.
CfOU 170 (opif)	DARK								1 hr
CfOU 171	BIAS 4x)			21:48					
172	Comp			21:59			F/18 stop	FeNe Clear	60s
173	Flat			22:04			"	Tung clear	20s
	June 14/15								
	DARK			23:20					3600s

Spectr. Te
Focus...
Spectr. Te
Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 104

Focus .....

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

(1 Pool MGX AND

Exp Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				ECD- Fine Red	1800/ 52.7		5120 Å				
											(1 Pool) <154>
											5000
										Did not write.	10 000
					1800/52.7		5120 Å			not written. (3-5 cosmic rays on each strip)	

105 FRI - SAT

Date 1990 JUNE 15/16 Observers DIF - TM

CCD Spectroscopy

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.
CF00174	Flat			~~20 50~~ ≈21 00				TUNG Clear	20sec
CF00173	Bias x4			20 55					
~~175~~	~~Comp~~			~~21 05~~	written after all			FeNe Clear	60sec
176	HD126053	14 18.1	+01 43	21 14	22 02	00 58 W			48min
Fin 000 264.TN	HD 144579 seeing test			22 15		00 30 E	+39 15		~~60~~
177	HD 144579	16 01.5	+39 24	22 15 30	22 47	00 05 W			32min
178	comp.			22 50				FeNe Clear	60sec
179	Flat			22 56				Tung Clear	35s
180	HD 124752	14 10.3	+68 03	23 05	00 06	03 15 W	+67 38		61min
181	Comp			00 08				FeNe clear	60s
182	BD +68° 946	17 37.0	+68 27	00 20	01 09	00 55 W	+68 20		49min
183	Comp			01 13				FeNe clear	60s
184	FLAT			01 18				Tung clear	20s
185	Dark			01 19					60min

Spectr. Temp. ..... Dome Temp./Hum. +22°C..65% Transparency Conditions ..PART. Cloudy..... 106

Focus .....

Dome operat's Fans on by 20:20

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

LOGTEMP Running

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Do Other											ADU
				CCD Fiber Fed	1800/527		5125				
											3170
13000											4400
2700	POOR	V 6.27	G1V	CCD	1800/527		5125A		Std vel	Cloudy here [3 COSMIC RAYS 6 cosmic Rays]	700 760
13000	POOR	V 6.66	dG8	[Int x O] CCD	4 Frames		Moderate N wind		Seeing test	IN DALDOS Dome SW	
3750		V 6.66	dG8		1800/527		5125A		Std vel		700 700
											3700
				CCD Fiber fed	1800/527		5125A				11000 13000
1200	5" POOR	V 8.2	K0	"	"		"		Asm Sp - KK	Fnl companion visible to North Tel on East Side	350 370
				"	"		"			[Fld Drawn on back of CARD]	
1069	4"	V 9.2	M5	"	"		"		Asm. Sp KK	East Side still / S/Hazy	270 300
				[Note check flds and bots cards in Deck for +68 996]						exp. mtr: 1069 counts	[270 300]
											5000
											6900
											200
											<200

107 #2

Date ..... JUNE 15/16 .. Observers . T.G. .....

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.
CF00186	Flat			0231				TUNG A=1/2	10sec
187	Flat			0234				"	5sec
188	BIAS x4								
	Last Toppup @	02	55						

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

Focus .....

Spectr. Temp. ..... Dome Temp./Hum 41.9° 67%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											1200
											1700
										1 PCOL	1525
										2 PCOL	1265
										T=1023	

109

Sun Mon

Date 1990 JUNE 17/18 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	Comparison Exp.
CF00189	Comp			2205				FeNe A=1/4	10sec
190	HD144579	16 01.5	+39 24	2210	2225				15min
265.TN	" seeing	"	"	2227		00 10E		Pixels 31x31	Int x4
191.PIF	Comp							FeAr clear	60sec
~~266TN~~ 192PIF	DARK	20 min							20min
266TN	HD144579 seeing	16 01.5 Test	+39 24	2249		00 12W	+39 15	Pixels 31x31	Int x4
193	FLAT			2258				TUNG A=1/4	20sec
194	FLAT			2302				"	10sec
195	DARK			2304					1800sec
196	Bias x4								

Spectr. Temp. ..... Dome Temp./Hum. +26°C 75% Transparency Conditions Hazy - cloudy 110

Focus .....

Fans on ≡ Dome open by 21EST

Spectr. Temp. ..... Dome Temp./Hum. +24°C 80%

ADU

Exp Mtr No filter	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD Fiberfed	1800/63°		Hα			Intensity high for 3 str lines	15K
1900	2"	6.66	dG8						stel vel		1240
"N" mode	2"	"	"	4 frames.		Fiber Head			Dome South.	(1/3 obscuring)	
"N" mode	2"	666	dG8	part cloudy		Fiber Head			Dome West	no wind.	
				CCD Fiberfed	1800/63°		Hα				3600
				"	"		"				1500
		Note		Binning	560	0	4	1024	20	1	ie only one strip for spectra.
					WARM Room only				62°F		

~~Comp~~ Done Tues - Wed

Date 1990 NOV 19/20. Observers D.I.F./T.n./M.S.i.....

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.
CF 00197	Comp			21 09			Diffuser OUT / F18 stop	FeAr Clear	120s
00198	HD 126053	14 18.1	+01 43	21 16	21 27	0038 W			11 min
199	Comp							FeAr	120
200	DARK								660
201	Flat						F18 stop	TUNG A=1/2	10sec
202	"							TUNG Clear	10sec
203	Bias x4								
204	HD 124897	14 11.1	+19 42	22 43	22 44	0202 W			1min
205	Comp					NO	Diffuser F18 Stop	FeNe Clear	30sec
206	Flat						Clear	TUNG ~~F18~~	20sec
207	DARK							~~TUNG Clear~~	~~30sec~~
208	Bias x4.								
209	VW Cep HD 197433	20 38 46	+75 14.3	~~00 01~~ ~~23 50~~	00 16.	02 47 E			15min
	VWCep = HD 197433 ≠ HD 187433								

Spectr. Temp. ~~117°C~~ ~~52%H~~ Dome Temp./Hum. 11.7°C 51%H Transparency Conditions PART Cloudy 112

Focus

Spectr. Temp. Dome Temp./Hum. CCDFMT for Hα obs [5730 5 1024 8] ADU

Exp. Mtr. No filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD Fiberkel	1800/63	250μ	Hα			Topup @ 20 30 T=-102.5 STILL cold	
990	OK	V 6.27	G2V				Hα		std vel	PART Cloudy	400
											2300
											4600
							Actual				~~203~~
					1800/57.9°				5750 5 1024 8 CCD FMT	5194Å indicated	
					1800/52.6				"	5148 indicated	
		V -0.04	K3IIIp		1800 53.2		~~5~~ 5200Å		std vel "	5241Å " Ideal setting	4500
7000					"		"				4800
										ADU = 9000	~~4500~~
											~~75~~
										suspect file (20/10/90) due to pipet blowup contact binary	500 count
		8	G5, K0 K5				5200Å		Hdy = pgm	ADU = 235	~~285~~

113 Tues-Wed pg42

Date 1990 June 19/20 Observers D.F./T.L./M.K.

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.	
210	VW Cep. HD197433	~~20~~ 20h38m46s	+75°14.3'	00 17	00 32	2h30m E	1		15min.	
211	4x Bias									
212	HD197433 VW Cep.	20h38m46s	+75°14.3	00 36	00 51	E	FROM Encoder		~~15~~ 15min	~900
213	HD197433 VW Cep.	"	"	00 54	01 10	E	+75 34			
214	Comp.			01 12			no Diffuser F18 Stop	FeNe Clear	30 sec	
215	Bias (4x)			0117.						
216	HD197433 VW Cep			01 18	01 27				9 min. ~~[illegible]~~	~350
217	HD197433 VW Cep			01 29 30	01 46				15min	~600
218	Bias (4x)			01 49						
219	HD197433 VW Cep.			0150	0205	00 58E			15min	~600
220	HD197433 VW Cep			0207	0223	00 40E			15 min	
221	Comp							FeNe Clear	30 sec	
222	Bias Average of 4									
223	Flat							TUNG Clear	20 sec	
224	HD197433 VW Cep			0233	0248		+75 37		15min	~800

VW Cep = HD 197433 ≠ HD 187433

Spectr. Temp. ..... Dome Temp./Hum. 14.2°/ 57.0 / 57% H Transparency Conditions ... Lousy Seeing ... 114

Focus .....

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

Exp. Mtr. No filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		V ~8	G5 +KOX	CCD Fiber fed	1800/53.2	250μ	~5200Å			contact binary system ADU=200	550 counts
~900									Hdy_pgm		500
~~[illegible]~~	VV poor										250
										suspect file due to pistol blown: (78/06/10)	
~350		V ~8	G5 +KOX	CCD fiber fed	1800/53.2		~5200Å		Hdy pgm.	ADU ~200, contact binary system (variable)	~~450~~ counts
~600		"	"	"	"		"		"	"	268
~600		V ~8	G5 +KOX	CCD fiber fed	1800/53.2		~5200Å		Hdy pgm	contact binary system	250
~~[illegible]~~											200
											800
~800				CCD fiber fed	1800/53.2		~5200Å		Hdy pgm		275

IIS Tues-Wed. pg#3

Date 1990 June 19/20 Observers D.F./Th./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.	Exp Mtr
225	HD 197433 VW Cep	20h 38m 46s	+75° 14.3'	0251	0306	0003W			15min	450
226	Bias Average of 4				~~03~~ 25					
227	HD 197433 VW Cep	20 38 46	+75° 14.3	03 10	03 ~~10~~	00 22 W			15min	710
228	Comp			03 27				Ne clear	30sec	
229.	Flat			0329				Tung clear.	20s	
230	Flat.			0330				Tung clear.	20s	
231	Flat			0332.				Tung clear	20s	
232	Dark			0334	0350				15min	
233	Bias (4x)			0350						

Spectr. Temp. ..... Dome Temp./Hum. +13.3°C / +59.3% Transparency Conditions ... photometric 116

Focus .....

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

Exp Mtr	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
850				ccd fibre fed	1800 / 53.2	2.5 sec	~5200Å		Hdy pgm	contact binary system	250
710				ccd fibre fed	1800 / 53.2		~5200Å		Hdy pgm	contact binary sys	270
										ADU = 1500	
										ADU = 8200	
										ADU = 8600	
										ADU = 8000	

117

Date 1990 June 21/22 (Thu/Fri) Observers D.F./SAS/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.
cf00234. ~~000~~ pit	BIAS 4X			00:20					
~~[illegible]~~	Flat			00:50				Tung Clear	10 sec
cf00235	Comparison			00:57			F/18 Stop	FeNe comp.	30s
236	Flat			00:59			"	Tung Clear	20s
237	HD 197433 VWcep	20h38m46s	+75° 14'.3	01:04	01:19	01h35E			15m
238	Comp						"	FeNe Clear	30s
239	Dark				01:40				15m
240	BIAS 4X								

Spectr. Temp. ..... Dome Temp./Hum. +19.5°C / +65.5 Transparency Conditions 118

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... ccd format: 565/0/5/1024/10/1 ADU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Fibre fed	1800/ 53.2	250μ	5200 Å	P.H 2 Exp ✓	Hdy prgm	topped 20k	<152>
								✓		Did not keep ADU-14000	
								✓			1700
								✓			10000
335		V~ S	65+ Kog					✓			530
								✓			1800
								✓		had some structure	<7307
								✓		checked temp - starting to warm up	

119

Date 1990 JUNE 25/26 (Mon/Tue) Observers F.ds./SAS

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.
opif CEØØØØ1	Bias (4X) superbias CEØØØØ1.Bis								
Ø2	Comp			22:21				ThAr	10^s
Ø3	HD 124897 Arcturus	$14^h\ 11^m 06^s$	19° 42	22:30:40					180^s
Ø4	Comp			22:45.5				ThAr	20^s
Ø5	HD 124897	"	"	22:47:35	22:53:45	$02^h 37$ W			
Ø6	Comp			22:56				ThAr	20^s
Ø7	Comp			23:00:30				ThAr	20^s
Ø8	HD 147394 ζ Her	$16^h\ 16^m 44^s$	46° 33' 05"	23:14:00	23:43:48	$01^h 24$ W			
Ø9	Comp			23:47:20				Th-Ar	20^s
10	HD 147394 ζ Her	"	"	23:57:00	24:20:35	02 02 W			
11	Comp							Th-Ar	20
12	comp							Th-Ar	20
13	HD 172167 VEGA	18 38 33	+38° 41'	00 37 30	00 38 16				
14	" "	"	"	00 40 40	00.41 07				
15	" "	"	"	00 43 30	00 45 15				
16	comp							ThAr	20

Spectr. Temp. ..... Dome Temp./Hum. 20°/58.... Transparency Conditions ..Some Cloud..... 120

Focus .....

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

0 0 256 1024 4 1 ccdfmt

Exp. Mtr	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Max of Quality Stars on centre
				Eneller/ CCD	17.50	.261 100μ	x Hal .5000	Stellar 450μ	fds - CCD tests	Topped @ 20.30 →	
											946
10 000		B 1.29	K2III						STD VEL	STD	2179
										T= -102.3 Restricted prog.	248
20 000		"	"						STD VEL.		949
											263
			B								277
1000		V 3.89	B5III						Fds - CCD TEST	pt cloudy.	
~5000											
		"	"								
2000		0.00	A0V								
1000		"	"								
5000		"	"								

P2 121

Date 1990 June 25/26 Observers Eds./SAS

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.
*pif nice000017	comp							Th-Ar	20
18	HD 186791	19 41 30	+10 22	01:03:00	01:13	0h 34 E			
19	Comp			01:14:45				Th-Ar	20s
20	comp							"	"
21	HD 180554	19h 11 55	+21° 12' 49"	01:31:00	02:05:35	0 048 30W			
22	comp							"	20
23	comp			02:13				Th Ar	20s
24	HD 206778	21h 39m.3	+9° 25'	02:17:00	02:27:10	01 18 E			
25	comp							"	"
26	Comp			02:35				Th Ar	20s
27	HD 195556	20h 26m 58s	+48° 36' 55"	02:58	03:28	01 07 W			
28	Comp			03:40				Th Ar	20s
29 30 31 32	4 flats @ 20s								
33 34 35 36	4 flats @ 10s								
37 38 39 40	4 flats @ 30s								
ce000041.pif 42	BIAS x4 BIAS	this last file is a very peculiar bias I took while aver[illegible] very cal[illegible]							

Spectr. Temp. ..... Dome Temp./Hum. 17°/66% Transparency Conditions ... Clear 122

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ CCD	13 cc .5000	.261 100μ		SLINT 40μ			
2000		V 2.72	K3 III						STD VEL		
1000		V 4.77	B4 IV						Fds - CCD Test		
1500		B 3.92	K2 Ib						std vel		
920		V 4.95	B2.5 II						Fds - CCD Tests		
looks like noise pickup											

123

Date Wed/Thu ~~Tues. 27/28~~ Observers F.A.S./S.A.S./~~S.H.T.~~ Short

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 00043	long dark			Tues A.M.					5 hrs
CE 00044	" "			Wed. PM.					1 hr
CE 00045	Superbias Aver of 4.			19:25:00					
46 47 48 49	4 × flat @ 10s.								
50 51 52 53	4 × flat @ 20s								
54 55 56 57	4 × flat @ 30s								
CE 00058	Superbias (4X)			20:11					
59	Comp			21:10:30				Th-Ar	20s
60	HD 124897 Arcturus	14h 11m 06s	19° 42	21:13:22	21:16:22	01h 07 W			180s
61	Comp			21:18:25				Th-Ar	20s
62	Comp			21:22:20				Th-Ar	20s
63	HD 144470 wso	16h 00m 57.3s	-20° 23	21:31:27	22:11:27	00h 11.5m W			
64	Comp			22:13:38				Th-Ar	20s
65	"			22:20:15				Th-Ar	20s
66	HD 147394 2 Her	16h 16m 44s	46° 33' 05"	22:25:12	22:55:16	00 42 W.			
67	comp			22:57.00					

Spectr. Temp. ..... Dome Temp./Hum. ...12.5/.60.6 Transparency Conditions .....

Focus .....

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

00 256 1024 4 1 codfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				Echelle/ CCD	15 40S	.263	.4555	4.3 M 450μ		T = -100 gain = 90	
										T = -102.3 " "	
										Topped down @ 20h	
4695		B 1.27	K2 III						std vel		
	4-5"										
858	bad	3.96	B IV						Fds - CCD Tests		
1000		3.89	B5 III						"		

92 125

Date 1990 June 27/28 Observers Fds/SAS/Short

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.
68	comp			23 01 25				ThAr	20s
69	HD 144470 W Sco	16h 00m 57s	−20°23	23:04	23:27.46	01 28 W			
70	comp							ThAr	20s
71	comp			23:35:34				ThAr	20s
72	HD 172167 Vega	18h 33m 33s	+38°41	23:42:02	23:44:44	0h 45 40E			
73	Comp			23:47				ThAr	20s
74	comp			23:50:10				ThAr	20s
75	HD 180554 1 Vul	19h 11m 55s	21° 12' 49"	23:52:00	00:32:16				
76	comp							Th-Ar	20s
77	comp			00:38:20				Th-Ar	20s
78	HD 186791	19 41 30	10 22	00:42:34	01:01:48				
79	comp							Th-Ar	20s
80	comp			01:12				Th Ar	20s
81	HD 195556 W Cyg	20 26 58	48 36 55	01:15:30	01:57:10				
82	comp							ThAr	20s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. Clear, bad seeing 126

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ CCD	18.405	.263	X Grat .4555	2.2 Hz 456u	Fits-CCD Tests		
350	4"	3.96	B1V								
3000											
430		4.77	B4III								
1500		2.72	K2III						STD-VGL		
350		4.95	B2.5V								

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Date 1990 June 27/28. Observers Fds / SHS / Short

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.
ceφφφ83	Comp			02:07				ThAr	120s
" 84	HD 11415	01h 47m 11.7s	+63° 10' 40"	02:12:15	03:01	4h 45E	+63 50		
" 85	Comp							ThAr	20s
" 86	BIAS (4X)			03:20					
87 88 89 90	4 flats @ 3s								
" 91	BIAS (4x)								
" 92	DARK								2400s
" 93	"								2400s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. Cirrus 128

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ... 12°/77° ...

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ CCD	18.405	.243	8 line = 4555	[illegible] 4 [illegible]			
5 40	6+	3.38	035						FOS. CCD tests	CCD warming -85° end [illegible] up.	

129

Date June 30 / Jul 1 Observers Fels / SAS

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~~ppp~~94	30m dark								30 min
95	" "								30 min
96	superbias (6x)								
97 - 106	Flats			20:43					each 55s
107	superbias (6x)								
108	comp 0° 4h E	Flexure tests							
109	" " 3h W								
110	2h W								
111	" " 1h W								
112	" " 0h								
113	1h E								
114	" 0° 2h E								
115	" " 3h E								
116	" " 4h E								
117	5h E								
118	6h E								
119	comp +25° 7h E								
120	" " 6h E								
121	" " 5h E								
122	25° 4h E								
123	" " 3h E								
124	2h E								
125	1h E								
126	0								
127	1h W								
128	2h W								
129	3h W								
130	4h W								
131	5h W								
132	comp +45° 5h W								
133	4h W								
134	3h W								
135	+45 2h W								
136	1h W								
137	0								

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 130

Focus .....

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

Exp. Mtr	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ (CI)	1° .405	slit w .263	x grat .4555	slit ht .2055 [illegible]	Fds prgm		
Meas. to 99. 57°										exposed close to saturation	

131

Date ~~June~~ 30/Jul Observers Fels/SAS

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.
cooooo 138	COMP+45 1h E								
139	2" E								
140	3" E								
141	4" E								
142	5" E								
143	6" E								
144	7" E								
145	8" E								
146									

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

133 Sun/Mon

Date ~~July 31~~ July 1st / 2nd Observers Fels/SAS

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 147	Super bias (6x)								
148	DARK								30m
149	"								30m
150	"								30m
151	Super bias (6x)								
152 → 161	Flats			20:07					57s
162	super bias (6x)			20:43					
163	comp			20:52.				Th-Ar	20s
164	HD124897 Arcturus	14h 11m 06s	+19° 42'	20:55	20:58	01h 04 W			
165	Comp			20:59:20				ThAr	20s
166	comp			20:02:03				ThAr	20s
167	HD 144470 ω Sco	16h 00m 57.3s	-20° 23	21:04:30	21:43:15	0h 01 E			
168	Comp			21:44:30				ThAr	20s
169	HD 144470 ω Sco	"	"	21:46:00	22:26:42	0h 42m 20s W			
170	Comp			22:27:54				ThAr	20s

Spectr. Temp. ..... Dome Temp./Hum. 17°/52%. Transparency Conditions. Clear, light breeze. 134

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 90 CGAIN ~~00~~ 0 256 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ CCD	18.41	100u .263	X Grat. .4555	Sutherland .205: 60sec	FOS prgm		
										Topped up 20:45	
7200		V 0.06	K2 III						Std vel		
1000		V 3.96	B1 V								
900		"	"								

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Sun/Mon

Date 1990 July 1/2 Observers Fds/SJS

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.
171	Comp			22:31:45				ThAr	20s
172	η UMa HD 120315	13h 43m 3.6	+49° 48' 45"	22:37:42	22:46:08	03h 21 W	49° 25		
173	Comp			22:47:25				ThAr	20s
174	Comp			22:49:45				ThAr	20s
175	HD 147394 ζ Her	16h 16m 44s	46° 33' 05'	22 51:35	23:16:29	01h 19 W			
176	Comp			23:18:02				ThAr	20s
177	Comp			23 29:34				ThAr	20s
178	HD 172167 Vega	18h 33m 33s	+38° 41	23:35:30	23:38.14	0h 36 E	+38° 53		
179	Comp			23:39:37				ThAr	20s
180	Comp			23:42:01				ThAr	20s
181	HD 180554 1 Vul	19h 11m 55s	21° 12' 49"	23:46:20	00h 24:00	0h 29m 40 E	+21° 26		
182	Comp			00:25:20				ThAr	20s
183	Comp			00:27:36				ThAr	20s
184	HD 186791	19h 41m 30s	10° 22	00:29:30	00:39:50	0h 43 E	+10° 40		
185	Comp			00:41:10					

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Clear 136

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion × hour	P.H. height slit	Program	Remarks	Quality
				Echelle CCD	18 41	100μ ·263	·4555	·205 600μ	Rds Pegn		
3000		V 1.86	B3V								
1500		V 3.89	B0III								
										Tipped up 23.25	
5000		V 0.04	A0V								
800	4"5	V 4.77	B4III								
1500		2.72	K2III						Sb/ Vel		

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Date 1990 July 1/2 Observers F.d.s./SAS

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.
186	Comp			00:45:20				ThAr	20s
187	HD 195556 W Cyg	20h 26m 58s	+48°36' 55"	00:52:45	01:37:26	0h 30 E			
188	Comp			01:38:54				ThAr	20s
189	Comp			01:41:47				ThAr	20s
190	HD 180554 1 Vul	19h 11m 55s	21° 12' 49"	01:44:35	02:23:25	01h 38 W			
191	Comp			02:24:40				ThAr	20s
192	Comp			02:29:37				ThAr	20s
193	HD 195556 W Cyg	20h 26m 58	+48°36'55"	02:32:20	03:17:20	01h 10 W			
194	Comp			03:18:35				ThAr	20s
195	Comp			03:22:17				ThAr	20s
196	HD 11415 ε Cas	01h 47m 12s	+63° 10' 40"	03:24:30	03:39:42	3h 51 E			
197	Comp			03:41:05					
198	Superbias (x6)	Top up	pos.	03:56:00					
199 → 208	Flats	"	"	04:01:00					53s
209	Superbias (x6)			04:24:00					
210	DARK			04:27:30					30min
211	"			05:00					"

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Clear, some cirrus. 138

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .. 15°/61 ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Schelle/ CCD	18.41	.213 .15μ	3.23 .4555	.205 .6μ	Feb pisp	T = -102.2	
800		495	B25B								
										Destroyed during PIEZFIT	
800	4-5	477	B4B								
790		4.8	B25B								
1000	4"	538	B3B								
										Destroyed during transfer	

139

Date 1990 July 2/3 (Mon/Tues) Observers FDs / SAS

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.
CE0212.pf	bias (6x)			18:10:00					
213	DARK			18:37:00					30m
214	DARK			19:13:00					30m
215	BIAS (6x)			19:55					
216-225	Flats			20:00					each 55s
226	bias (6x)			20:27					
227	Th-Ar comp			20:40:50				ThAr	20s
228	HD124897 Arcturus	14h11m06s	+19°42	20:44:30	20:47:30	0h58 W			180s
229	Comp			20:48:50				ThAr	20s
230	Comp			20:51:5				ThAr	20s
231	HD144470 ω Sco	16h00m58s	-20°23	20:56:08	21:19:33	0h21 E			
232	Comp			21:20:34				ThAr	20s
233	HD 144470 ω Sco	"	"	21:21:55	21:44:0	0h04 W			
234	Comp			21:45:37				ThAr	20s
235	HD 144470 ω Sco	"	"	21:47:10	22:06:37	0h26 W	+20°25		

Spectr. Temp. ..... Dome Temp./Hum. 20°/60% ... Transparency Conditions .. Clear ..... KD

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 90 again 0 0 256 1024 4 1 ccdfit

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ CCD	18.41	.263 100μ	x 5000 4555	.265 100μ	Std program		
										Topped up @ 20:35 Z -1.2.2	
12 300		0.06	K1						Std Vel		
1000	2-3	3.96	B1								
1200	2-3	"	"								
~~1200~~											
1000	"	"	"								

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Date 1990. July. 2/3..... Observers .Fds/SAS.....

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.
236	Comp			22:07:40				Th-Ar	20s
237	HD 144470 ω Sco	$16^h 00^m 58^s$	-20°23	22:09:10	22:31:54				
238	Comp			22:33:00				Th Ar	20^s
239	HD 144470 ω Sco	"	"	22:34:35	23:02:13	$01^h 22$ W			
240	Comp			23:03:46				Th Ar	20^s
241	Comp			23:07:18				Th Ar	20^s
242	HD 180554 1 Vul	$19^h 11^m 55^s$	+21°12'49"	23:09:30	23:39:30	$01^h 10$ E			
243	Comp			23:40:40				Th Ar	20^s
244	Comp			23:42:52				Th Ar	20^s
245	HD 172167 Vega	$18^h 33^m 33^s$	38° 41	23:44:30	23:48:05	$0^h 22$ E			
246	Comp			23:49:26				Th Ar	20^s
247	Comp			23:52:06				Th Ar	20^s
248	HD 147394	$16^h 16^m 44^s$	46° 33' 05"	23:56:30	00:11:30	$02^h 18$ W			
249	Comp			00:12:45					
250	~~Comp~~ bias (6x)			00:16:30					

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Clear 142

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ CCD	18.41	.263 12μ	4555	.205 60μ	Fds pgm		
1000		3.96	B,V								
1400	2.3	"	"								
1273	2"	4.77	B4V								
10000		0.04	ADV							Saturated	
1400		5.85	B5V								
										Topped up @ 00:22	

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Date 1990 July 2/3 Observers Fds/SAS

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.
251	Comp			00:27:50				ThAr	20s
252	HD195556 ω Cyg	20h 26m 58s	148° 36' 55"	00:30:30	01:15:10	0h 48 E			
253	Comp			01:16:34				ThAr	20s
254	Comp			01:21:54				ThAr	20s
255	HD186791	19h 41m 30s	18 22	01:23:30	01:33:49	0h 14 W			
256	Comp			01:34:56				ThAr	20s
257	Comp			01:37:42				ThAr	20s
258	HD180554 1 Vul	19h 11m 55s	21° 12' 49"	01:40:10	02:25:10	01h 36 W			
259	Comp.			02:26:42					
260	bias (6×)			02:29:30					
261-270	FLATS			02:43:00	03:05:00				55s each
271	bias (6×)								
272	DARK			03:12:50	03:42:50				30min
273	DARK								"

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..Cirrus..... 144

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ CCD	18.41	0.203 100μ	04555	0.105 60μ	Eds program		
1000		4.95	B25II							light Cirrus passing	
1500	3"	2.72	K2III						3rd V.C		
933		4.77	B4II							Cloud	

ol 145

Date 1990 July 3/4 Observers SAS/DiF (KK 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.
cf00241	4x averaged bias			21:10					
cf00242	Flat						F18 stop	Tung clear	30s
243	Comp			21:26			F18 stop	FeNe clear	60s
PM 244	HD 144579	16 01.5	39 24	21:31:41	21:51:41	0h16 W			✓
FMOO02675AS	"	"	"	21:54					
245	Comp			22:00					60s
246	BIAS (4x)				22:12				
247	HD 149162	16h27.9	+03°17	22:13.9	23.50.7	0h58 W			✓
248	BIAS (4x)			23:02					
249	HD 154417	17h00.2	0° 51	23:07:50	23:16:21	0h42 W			✓
✓ 250	WD 1610-96	17 38.5	+4° 37	23:23:01					60s ✓
✓ 251	Comp			23:25:55			F18 stop	FeNe clear	60s
252	Flat			23:28			"	Tung clear	35s
253	HD 158633	17h25.3	+67°24	23:40:37	23:53:15	0h58 W			✓
254	BIAS			23:55					

Spectr. Temp. ..... Dome Temp./Hum. 123°C/51.6 Transparency Conditions high cirrus - will it clear? 146

Focus .....

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

70 again
5.9 ø 5 1024 9 / ccd/int pfzret-ed

Exp. Mtr	Seeing	Ptg. Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD - Rae Ed	52°2/ 18000		S120 Å			Topped up 20:30	
											10 000
											5000
2500	3"-4	6.66	G8						Std Vel		650 530
										Focing test 3x3 int x4	
											5000
											150 1 pol
900		V 8.84	KKp						Asm-Sp (KK)		300 280
											1 pol 153
2500	3"-4	V 6.01	G0V						Std Vel.	produce 5 slope	540
6200		B 3.93	K2III						Std vel	Mwray Ab File (248)	1200 1100
											5000
											15000
3500	3"	B 3.07	G9III						Asm-Sp (KK)		300 650
											1537

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Date 1990 July 3/4 Observers SAS/DiF

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.
255	BD+68 946	$17^h 37$	$+68° 24$	00:08:40	01:09	$2^h 3^m$ W			35~~80~~
256	Comp			01:13:50			F/18 stop	FeNe clear	60^s
257	HD 173739	$18^h 42^m 13^s$ (1950)	$+59° 33'.3$	01:18:25	02:23:53	$02^h 11$ W			37~~28~~
258	BIAS 4x			02:26					
259	Flat			02:28:14			"	Tung clear	30^s
260	Flat			02:29:50			"	"	"
261	HD 173739	"	"	02:33:15	02:53	$02^h 40$ W			✓
262	Comp			02:56:45			"	FeNe clear	60^s
263	HD 212943	$22^h 22.8$	$+04° 12$	03:00:25	03:09:45	$00^h 46$ E			5~~80~~
264	BIAS (4x)			03:10:00					
265	HD 222368	$23^h 34.8$	$05° 05$	03:18:30	03:29:00	$01^h 39$ E			6~~30~~
266	Comp			03:49			F/18 stop		60^s
267	Comp			03:51:15			"	FeNe clear	60^s
268–271	Flats			03:53:30 03:54:40 03:55:50 03:56:50				Tung clear	each 30^s
272	BIAS (4x)			03:58:00	04:09				
273	DARK								

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Clear - cloudy 148
Focus .....
Spectr. Temp. ..... Dome Temp./Hum. 82°/58%

partly-C m. 45
windy.
pf2 ref-ev

Exp. Mtr.	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000	1	9.22	M5	CCD-Spectral	1800/ 527		5120 Å		Karl Kamper		350
									"		3200
889	4-5	9.9	dM4						"	too much cloud! ✓ some scattered cloud	240 200
										✓	
										✓ T = 102.2	13000
										✓	13000
		"	"							✓ cloud again	
										✓	5000
5000	6+	B 5.94	K0-5						std vel	✓ very windy	560
										✓	152
5000	8+	B 4.64	F7V						std vel	✓	950
										✓	5500
										✓	5000
										✓	1300
										✓	152
										✓	

149

Date ..... Observers .....

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.
July 4 274	Dark			20:49					1h

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

151

Date July 9/10 Observers DF / Mki

Emulsion Batches:

order separation .....

filter used .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cf00275	4 x averaged BIAS			21:56:00					
				~~22:04:00~~				order sep filter	
cf00276	Comparision: Fe-Ne			22:40:00			f/18 stop	Fe Ne clear	200s
277	Flat			22:47:40			"	Tung clear	30s
278	HD172167 (Vega)	$18^h 33^m 33^s$	$38° 41'$	23:02:00 ~~23:08:50~~	23:05:00 ~~23:17:55~~	$0^h 37^m$ E ~~$0^h 48^m$~~ E	"		120s ~~120s~~
279	HD172167 (Vega)	"	"	23:09:10	23:13:00	$0^h 29^m$ E	"		200s
280	Moon			~~23:27:00~~	23:32:20		"		300s
281	Comparison: Fe-A			23:46					200.
282	Comparison Fe-Ne			23:55	23:58				200
283	Flat				00:02				30
284	Dark								200.
285	Bias				00:18				

Spectr. Temp. ..... Dome Temp./Hum. 49.6/63.7 Transparency Conditions ..... clear/pt. cloudy 152

Focus ..... — getting darker

Spectr. Temp. ..... Dome Temp./Hum. ..... 631 051024 01 confirmed

Exp. Mtr	Seeing	Ptg Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				red/blue							~151
					83T/30.0°				new formed 631 051024 01		average of ~
[illegible]				red/blue	83T/30.0°				101008	filter stop in place	~300
				"	"				"		~5800
38000 ~~15000~~	poor	0.0		"	"				"		~540
220000	poor	"		"	"				"		~3900
—	poor	—		"	"				"		~11000

1 53

Date July 10/11 Observers D.F./Mki

order seperation filter used

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.
cf00286	Flat			20:56:00			f/18 stop in place	Tung clear	40s
287	Bias (4x avg)			20:58:00			"		
288	HD 172167 (Vega)	18h 33m 33s	38° 41'	21:02:00	21:03:00		f/18 stop in place		60s
289	HD 172167 (Vega)	"	"	21:05:30	21:10:40	2h 21m E	"		300s
290	Comparision			21:16:20			"	He Ne clear	200s
291	HDE 226868 (Cygnus X-1)	(1990.5) 19h 58m	(1990.5) 38° 10'	21:45:00	22:05:10	2h 53m E	"		20 min
292	HDE 226868 (Cygnus X-1)	"	"	22:09:00	22:29:00	2h 27m E	"		"
293	HDE 226868 (Cygnus X-1)	"	"	22:37:30	22:57:30	2h 3m E	"		20 min
294	BIAS (4x)			23:01:00			"		—
295	Comparision			23:04:00			"	He Ne clear	200s
296	HDE 226868 (Cygnus	(1990.5) 19h 58m	(1990.5) 38° 10'	23:11:00	23:31:00	1h 31m E	"		20 min
297	HDE 226868 (Cyg X-1)	"	"	23:35:00	23:55:00	1h 00m E	"		20 min
298	Bias (4x avg)			00:01:00			"		—
299	Flat			00:03:10			f/18 stop in place	Tung clear	40s
300	HDE 226868 (Cyg X-1)	(1990.5) 19h 58m	(1990.5) 38° 10'	00:06:00		0h 32m E	"		20 min

Spectr. Temp. ..... Dome Temp./Hum. ..+18.4/.556 Transparency Conditions ....Clear..but slightly hazy 154

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..+16.4/.160.0 ccd format: 612/0/6/1024/10/1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Fiber-fed CCD	831 / 50.0		10100Å				11000
				"			"				1500
45 000	O.K.	0.0	A0 V	"	"		"				5550
375 000	"	"	"	"	"		"				7100
—	"	—		"	"		"				300
360	"	~9.0	09.7Ia6	"	"		"				240
350	"	"	"	Fiber-fed CCD	831 / 50.0		10100Å				200
260	poor "	"	"	"	"		"			- thin haze gradually thickening as night progresses	180
—											125
—		—		Fiber-fed CCD	831 / 50.0		10100Å				280
[illegible]	poor (clouds)		09.7Ia6	"	"		"			WARNING: - bright moonlight with cirrus could easily contaminate spectra	~~590~~
[illegible]			"	"	"		"				220
				"	"		"				
				"	"		"				8500
480			0.97 Iab	"	"		"				200

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Date July 10/11 Observers D.F./Mki

order seperation filter used

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
cf00301	HDE 226868 (rg X-1)	1950.5 19h 58m	(1950.5) 38° 10'	00:28:00	00:48:10	0h 12min E	f/8 stop in place		20 min.	165
cf00302	Dark	—		00:50:00	01:10:05				20 min	
cf00303	4x averaged BIAS			02:11:00						

Spectr. Temp. ..... Dome Temp./Hum. 16.7/16.6 Transparency Conditions .. clouds with patches 156, of great seeing.

Focus .....

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

ccd format: 612/0/6/1024/10/1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
168	good !	4.0 approx	09.7 Tab	ccd fibre fed	831 / 50.0	—	→10100Å			- See warning on previous page.	~173
				"	"		"				
										- B1d5 taken just after mid-run ccd top-up	~238
										clouds!	

157

Date July 11/12 Observers Mki/DiF

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.
cf 00304	Comparision			22:00:00				FeA / clear	200s
305	Comparison			23:26:00			1mm separation	FeA / filter	200s
306	4x avg. BIAS			23:29:00					—
307	Flat			23:34:00				Tung / order sep.	40s
308	HD 209975 (19 Cep)	1990.5 22h 04m 51s	1990.5 +62° 14'	23:39:20	23:49:10	3h 15m 30s E	f/18 stop in place	order sep filter	600s
309	Dark			23:57:00	00:07:00				600s
310	HD 209975 (19 Cep)	1990.5 22h 04m 51s	1990.5 +62° 14'	02:53:00	03:13:20	0h 00m 00s W	f/18 stop in place.	order sep filter	20 min
311	HD 209975 (19 Cep)	1990.5 22h 04m 51s	1990.5 +62° 14'	03:16:00	03:35:50	0h 32m 00s W	"	"	20 min
312	HD 209975 (19 Cep)	1990.5 22h 04m 51s	1990.5 +62° 14'	03:37:30	03:57:30	0h	"	"	20 min
313	Comparison ~~HD 3712 (α Cas)~~	~~0h 39m 58s~~	~~+56° 29'~~	~~03:57~~			"	FeA / order sep	200s
314	HD 3712 (α Cas)	0h 39m 58s	+56° 29'	04:07:00	4:09:46	+1h 29m 00s E	"	order sep	200s
315	HD 3712 (α Cas)	0h 39m 58s	+56° 29'	04:11:30	04:15:30	1h 24m 0s E	"	"	200s
316	Dawn Sky	0h		04:16:50				"	200s
317	Bias (4x)				04:25				—
318	Flat				04:28				40

Spectr. Temp. ..... Dome Temp./Hum. 49.0/51.0 Transparency Conditions ... clear with small cirrus clouds.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... → cloudy!

ccd format: 674/0/611024/1012

Exp. Mtr.	Seeing	Ptg Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
—				ccd fiber-fed	~~[illegible]~~ 831 / 50.0	?	10100 ~~[illegible]~~		~~Hawley~~ → Cyg X-1	despite a couple of technical failures and a sudden clouding over, the seeing remains alright	
—				"	"		"				
				"	"		"				
324		V=5.11	0976	ccd fiber fed	831 / 50.0	→	10100				150
		~~[illegible]~~	0976	ccd fiber fed	831 / 50.0	→	10100				~~324~~
8700	[illegible]	V=5.11	0976	ccd fiber fed	831 / 50.0	→	10100				270
2540	"	"	"	"	"		"				185
15500	"	"	"	"	"		"				
—	poor	V=7.2	"	"	"		"			pushing down, here!!	
10000	poor	V=2.2	K0III	"	"		"	—			700
13000	poor (very?)	"	"		"		"			really pushing down, here!!!	620
210	—	—	—								

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Date July 11/12 Observers Mki/Dj

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.
✓ 319	Dark				04:34				200
✓ 320	Dark			04:35:30	04:55				20 min

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
										Temp. = -92.0	

161

Date 1990 July 12/13 Thur/Fri Observers SAS/DiF

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.
✓cf 00 321	BIAS (4X)			21:21					
✓ 322	FLAT			21:25:50			F/18 stop	Tung clear	12 s
✓ 323	Comparison			21:34:00			F/18 stop	FeNe clear	30 s
✓ 324	HD 135101	15h 08m 16	+19° 39	21:37:40	21:59:52	01:53 W			~22 min ×732
✓ 325	Bias (4X)			22:07:30			"		
✓ 326	Comparison			22:10:00			"	FeNe clear	30 s
✓ 327	Flat			22:11:45			"	Tung clear	10 s
✓ 328	HD 135101	15h 08m 16s	+19° 39'	22:15:00	22:42:30	2h 36m 30s W			×1650
✓ 329	BIAS			23:06					
✓ 330	HD 135204	15h 08m 48s	-0° 58'	23:08:37	23:31:R	3h 24m 0s W			×755
✓ 331	HD 182572	19h 20.2	+11° 44	23:37:00	23:46:10	0h 32 E			×550
✓ 332	Comp			23:48			F/18 stop	FeNe clear	30s
✓ 333	Flat			23:50			"	Tung clear	10s
✓ 334	HD 217014	22h 52m 33s	+20° 14	23:56	00:06:44	03h 44m E	"		×644
~~335~~	~~HD 167433 (Vw Cep)~~	~~20h 46m 40s~~	~~+75° 14.3~~	~~00:24:00~~	~~00:29.00~~	~~0h 32m E~~	"		~~15 min~~

Spectr. Temp. ..... Dome Temp./Hum. 18°C/61% Transparency Conditions. Clouds (Cirrus with some cumulo-strati) 162

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 15.7°C/60%

ccd format: 554/0/5/1024/0/1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks Dewars topped at 20h	Quality
				"		250μ					<1537
125	O.K			ccd-fibre fed	1800 / 53.2		→ 5200Å			Note: Grating really at 51.9° so be wary of these results as it is not quite centered	12000
30	OK	~~V-6.7~~	~~G5V~~	"	std "		"				
2000	4-5	6.68	G5V	"	"		→ 5200Å		Hdy std	~~Note~~ at 5200Å	1100
										Grating realigned at 53.2° (not checked)	
				ccd fibre fed	1800 / 53.2		→ 5200Å				-
				"	"		"				10000
2000	4-5			"	"		"		Hdy std		1000
1200	5"	6.6	G5V	ccd fibre fed	1800 / 53.2		→ 5200Å		Hdy std		820
3000	4"	5.16	G8 II	"	"		→ "		Std vel		15000
											8000
											10000
3050		5.53	G5	"	"		"		Hdy std		1400
1170				ccd fibre fed	1800 / 53.2		→ 5200Å		Hdy	Overwhelm!!! (cirrus!)	700

pg 163

Date 1990 July 12/13 Observers SAS/DJ

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.
√ 335	HD 197433 VW Cep	20h 38m 40s	+75° 14.3'	00:42:00	00:57:00		~~f/18 stop~~		15s
√ 336	4x avg BIAS			00:59:00					
√ 337	HD 197433 VW Cep	20h 38m 40s	+75° 14.3'	01:00:00	01:15:30	0h 16m E	~~f/18 stop~~	~~clear~~	15m
√ 338	HD 197433 VW Cep	"	"	01:19:30	01:34:50	0h 3m W	~~"~~	~~clear~~	15m
√ 339	BIAS 4x			01:55					
√ 340 ~~339~~	Flat			01:57			f/18 stop	Tung clear	8s
√ 341	Comp			02:00			"	Fe/Ne clear	30s
√ 342	HD 197433 VW Cep	20h 38m 40s	+75° 14.3	02:04:45	02:18:10	0h 46 W			×805
√ 343	"	"	"	02:19:40	02:31:00	0h 59 W			× 680
√ 344	HD 197433 VW Cep	"	"	02:33	02:43:40	01h 12 W			× 640
× 345	4x averaged BIAS			02:45:00					
√ 346	HD 197433 VW Cep	20h 38m 40s	+75° 14.3'	02:47:15	02:58:00	01h 26 W	Dec down +75° 40		× 645
√ 347	HD 197433 VW Cep	"	"	02:59:30	03:08:45	01h 37 W			× 515
√ 348	HD 197433 VW Cep	"	"	03:11:28	03:21:40	01h 50 W			× 612
√ 349	4x avg. BIAS.			03:23					

VW Cep = HD 197433 ≠ HD 187433

Spectr. Temp. ..... Dome Temp./Hum. 113.7/58.5 Transparency Conditions ... clearing with some high cirrus 164

Focus .....

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

ccd format: 554/0/5/1024/10/1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
967				ccd fibre-Bed	1800 / 53.2	→	5200Å		Holy		
775				ccd fibre fed	1800 / 53.2	→	5200Å		Holy		500
400				"	"		"		"		350
										ccd dewar topped @ 1:40	
										T = -94	14000 10000
1000	3-4"	~8	65 KoR	ccd fibre fed	1800 / 53.2	→	5200Å		Holy - contact binary		600 500
1000		"	"	"	"						600 500
1000		"	"	"	"						600 500
										one of those BAD files	
1000		"	"	ccd fibre fed	1800 / 53.2	→	5200Å		Holy - contact bin.		600 500
1000		"	"	"	"		"		"		600 500
1000		"	"	"	"		"		"		600 500

P3 165

Date 1990 July 12/13 Observers SAS/DiF

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.
✓ 350	HD 197433 VW Cap	20 38 40	+75 14.3	03:26:27	03:36:30	02h 05W			x557
✓ 351	Comp			03:40			F/18 Atop	FeNe Clear	30s
✓ 352	Comp			03:42			"	"	30s
✓ 353	Flat			03:43			"	Tung clear	10s
✓ 354	Flat			03:45			"	"	10s
✓ 355	Flat			03:46			"	"	10s
✓ 356	BIAS (4x)			03:47					
✓ 357	DARK			04:05					40m
	July 13/14								
✓ 358	Dark			22:05					240s
✓ 359	BIAS 4x			23:08					

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions some cloud in S., otherwise clear 166

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 14°/62%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	3 4	~8	6.5 × 10 2	CCD - Fibre Fed	1800V 52°.3		λ = 5200 Å		Hy - contact binary		600 500
											3500
											12000
											15000
											15000
										Topped 03:50	
										5536 5 1024 10 1	CCDFMT
										bad file	

167

Date 1990 July 16/17 Mon/Tues. Observers FDS/SAS

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.
•pif 00274	DARK			18:25:00					30m
275	DARK			18:58:30					30m
280-284	Flats		0°			0h			75s
285-289	Flats		20°			0h			75s
290-294	Flats		40°			0h			75s
295	BIAS (4X)			20:51:00					
296	Comp			20:53:35				Th-Ar	20s
297	HD124897 Arcturus	14 11.1	+19°42	21:00:15	21:03:15				
298	Comp			21:04:48				ThAr	20s
299	Comp			21:08:00				Th Ar	20s
300	HD166182 102 Her	18h 04m 29s	20° 47' 55"	21:13:00	21:46:40	01h01 E			
301	Comp			21:48:00				ThAr	20s
302	Comp			21:51:00				ThAr	20s
303	HD 160762 i Her	17h 36m 38	46° 04'	21:53:10	22:09:47	00h09 E			
304	Comp			22:11:06					

Spectr. Temp. ..... Dome Temp./Hum. 22/6 % Transparency Conditions ... Clear ... K8

Focus .....

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

90 again

Ø Ø 256 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	~~Grating~~/ Tilt	Slit width	Emulsion	Slit height	Program	Remarks	Quality
				Echelle / CCD	19.11	.272 60μ	X Grat .4555	.265 600μ	Eds pegm	Topped @ 19:36	
5000		0.06	K2III							2 449089.58851 SC = -25.5677	
300	2"	V 4.36	B2IV								
1300	2"	V 3.80	B3IV						Program Standard		

22 169

Date 1990 July 16/17 Observers FDS/SAS

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.
305	Comp			22:13:27				ThAr	20s
306	HD166182 102 Her	18h04m29	20°47'55"	22:15:45	22:48:33	0h01 W			
307	Comp			22:49:45				ThAr	20s
308	Comp			22:52:35				ThAr	20s
309	HD172167 Vega	18h33m33s	+38°41	22:54:10	22:57:10				
310	Comp			22:58:10				ThAr	20s
311	Comp			23:00:00				ThAr	20s
312	HD180163 η Lyr	19h10m21.2	+38°58'26"	23:01:30	23:40:33	0h12 E			
313	Comp			23:41:48				ThAr	20s
314	~~Comp~~ BIAS			~23:44				~~ThAr~~	~~20s~~
315	Comp			23:59:25				ThAr	20s
316	HD160762 i Her	17h36m38s	+46°04'	00:04:15	00:48:10	02h30 W			
317	Comp			00:49:30				ThAr	20s
318-322	5 Flats	0h	+20°	01:01:00		0h		Tung	75s
323-327	5 Flats	0h	+40°	01:13:00		0h		"	"
328	~~DAR~~ Superbias (4)			01:30:00					
329				01:36:40					
330	> DARKS			02:00:00					30min

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Some scattered cloud. 170 hazy; cloud from SW @ 00:15.

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit Width	Emulsion	Slit PA Height	Program	Remarks	Quality
				Echelle/ CCD	19.1	.277 60μ	× Grat .4555	.205 400μ	Fds Prgm		
1100	2"	4.36	B2IV								
5000		0.04	A0V								
		4.31	B2.5IV								
										Topped up 23:50	
	3-4"	3.80	B3IV							Cloudy 00:12	

171

Date July 17/18/19. Observers Fels/SAS

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.
CEØØ 331-Ø4	bias ×4.			18:12					
332	DARK 30m			18:12:40					
333	bias ×4								
334	DARK 30m			18:49:00					
335	bias ×4								
336-340	5 flats@ 80s	0hr	+20°	19:37		Slit height: .185			
341-345	5 flats@ 80s	0h	+40°	19:51:00		"	"		
346	bias ×4			20:08:00					
347	DARK 15m			20:11					
348	DARK 15m			20:30:25					
349	DARK 15m			20:50:00					
July 18/19.									
350	bias ×4			18:30:00					
351	DARK 15m			18:35:00					
352	bias ×4			18:54:50					
353	DARK 15m			18:57:30					
354	bias ×4			19:15:00					
355	DARK 15m			19:17:30					
356	bias ×4			19:35:30					
357	DARK 15m			19:38:45					
358	bias ×4			19:55:00					
359	DARK 15m			19:57:45					
360	bias ×4			20:23:00					
361	DARK 15m			20:25:00					
362→407	Flexure TESTS with Tungsten lamp 20s exp. slit width = .225								
408	bias ×4			22:20:50					
409	DARK 15m			22:23:15					

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 172

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				July 19							
				5							
				Cero 410	Bias 4x		18:04:00				
				411	Dark 15m		18:07				
				412	Bias 4x		18:25				
				413	Dark 15m		18:28				
				414	Bias 4x		18:45				
				415	Dark 15m		18:51				
				416	Bias 4x		19:09				
				417	Dark 15m		19:10				
				418	Bias 4x		19:27				
				419	Dark 15m		19:30				
				420	Bias 4x		19:47				
				421	Dark 15m		19:50				
				422	Dark 15m		19:50				
				423	Bias 4x		20:50				
				424	Dark 15m		20:55				
							20:58				

173 #1

Date 1990 July 20/21 Fri/Sat Observers TDS/SAS/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.
ce~~00~~425	Bias 4x			19:07:00					
426	Dark 15^m			19:09:00					900^s
427	Dark 15^m			19:26:30					900^s
428	Dark 15^m			19:46:50					900^s
429	Dark 15^m			20:04:30					900^s
430	Bias x 4			20:22:00					
431	comp			20:39:30				Th-Ar	20s
432	HD124897 Arcturus	14 11.1	+19 42	20 42~~00~~	20:45:00				~~15^m~~ 3^m
433	Comp			20:46:53				Th Ar	20sec
434	comp			20:49:40				Th Ar	20^s
435	HD 160762 i Her	$17^h 38^m 38$	$+46° 04$	20:53:00	21:18:05	$00^h 44$ E			
436	Comp			21:19:19				Th Ar	20^s
437	Comp			21:21:36				Th Ar	20^s
438	HD 166182 102 Her	$18^h 04^m 29$	$+20° 47' 55''$	21:23:55	21 5750				
439	Comp							Th-Ar	20^s
440	comp							"	"

Spectr. Temp. ..... Dome Temp./Hum. 21°/21% Transparency Conditions ..P.o.r.T. Cloudy..... 174

Focus .....

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

90 cg 2in
Ø Ø 256 102 4 1 cedfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	ΔT.C. P.H. Inlet	Program	Remarks	Quality
				Echelle/ CCD	1911	22μ 60μ	6100 c4555	~205 600μ	Fds pgm	topped up 18 32 I ~102	
											<166>
											<165>
											<165>
6200		0.05	K2III						std vel		
1500		3.80	B3IV						Program standard		
1200		4.30	B2IV								

175 #7
Fri - Sat

Date 1990. AUG. 20/21.... Observers . Fels - SHS - Tu.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
441	HD 172167 Vega	18 33 33	38° 41	22 02 55	22 06 10				
442	comp			22:07:17				Th A	20s
443	bias x4			22:09:40					
444	Comp			22 24 12				Th A	20s
445	HD 180163 ε Lyr	19 10 21	+38 58 26	22 26 00	23 00 25	00 36 E			
446	Comp			23 02 00				Th A	20 sec
447	Comp			23:03:50				Th Ar	20s
448	HD 166182 102 Her	18h 04m 29s	20° 47' 55"	23:05:50	23:32:24	01h 01 W			
449	Comp			23:34:30				Th Ar	20s
450	Comp			23:36:55				Th Ar	20s
451	HD 160762 i Her	17h 36m 38s	+46° 04	23:40:00	23 58 56	01 58 W			
452	Comp			00:00:05				Th Ar	20s
453	Comp			00:01:57				Th Ar	20s
454	HD 180163 η Lyr	19 10 21	+38 58 26	00 06 55	00 35 08	01 00 W			
455	Comp			00:36:18				Th-Ar	20s
456	Comp			00:38:08				Th-Ar	20s
457	HD 184471 α Cyg	19 28 33	34 14 25	00:39:35	01:19:35	01h 25 W			

Spectr. Temp. ..... Dome Temp./Hum. 1.20°C ... 79.8% H Transparency Conditions . Sl. Hazy 176

Focus .....

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

Exp. Mtr.	Seeing	~~Pig.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	Slit ~~Pit~~ height	Program	Remarks	Quality
5000		0.04	A0 V	Echelle/ CCD	19.11	.277 600l	Grating .4555	.205 600l	Fds pgm		
										Topup during Bias	
1300	3"	4.39	B25 IV							problem - AC 00467.pf	
1200	3"-4	4.36	B2 IV							Comp source left on during exp!	
1350		3.80	B3 IV								
1200		4.39	B2.5 IV								
1058	3"-4	4.74	B3 IV								

177 #3

Fri-Sat

Date 1990 Sept 20/21 Observers Fds.-Th.-SAS

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 ØØ458	Comp			01:20:55				Th-Ar	20sec
459	Comp			01:22:56				Th-Ar	20s
460	HD 166182 102 Her	18h04m29s	20°47'55"	01:24:45	01:59:00	03h28m W			
461	Comp			02:01:01				ThAr	20s
462	Comp			02:03:26				ThAr	20s
463	HD 160762 iHer	17h36m38	46°04	02:05:10	02:31:50	04h30m W			
464	Comp			02:32:54				ThAr	20s
465	~~Comp~~ BIAS 4x			02 34:30					
466	Comp			02:49:24				ThAr	20s
467	HD 180163 η Lyr	19 10 21	38° 58' 26"	02.51:20	03:31:03	03:55h			
468	Comp			03:32:45				ThAr	20s
469	Comp			03:38:11				ThAr	20s
470	HD 22928 δ Per	03h 35m 48.1	47° 28 04	03:40:35	04:00:25				
471	Comp			04:03:15				ThAr	20s
472-475	4 flats @ 60s	δ Per position		Slit height = -185					
476-479	" " "	0HA, +40 dec							
480-483	" "	0HA, +20 dec							
~~484~~ 484	bias (4)				[487	Bias x4]			
~~dark~~ 485	DARK 15m →	486 - DARK 15m.							

Spectr. Temp. ..... Dome Temp./Hum. ..17.5°C 86% H Transparency Conditions ...Clear..... 1.8

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ...17/75%

Exp. Mtr.	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion × Grating	Slit P.H. Height	Program	Remarks	Quality
				Echelle/ CCD	19.11	.277 60μ	.4555	600s 600μ	Fds pgm	ORDER ~~125~~ [Central λ 4481Å? Tm]	
1106	3-4	4.36	E2 IV								
1500		3.80	B3 V								
										During top up	
~~1600~~											
1000		4.39	B2.5 V							Problem on CCD. - Central circular dimming	
2000		3.01	B5 III							problem still there	

Pl 179

Date 1990 July 23/24 Mon/Tue Observers Fds./SAS

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.
opif ~~ce~~ 488	BIAS (4x)			18:07:00					
489	DARK			18:09:00					
490	BIAS (4x)			18:25:00					
491	DARK			18:26:00					
492	BIAS (4x)			18:51:30					
493	DARK								
494	BIAS (4x)								
495	DARK								
496	BIAS (4x)			19:57:00					
497	DARK								
498	BIAS (4x)								
499	DARK								
500	Comp			20:50:48					
501	HD 124897 Arcturus	$14^h 01^m 06^s$	+19° 42	20:53:40	20 5640				180^s
502	Comp			20:57:30					

Spectr. Temp. ..... Dome Temp./Hum. 20°/65% Transparency Conditions A few scattered clouds. 180

Focus .....

90 again T: -103.5

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

0 0 256 1024 4 1 ccdtmc

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	P.H.	Program	Remarks	Quality
										Topped 17^46	
				Echelle/ CCD	18.60	.277 60μ	.4555	.205 600μ	Fds prgm	λc = 4481 Å	
										Topped up 20:45	
E45D		0.06	K2III						Std Vel		

#2 181

Date 1990 July 23/24 Observers F.J.S. / S.A.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.
503	Comp								
504	HD 160762 i Her	17h 36m 38	46° 04	21:05:30	21:19:48				
505	Comp			21:21:00				Th Ar	20s
506	Comp							Th Ar	20s
507	HD 166182 102 Her	18h 04m 29	+20° 47 55	21:26:10	21:49:34	0h 30 E			
508	Comp			21:50:38				Th Ar	20s
509	Comp			21:53:02				Th Ar	20s
510	HD 180163 η Lyr	19h 10m 21s	38 58 26	21:54:55	22:18:56	01 06 E			
511	Comp			22:19:58				Th Ar	20s
512	Comp			22:22:09				Th Ar	20s
513	HD 184171 8 Cyg	19h 28m 03s	34° 14′ 25″	22:24:25	22:57:22	00h 45m 30 E			
514	Comp			22:58:15				Th Ar	20s
515	Comp			23:00:58				Th Ar	20s
516	HD 172167 Vega	18 33 33	38° 41	23:02:50	23:05:18	00h 17 W			
517	Comp			23:06:20				Th Ar	20s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Clear 182

Focus .....

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

Exp. Mtr	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	Slit P.H. height	Program	Remarks	Quality
				Echelle/ CCD	18.60	.277 60μ	4555	.205 600μ	Fds prgm		
1500	2"	3.80	B3 IV						program std		
1300		4.36	B2 V								
1200	2"	4.39	B2.5 IV								
1100	2"	4.74	B3 IV								
5000		0.04	F0 I								

P3 183

Date 1990 July 23/24 Observers FJS/SMS

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.
518	Comp			23:08:36				ThAr	20s
519	HD160762 i Her	17 36 38	46° 04	23:11:20	23:28:57	01h 38 W			
520	Comp			23:29:53				Th Ar	20s
521	Comp			23:32:22				Th Ar	20s
522	HD 166182 102 Her	18h 04 27	20° 47 55	23:34:30	00:02:00	01h 42 W			
523	Comp			00:03:10				Th Ar	20s
524	BIAS during topup			00:07:10					
525	Comp			00:18:50				Th Ar	20s
526	HD 180163 η Lyr	19h 10m 21	38° 58' 26	00:21:50	00:51:45				
527	Comp			00:53:00				Th Ar	20s
528	Comp			00:55:33				Th Ar	20s
529	HD184171 8 Cyg	19h 25m 03	34° 14' 25	00:59:00	01:35:15	01h 53 W			
530	Comp			01:36:20				Th Ar	20s
531	Comp			01:39:35				Th Ar	20s
532	HD 218376 1 Cas	23 02 23	58 52 45	01:41:40	02:23:35	00h 53 E			

Spectr. Temp. ..... Dome Temp./Hum. 18/70% ... Transparency Conditions ... Clear ..... BK

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ CCD	18.60	0277 60μ	04555	.205 600μ	Ed's prgm		
1300	2"-3	3.50	B3 IV						Program Std.		
1200	2"-4	4.36	B2 IV								
										Tip up @ 00:06	
1200		4.39	B2.5 IV								
1100	2"-3	4.74	B3 IV								
1000	2"-3	4.85	B2 IV								

p4 185

Date 1990 July 23/24 Observers Fds/SAS

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	Comp			02:27:34				ThAr	20s
534	Comp			02:32:15				ThAr	20s
535	HD 22928 8 Per	03h35m48	+47°27'04"	02:37:20	02:55:36	4h57E			
536	Comp			02:57:30				ThAr	20s
537	Comp			03:01:00				ThAr	20s
538	HD 218376 1 Cas	23 02 23	58 52 45	03:03:20	03:38:25	00h21W			
539	Comp			03:39:35				ThAr	20s
540	Comp			03:48:08				ThAr	20s
541	HD 24760 ε Per	03h51m08	39°43'16	03:51:20	04:05:00	04h03E			
542	Comp			04:06:05				ThAr	20s
543-547	~~Comp~~ 5 × flat	0hr	+45°						90s
548-552	5 × flat	0hr	+25°						90s
553	bias (4)								
554	dark 15m								
555	bias (4)								
556	dark 15m.								

Spectr. Temp. ..... Dome Temp./Hum. 17/72% ... Transparency Conditions ... Clear 186

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 16°/75%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	~~Grating~~/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				Echelle/ CCD	18.60	.277 60μ	04555	.205 660μ	Eds Pegm		
2000	3-4"	3.01	B5 II								
1100	2-3"	4.85	B0 II								
1500		2.89	B0.5 II								
								.085			
										top up 04:50	

187

Date 1990 July 24/25 (Tue/Wed) Observers Fds/SAS/Short

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.
°pif CCDØ 557	BIAS (4x)			19:03:30					
558	DARK			19:05:00					
559	BIAS (4x)			19:21:00					
560	DARK			19:23:30					
561	BIAS (4x)			19:47:30					
562	DARK			19:49:00					
563	BIAS (4x)			20:05:00					
564	DARK			20:06:30					
565	Comp			21:03:43				Th-Ar	20^s
566	HD 172167 Vega	18^h33^m33	$+38°41$	21:14:45	21:28:03	01^h16 E			
567	Comp			21:29:45	~~21:29:45~~			ThAr	20^s
568	BIAS (4x)			22:0:45					
569	DARK			22:12:00					15^m
570	BIAS (4x)			22:17:00					
571	DARK			22:19:00					15^m

Spectr. Temp. ..... Dome Temp./Hum. 21°/63% ... Transparency Conditions ... Mostly cloudy ....

Focus .....

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

90 again T= -102.1

DD 256 1024 4 1 ccd fmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion x filter	Seeing P.H. height	Program	Remarks	Quality
				Echelle/ CCD	18.60	.277 6μ	.4555	.205 60μ	Fds pgm	top up 18:30	
1500		0.04	A0V							intermittent cloud	

PV 189

Date 1990 July 24/25 Observers Fds/SAS/Short

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.
572	Comp			23:29:00				ThAr	20s
573	HD160762 i Her	17 36 38	46° 04	23:32:11	23:58:56				
574	Comp			00:00:14				ThAr	20s
575	Comp			00:03:22				ThAr	20s
576	HD166182 102 Her	18 04 29	20 47 55	00:05:26	00:41:18				
577	comp			00:43:40				ThAr	20s
578	comp			00:46:12				ThAr	20s
579	HD180163 η Lyr	19 10 21	38 58 26	00:48:00	01:23:40				
580	comp			01:25:30				ThAr	20s
581	comp.			01:27:31				ThAr	20s
582	HD184171 8 Cyg	19 28 03	34 14 25	01:25:52	02:04:54				
583	comp			02:06:45				ThAr	20s
584	bias (4)			02:08:32					
585	comp			02:25:51				ThAr	20s
586	HD218376 1 Cas	23h 02 23	58° 52 45	02:28:10	03:18:16				
587	comp			03:19:42				ThAr	20s

Spectr. T
Focus...
Spectr. T
Exp. Mtr
1500
1300
1200
1000

Spectr. Temp. ..... Dome Temp./Hum. 19°/69% .. Transparency Conditions . Scattered .. cloud .. 190

Focus .....

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

Exp. Mtr.	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion x Filter	S/N P.H. width	Program	Remarks	Quality
				echelle/ CCD	1860	.277 60μ	.4555	.525 600μ	Fos pgm		
1500	3-4	3.80	B3IV						pgm std		
1300		4.36	B2IV								
		~~4.35~~	~~B3IV~~								
1200		4.34	B3IV								
1000		4.74	B3IV								
										top up 02:10	
	3-4	4.85	B2IV							Cloud for 10 min	

P3 191

Date 1990 July 24/25 Observers FDS/SMS/Short

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.
588	Comp			03:25:49				ThAr	20s
589	HD 22928 δ Per	03 3548	+47 27 04	03:29:09	03:44:30				
590	Comp			03:47:30				Th Ar	20s
591	comp			03:53:02				Th Ar	20s
592	HD 24760 ε Per	03h 51 08	+39 43 16	03:56:10	04:06:45	03h 56E			
593	Comp			04:07:55					
594-598	5 × flat @ 90s	0HA	+45°	04:14:00				Tung	90s
599-603	5 × flat @ 90s	0HA	+25°	04:30:17					
604	bias (4)			04:49:20					
605	dark 15m			04:51:00					
606	bias (4)			05:06:20					
607	dark 15m			05:09:00					

Spectr. Temp. ..... Dome Temp./Hum. 18/74% Transparency Conditions A few clouds 192

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion × Grating/angle	~~R.H.~~ blue	Program	Remarks	Quality
				Echelle/ CCD	18.60	.277 60μ	.4555	.0205 600μ	Fds Prgm		
1700		3.01	B5 III								
1300		2.89	B0.5 I								

P1 193

Date 1990 JULY 25/26 Wed–Thurs Observers Fds. / Tn / SHORT ... Also present (Needler) SAS

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.
0 Pif CCD 608	BIAS (4x)			18:34:42					
609	DARK			18:36:20					15m
610	BIAS (4x)			18:51:40					
611	DARK			18:53:20					15m
612	BIAS (4x)			19:12:20					
613	DARK			19:14:00					15m
614	BIAS (4x)			19:29:00					
615	DARK			19:32:20					15m
616-620	5 Flats		+45°	19:51:47		0h		tung	110s
621-625	5 Flats		+25°	20:12:30		0h		tung	110s
626	Comp			20:47:44				ThAr	20s
627	HD 124897 Arcturus	14h11m06	+19°42	20:50:20	~20:53:00	02h34W			
628	Comp			20:54:45				ThAr	20s
629	Comp			20:57:47				ThAr	20s
630	HD 160762 Iller	17h36m38	46°04	21:00:15	21:10:58				

Spectr. Temp. ..... Dome Temp./Hum. +23°C ... 51% Transparency Conditions ..Clear..... 194

Focus .....

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

go again
DO 256 1024 4 1 CCD fmt

Exp. Mtr.	Seeing	Pg Mag	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion x G/A Cong	Slit P.H. height	Program	Remarks	Quality
				Echelle/ CCD	18.60	.277 60μ*	.4555	.205 600μ	Fds pigm	Topped up 18:10	
							*Note - Slit width for this night actually was				
								.287, not .277		Change it Noted next night	
								.185 800μ			
								.185 800μ		Top up 20:40	
								.205 600μ			
8000		0.06	KZIII						Std vel		
1500		3.80	B3IV						Program standard		

P2 195

Date 1990 July 25/26 Wed/Thur Observers Fds/SAS/Tn/Short/Paul Needler

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.
631	Comp			21:12:10				ThAr	20s
632	Comp			21:15:32				ThAr	20s
633	HD 166182 102 Her	18h04m29	+20°47'55"	21:17:25	21:45:30				
634	Comp			21:46:47				ThAr	20s
635	Comp			21:49:30				ThAr	20s
636	HD 180163 η Lyr	19h10m21s	+38°58'26"	21:51:10	22:22:25	0h53 E			
637	Comp			22:24:08				ThAr	20s
638	Comp			22:26:10				ThAr	20s
639	HD 184171 8 Cyg	19h28 03	34°14 25	22:28:02	23:03:15	0h31 E			
640	Comp			23:05:04	~~23:05~~			ThAr	20s
641	Comp			23:09:00				ThAr	20s
642	HD 218376 1 Cas	23h02 23	58 52 45	23:13:00	23:56:05	03h13m30E			
643	Comp			23:58:10				ThAr	20s
644	Comp			00:01:26				ThAr	20s
645	HD 160762 i Her	17h36 38	46°04	00:03:14	00:15:50	02h33 W			

Spectr. Ten
Focus
Spectr. Ten
Exp Mtr.
1500
1208
1100
1000
1400

Spectr. Temp. ..... Dome Temp./Hum. 22°/53% Transparency Conditions. a few scattered clouds 196

Focus .....

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

some haze

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion x Grating	Δ P.H. height	Program	Remarks	Quality
				Echelle/ CCD	1860	.277 60μ	.4555	.205 300μ	Tab Pigm		
										File lost !??	
1300	1"-2	4.36	B2 IV								
1208	1"-2	4.39	B3 IV								
1100	2"-3	4.74	B3 IV								
1000	1"-3	4.85	B8 IV							hazy.	
1400	2"	3.80	B3 IV						program std		

p3 197

Date 1990 July 25/26 Observers Fds/SAS/Tn/Short

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.
646	Comp			00:17:34				ThAr	20s
647	Comp			00:20:18				ThAr	20s
648	HD 166182 102 Her	18h 04 29	20° 47' 55"	00:21:57	00 46 00	02 35 W	+20 50 27		
649	Comp			00:47:00				ThAr	20s
650	BIAS (4)			00:50:10					
651	comp			01 02 40	~~27 38~~			ThAr	20s
652	HD 180163 η Lyr	19h 10 21	38 58 26	01:06:50	01:27:35	2 11 W			
653	comp			01:29:04				ThAr	20s
654	comp			01:31:17				ThAr	20s
655	HD 184171 8 Cys	19 28 03	+34 14 25	01:32:50	02 03 37	02 30 W			
656	comp			02 05 05				ThA	20s
657	Comp		Approx	02 08 ~~05~~				ThA	20s
658	HD 218 376 1 Cas	23 02 23	+58 52 45	02 10 44	02:43:30	25 32 E			
659	comp			02:44:53					
660	comp vega			02:46:30					
661	HD 172167	18 39 33	38 41	02:48:03	02:50:36				
662	comp			02:51:43					
663	comp			02:53:11					

Spectr. Temp. ..... Dome Temp./Hum. 20°/60% Transparency Conditions hazy 198

Focus .....

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

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion × Binning	Slit height	Program	Remarks	Quality
				Echelle/ CCD	18.60	.277 60μ	.4555	.205 600μ	FOS pgm		
1200		4.36	B2 IV						Fds pgm		
										Topup during Bias 0055	
1200		4.39	B3 IV						Fds pgm		
1200		4.74	B3 IV						Fds pgm		
1000		4.85	B8 IV						Fds pgm		
5000		0.04	A0 V								

P4 199

Date 1990 July 25/26 Observers Fds/SAS/Tn/Short

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.
664	HD184171 8 Cyg	19 28 03	34 14 25	02:54:42	03:37 57	4h 04m			
665	comp			03:39:15				Th Ar	20s
666	comp.			03:43:02				Th Ar	20s
667	HD232928 2 Per	03 35 48	47 27 04	03:44:38	04:02:30	03h 42m 30 E			
668	Comp			04:03:33				Th Ar	20s
669	bias (4)			04:12:14					
670	dark 15m			04:14:00					
671	bias (4)			04:29:00					
672	dark 15m			04:31:00					

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..hazy..... 200

Focus .....

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

Exp. Mtr.	Seeing	Pv. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1000	2"	4.74	B3 IV	Echelle/ CCD	15.60	0.277 600μ	IIa-O 4555	0.255 600μ	Fds prgm		
2000	2-3	3.01	B0.5 V								

201 #1 Thurs-Fri

Date 1990 JULY 26/27 Observers F.d.s.-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.
673	Bias (4)			17 24 44					
674	DARK 15m			17 26 00					
675	Bias (4)			17 41 20					
676	DARK 15m			17 43 40	17 58 00				
678	BIAS (4)			18 06 26					
679	DARK 15m			18 08 00					
680	BIAS (4)			18 23 20					
681	DARK 15m			18 25 00	18 40 06				
682	BIAS 15m			18 49 00					
683	DARK 15m			18 51 20					
684	BIAS (4)			19 06 40					
685	DARK 15m			19 09 00	19 24 20				
~~685~~									
686-690	5 Flats			19 57 00		00	+25°		100s
691-695	5 FLATS			20 05 46		00	+45°		100s
696	Comp			20 36 24					

Spectr. Temp. ..... Dome Temp./Hum. +24°C 45.8% Transparency Conditions ....Sl. Hazy..... 202

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ X Filter	S/N P.H.	Program	Remarks	Quality
				Echelle CCD	1800	.277 60μ	.4555	.205 600μ	Eds pgm	Central ORDER 4481Å	
								.185			
								.185		Top up @ 2030 T = 102.8°C	

203 #2

Date 1990 July 26/27 Observers Fds-Ts

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.
697	HD 124897	14 1106	+19 42	20 38 30	20 40 08	2 25 W			
698	Comp			20 41 36				THA	20s
699	Comp			20 43 53				"	20s
700	HD 160762	17 36 38	+46 04	20 45 36	20 54 54	0 43E			
701	Comp			20 56 07				THA	20s
702	~~HD 166182~~ Comp			20 56 18				"	20s
703	HD 166182 102 Her	18 04 29	+20 47 55	21 00 02	21 16 00	00 52E			
704	Comp			21 17 18				THAR	20s
705	Comp			21 19 35				"	20s
706	HD 180163 η Lyr	19 10 21	+38 58 26	21 20 15	21 39 01	01 29E			
707	Comp			21 40 00				THA	20s
708	Comp			21 41 38				"	20s
709	HD 184171 8 Cyg	19 28 03	+34 44 25	21 43 14	22 03 55	01 27E			
710	Comp								20s
711	Comp								20s

Spectr. Temp. ..... Dome Temp./Hum. +24°C 48% Transparency Conditions ....Sl. Hazy..... 20%

Focus .....

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

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion × Grating	SLIT P.H. Height	Program	Remarks	Quality
5000		006	K2III	Echelle CCD	18.60	.277 60μ	.4555	.205 60μ	Std Vel	Central Order @ 4481Å	
1600		380	B3IV						Fds-pgm		
1500		436	B2IV						Fds-pgm		
1500		439	B3IV						Fds-pgm	"	
		474	B3IV						Fds-pgm	"	

205 #3

Date 1990 JULY 26/27 Observers F.Ds - 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.
712	HD172167 1eqg HD ~~218376~~	18 33 33	+38 41	22 08 50	22 70 01				
713	Comp			22 11 16					
714	Comp			22 16 30	~~16 30~~				
715	HD 218376 1 CAS	23 02 23	+58 52 45	22 19 35	22 112	04 16 E			
716	Comp			22 50 47				ThA	20s
717	Comp			22 54 03				"	20s
718	HD 160762 i Her	17 36 38	+46 04	22 55 35	23 04 58	01 26 W			
719	Comp			23 06 15					
720	Comp			23 08 14					
721	HD 166182 102 Her	18 04 29	+20 47 55	23 10 05	23 30 34	01 23 W			
722	Comp			23 31 33					
723	Comp			23 33 41					
724	HD 180163 m-4yr	19 10 21	+38 58 26	23 35 10	23 59 20	00 49 W			
725	comp			00 00 51					
726	comp			00 03 15					
727	HD 184171 6yg	19 28 03	34 14 25	00 04 44	00 06 40	00 57 W			

Spectr. Temp. ..... Dome Temp./Hum. 123°C 51% Transparency Conditions ... V.v.s/. hazy ∴ Fine 206

Focus .....

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

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5000		0.04	A0V						Fds pgm		
		~~0.04~~	~~A0V~~								
1129		4.85	B0II						Fds pgm	L	
1500		3.80	B3IV						Fds pgm		
1400		4.36	B2IV						Fds pgm		
1400		4.39	B3IV						Fds pgm		
1100		4.24	B3IV						Fds pgm		

207 #4

Date 1990 July 26/27 Observers Ed.S. - 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.
728	Comp			00:27:45				ThA	20sec
729	BIAS (4)			00:31:11				"	"
730	Comp			00 47 33					
731	HD 218376	23 02 23	+58 52 45	00 50 10	01 22 50	01 42 E			
732	Comp			01 24 30	~~01 24 30~~			ThA	30 s
733	Comp			01 28 00	~~01 28 00~~				20
734	HD 160762	17 36 36	+46 04	01 29 25	01 46 19	04 09 W			
735	Comp			01 47 22					20 s
736	Comp			01 47 39					20 s
737	HD 166182	18 04 29	+20 47 55	01 51 25	02 18 42	04 12 W			
738	Comp	[+739 Comp]		02 20 00				ThA	20 20
740	HD 180163	19 10 21	+38 58 26	02 23 41	02 51 20	03 40 W			
741	Comp			02 52 25					20
742	Comp			02 55 20					20 s
743	HD 218376	23 02 23	+58 52 45	02 56 40	03 25 10	00 20 W			
744	Comp			03 26 20					20 sec
745	Comp			03 31 48					20

Spectr. T
Focus ...
Spectr. T

Exp. Mtr

1200

1400

1000

1400

Spectr. Temp. ..... Dome Temp./Hum. +21°C 55% Transparency Conditions .Sl. hazy..... 208

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... seeing seem good for most part of whole night.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ X binning	P.H.	Program	Remarks	Quality
				Echelle CCD	1860	.277 60μ	.4555	.205 60μ			
										Topup @ 00:30	
1200		4.85	B0 IV						Fds pgm	✓	
1400		3.80	B3 IV								
1000		4.36	B2 IV								
1400		4.39	B3 IV							L	
	OK	4.85	B0 IV						Fds pgm	L	

200 #5

Date 1990 JULY 26/27 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.
746	HD22928	03 28 03	+47 27 04	03 34 08	03 54 29	03 46 E			
747	Comp			03 31 48				Th Ar	20s
748	bias (4)			04:07:21					
749	dark 15m			04:09:00					
750	bias (4)			04:24:20					
751	dark 15m			04:26:00					

Spectr. Temp. ..... Dome Temp./Hum. 70°F ... 70% Transparency Conditions ... Fine 210

Focus .....

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

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		301	8055	← Same Throughout night				→	FBs pgm		

211 #1 Fri Sat

Date 1990 JULY 27/28 Observers F.L.S. - 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.
752	Bias (4)			17 44 45					
753	Dark 15m			17 46 15					
754	Bias (4)			18 01 35					
755	dark 15m			18 03 00					
756	bias (4)			18 37 30					
757	Dark 15m			18 39 00					
758	Bias (4)			18 54 20					
759	Dark 15m			18 57 00					
760	Bias (4)			19 25 30					
761	dark 15m			19 27 00					
762	Bias (4)			19 42 20					
763	dark 15m			19 44 00					
764-768	5 Flats					0 0	+45°	JUNG	90s
769-773	5 Flats					0 0	+25°	"	90s
774	comp			21 12 10					
775	HD 160762 iron	17 36 38	+46 04	21 20 40	21 31 10	0 04 W			

Spectr. Temp. ..... Dome Temp./Hum. +24°C ...55% Transparency Conditions ..PART. cloudy..... 212

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Dewe CCD	1860	.277 600μ	.4555				
								.185 2 800μ		Top up Q 21	
								.185 800μ			
								.185 800μ	(By mistake forgot to shorten slit)		
1500		V 3.80	B3 IV					.205 600μ	Fds pgm		

213 #2

Date 1.9.90. JULY 27/28 Observers F.d.S. - 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.
776	Comp			21 37 12				Th Ar	20s
777	Comp			21 39 25				"	"
778	HD 166182 102Her	18 04 29	+20 47 55	21 41 10	22 03 50	00 01W			
779	Comp			22 05 00				Th Ar	20s
780	Comp			22 07 15				"	20s
781	HD 180163 mHyr	19 10 21	+38 58 26	22 09 17	22 28 40				
782	Comp			22 29 30				Th Ar	20s
783	Comp			22 31 19				"	
784	HD 184171 8Cyg	19 28 03	+34 14 25	22 32 40	23 02 32	00 23E			
785	Comp			23 03 40				Th Ar	20s
786	Comp			23 06 14				"	"
787	HD 172176 Vega	18 33 33	+38 41	23:08:05	23:08:56				
788	Comp			23:10:22				Th Ar	20s
789	Comp			23:18:32	~~23:58:57~~			"	20s
790	HD 218376 1Cas	23 02 23	+58 52 45	23:20:56	23 58 32	03 13E			
791	comp							Th A	20s

Spectr. Temp. ..... Dome Temp./Hum. 1.23°C 57% Transparency Conditions Clearing 214

Focus .....

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

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD	1800	60μ	1.0555	.209 60μ			
1400		4.36	B2 IV						Fds pgm		
1200		4.39	B3 IV						Fds pgm		
1500		4.74	B3 IV						Fds pgm		
5000		0.04	A0 V						Fds pgm		
1200		4.85	B0 IV						Fds pgm		

215 #3

Date 1980 JULY 27/28 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.
792	Comp			00:04:30				ThAr	20s
793	HD 160762 iHen	17 36 38	+46 04 00	00 06 06	00:18:50	2 44 W			
794	Comp			00 20:02				ThAr	20s
795	Comp			00:22:47				"	20s
796	HD 166182 10zHa	18 04 29	+20 47 55	00:24:40	00:45:39	2 42W			
797	Comp			00:46:50				ThAR	20sec
798	Bias (4)			00:48:54					
799	Comp			01 03 44				ThAr	20s
800	HD 180163	19 10 21	+38 58 26	01 05 10	01 20 00	02 12W			
801	Comp			01 36 12				ThAr	20s
802	Comp			01 38 18				"	20s
803	HD 184171 8Cyg	19 28 03	+34 14 25	01 39 40	02 08 15	02 42W			
804	Comp			02 10 51					20s
805	Comp			02 15 32					20s
806	HD 218376 1Cas	23 02 23	+58 62 45	02 46 30	02 46 07	00 15E			
807	Comp			02 47 05				ThAR	20s

Spectr. Temp. ..... Dome Temp./Hum. 22°C ... 61% Transparency Conditions Part. Cloudy 216

Focus .....

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

Exp. Mtr	Seeing	Pic. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	Slit P.H.	Program	Remarks	Quality
				Echelle RCD	1860	60μ	4555	.205 60μ			
1500		3.8	B3 IV				P		Fds-pgm		
1400		4.36	B3 IV						Fds-pgm		
										Top up @ 01 00 EST	
		~~4.39~~	~~B3 IV~~								
1400		4.39	B3 IV						Fds-pgm	〃	
1450		4.74	B3 IV						Fds pgm		
1400		4.85	B0 IV						Fds-pgm	〃	

217 #4

Date 1990 JULY 27/28 Observers Eds.-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.
808	Comp			02 51 09				ThAr	20s
809	HD 22928	03 35 48	+47 27 04	02 53 10	03 13 34	4 23 E			
810	Comp			03 14 52				ThAr	20s
811	Comp			03 18 26				"	20s
812	HD 218376 1CAS	23 02 23	+58 52 45	03:20:40	03 54 25	0 53 W			
813	Comp							ThAr	20s
814	bias (4)			04:35:07					
815	dark 15m			04 37 00					
816	bias (4)			04 52 20					
817	dark 15m			04 54 40					

Spectr. Temp. ..... Dome Temp./Hum. +21°C 60% Transparency Conditions ..Sl. Hazy..... 218.

Focus .....

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

Exp. Mtr.	Seeing	Pos Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	18·60	60μ	·4555	600μ			
4000		7·05	B0 V						Fds pgm		
1450		4·85	B0 V						Fds pgm		

2~~19~~ pg#1 SAT SUN

Date 1990 JULY 28/29 Observers Tn (Omar) L77

Note Camera controller turned off then on to unhang system FDS advised this.

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.
Ce00859.PIF ~~001~~	Comp ✓			23 23 40				ThAr	20s
860	HD170000	18 22 11	+71 17 05	232730	235010	01 39W			
861	Comp ✓			235227				ThAr	20s
862 ~~005~~	DARK 4m ✓			23 55 30					
863 ~~006~~	BIAS ✓			00 06 00					
864 ~~007~~	HD170000 ✓	18 2211	+71 1705	000728	003018	02 18W			
865 ~~008~~	Comp ✓			00 31 47				ThAr	20s
866 ~~009~~	DARK 4m ✓			00 3434					
867 ~~010~~	DARK 2m ✓			00 39 55					
868 ~~011~~	BIAS ✓			00 44 10					
869 ~~012~~	Comp ✓			00 46 00				ThAr	20s
870 ~~013~~	HD201601 ✓	21 05287	+9 43 43	00 48 45	01 3110	0 39 ~~W~~			
871 ~~014~~	Comp ✓			01 32 50				ThAr	20s
872 ~~015~~	BIAS (4) ✓			01 34 50					
873 ~~016~~	HD201601 ✓	21 0529	+9 43 43	013927	021200	01 12W			
874 ~~017~~	Comp ✓			021400				ThAr	20

Spectr. Temp. ..... Dome Temp./Hum. 22°C 65% Transparency Conditions ..Sl. Hazy..... 220

Focus ..... CCD 1st Top up @ 20:55 Good AURORA after TOUR

Spectr. Temp. ..... Dome Temp./Hum. LCD T = -102°C by 21:40 TOUR looked at Ring Nebula

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion X Grating	Slit P.H.	Program	Remarks	Quality
				Echelle CCD	18.60	60μ	.4555	600μ		Should be setup same as	
1300		4.12	Mpsi						L22 pgm	previous night.	
				Note File II 004 is probably same as 002							
≈ 1300?		4.12	Mpsi								
										Mean ADU 164.716	164.716
1300		4.95	FOp						L22 pgm	4 ci	
										Mean ADU 162.877	
960		4.95	FOp				CCD warming up.			1 ci T = -90°C and	
										2 ci	

#2
221

Date 1990 JULY 28/29 Observers Zzz - Ts

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.
CE00875 ~~018~~	DARK 4min ✓			021640					
876 ~~019~~	BIAS x4 ✓	(Bias. bak)		022530					
877 ~~020~~	DARK 2min ✓			024055					
~~021-025~~ 878 882	FLATS x5	✓ 0752 ✓ 0754 ✓ 0756	0800 ✓ 0804 ✓	0250		04 W	+10°		90 sec
883 ~~026~~	Bias (4) ✓			031220					
884 ~~027~~	Dark 15m	(DARK. BAK)		28 ✓					
885 ~~028~~	Bias (4)			29 ✓					
886 ~~029~~	Dark 15m			45 ✓					
	Note	Nov 3/90 Tn		Numbers	changed	when doing	PIF2FITs		

Spectr. Temp. ..... Dome Temp./Hum. + 22°C 8% Transparency Conditions ..PART Cloudy 222

Focus .....

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

Super Aurora still by 03EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	S211 P.H.	Program	Remarks	Quality
				Echelle CCD	18.60	60μ	x 4.5 .455 Mean	H ADU = 191.009		Tgpype 02 20, T = -90°C	
										T = -80°C	
							Mean	ADU = 162.646		T = -102°C	
								.185 a 200μ	(Long Slit for Flats only)		
										Mean = 164.287 ADU	

223 #1 Sunmon

Date 1990 JULY 29/30 Observers SHOAT - Th

Emulsion Batches:

written to PERSEUS ... PCS account.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
818	Bias (4)			~19 15					
819	DARK (15m)	BIAS. BAK							
820	bias (4)								
821	dark (15m)								
822	Comp			20 4018				ThAr	20s
823	HD172167	18 33 33	+38 41	20 43 45	20 52 50	01 31 E			
824	Comp			20 5508				ThAr	20s
825-829	FLATs (5)	(while still on Vega)		21 0653	21 19	01 05 E	+38 45	Tung	90sec
830	Comp			21 3048				ThAr	20s
831	HD 210745	22 07 23	+57 12 30	21 3347	22 20 19	03 37 E			
832	Comp			22 2927				~~ThAr~~	20s
833	Comp			22 5205				ThA	20s
834	HD 204867	21 26 18	-6 00 40	22 5520	23 26 27	01 52 E			
835	Comp			23 2800				ThA	20s
836	Comp			23 3348				"	20s

Spectr. Temp. ..... Dome Temp./Hum. 4.25°C 72% Transparency Conditions PART cloudy 22h

Focus .....

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

Exp. Mtr.	Seeing	~~Mag.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ × Grating	Slit P.H.	Program	Remarks	Quality
				Echelle CCD						5175Å Central	
										set before 1st comp	
										ORDER 109, 1.971Å/mm	
				Echelle CCD ~~19.10~~	19.10	.277 600u	.3962	.205 600u			
5000		0.04	A0 V					"	SHORT STD	Cloud at first	
								"			
								.1985 ~800u .205 600u	FOR Flats only	Cloudy now	
1100		3.35	K0 I						SHORT pgm	Long cloud stretch @ 22EST PART cloudy	
										CCD T = −104.6 Topup @ 22 35	
2500		2.91 ~~2.91~~	G0 I						SHORT pgm		

225 #2

Date 1990 JULY 29/30 Observers SHORT - 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.
837	HD210745	22 07 23	+57 42 30	23 36 30	00 02 00	01 56 E			
838	Comp			00 03 50				ThA	20 sec
839-843	Flats (5)			00 17 04				TUNGSTEN	90 sec
844	Comp			01 34				ThA	20 sec
845	HD204867	21 26 18	-60 00 40	01 39 40	02 19 33	01 02 W			
846	Comp			02 21 45				ThA	20 sec
847	Comp			02 47 01					
848	HD204867	21 26 18	-60 00 40	02 48 46	03 11 12	01 54 W			
849	Comp			03 12 43				ThAr	20 sec
850-854	Flats (5)	Drive off now		03 21 10		02 05 W	-6°		
855	Bias (4)			03 42 22					
856	DARK 15m								
857	Bias (4)								
858	DARK 15m				~04 15				

ce 00859 → 886 done July 28/29 - Tn/Lez a few pages ago.

Spectr. Temp. ..... Dome Temp./Hum. 123°C 86% Transparency Conditions Hazy - cloudy 226

Focus .....

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

Exp. Mtr.	Seeing	Mag	Sp.	Inst.	Grating/ Tilt Echelle	Slit	Emulsion × grating	Slit P.H. H	Program	Remarks	Quality
2000		3.35	KOI	Echelle CCD	19.10	.277 60μ	.3962	.205 600μ	Short pgm	Central λ = 5175Å	
	[B-V=1.60]										
					19.10	.277 60μ	.3962	[.185 800μ	For Flats only]		
		B=3.73		Echelle CCD	* 19.20	.277 60μ	.5000	.205 600μ	λ 3950Å	Cloudy now	
3500		V=2.91	GOI						Short pgm *	[3969Å, 3934Å well centered in their respective orders]	
										T = -103.5 @ 0150	
1000		B-3.73	GOI							Topup start T @ 0225 T = -104.5	
								.185 800μ	Flats only		
										CCD T = -104.5 end.	
					Last	Topup @	04:30,	Then	T turned all the way	down.	

227 #1 Tues-Wed

Date 1990 JULY 31 – AUG 01 Observers SHORT – 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.
CE00887	Bias			≈2010					
888	DARK 15m	DARK.BAK							
889	Bias								
890	Dark 15m								
891	Comp			213305				ThAr	12s
892	HD 172167	18 3333	+38 4100	214644	214900	0027E			
893	Comp			215033				ThAr	12s
894	Comp			220818				ThAr	12s
895	HD 210745	220723	+57 4230	221127	224100	0310E			
896	Comp			224250				ThA	12sec
897	Comp			225724				"	12s
898	HD 204867	21 2618	-06 0040	224959	232016	0149E			
899	Comp			232254		E	-05 40 06		12sec
900–903	Flats (4)	Toget intensity ≈ 8K		2323 35	2344	E	-05 40 06		4sec
904–907	"	"	"	234800	2353	02 00E	+49°		4sec
908	Comp			00 0500					10s

Spectr. Te
Focus
Spectr. Te
Exp Mtr.
5000
1500
2000

Spectr. Temp. ..... Dome Temp./Hum. 4.18°C 65% Transparency Conditions Fine 228

Focus .....

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

Exp. Mtr	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion X grating	P.H. H-cont	Program	Remarks	Quality
						.277 60μ		.205 600μ			
										Top up @ 20 30	
										[4th order down	
				Echelle CCD	*18.54	.277 60μ	* .2834	.205 600μ	(Hα region) *	Hα centered @ ≈ col 137]	
5000		V 0.04	A0V						SHORT pgm	Note setup ∂ to get	
										Hα centered was 6730Å	
2500		V 3.35	K0I						SHORT pgm		
2000		V 2.91	G0I						SHORT pgm		
					18.54	60μ	.2834	.185 800μ	FOR Flats only	CCD T = -103.5	
					"	"	"	"	"		
					19.10	60μ	.3962	.205 800μ		5175Å centered	
										4th ORDER down, col 108	

229 #2

Date 1.9.90. July 31. Aug. 1... Observers Short - 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.
909	HD210745	22 07 23	+57 42 30	00 07 47	00 36 48	1 14 E			
910	Comp			00 48 00				ThA	10sa
911	Comp			01 21 53				ThA	10se
912	HD204867	21 26 18	-06 00 40	01 23 56	01 45 00	W			
913	Comp			01 47 33				ThA	10se
914-917	Flats 4			01 59 32		W	-5 40	Jung	10se
918-921	Flats 4			02 09 20		W	+38 44	Jung	10se
922	Comp			02 15 48				ThA	10
923	HD172167	18 33 33	+38 41	02 18 15	02 19 51	04 04 W			
924	Comp			02 21 28				ThA	10s
925	Comp			02 24 20				ThA	20s
926	HD172167	18 33 33	+38 41	02 26 02	02 27 42	04 12 W			
927	Comp			02 29 20				ThA	20s
928	Comp			02 32 20				"	20s
929	HD 210745	22 07 23	+57 42 30	02 35 43	03 19 35	01 38 W			

Spectr. Temp. ..... Dome Temp./Hum. 1.5°C : 79% Transparency Conditions ... Fine 230

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion x grating	Slit P.H. height	Program	Remarks	Quality
3000		B= 4.95	K0I	Echelle CCD	19.10	.277 60μ	.3962	600μ	Short pyx	5175Å	
										(0058 Topup started)	
3100		B= 3.73	G0I						Short pyx	4<1	
								.155 800μ			
								300μ			
								.205 600			
3000											
				Echello CCD	19.20	.277 60μ	.5000	.205 600		centered for 3969 & 3934Å	
3000		V 0.04	A0V								
5000		B 4.75	K0I								

231 #3

Date 1990 JULY 31/AUG 1 Observers Shoaf, 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.
930	Comp			032137				ThA	20s
931-934	Flats 4			032906		01 44W	+58 07	Tung	15se
935	Bias			033329					
936	Dark 15m	DARK. BAK during closeup.							
937	Bias								
938	Dark								

Spectr. Temp. ..... Dome Temp./Hum. 114 F. 84% Transparency Conditions .. Fine 232

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					19.20		5000				
					"		"				

233 Wed - Thurs

Date 1990 Aug 1/2 Observers KK DJF 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.
CEF011	Hartmann test			20 00	2005	T= +	20.°4 C		
CEF012									
CEO939	Biax 4X								
940	Comparison				20:49			ThA	10s
941	HD 137909 BCorBor	15 23.7	+29°27'	20:54:15	21 1900				
942	Comp				21:22			ThA	10s
943-946	Flats 4			21 25			+29°	ThAG	20s
947	Comp							ThA	10s
948	HD 137909 BCrB	15 23.7	+29° 27'	21:34:20	22:07:00	0h 55min W			
949	Comparison			22:07:50				ThA	10s
950	Comparison			22:10:30				ThA	10
951	HD 147547 δ Her	16 17.5	+19°23'	22 14 10	22 36 30	00 33W			
952	Comparison			22:35:00				ThA	10s
953	Comparison			22:44:00				ThA	10s
954	HD 183912 BCyA	19h 26.7 ~~19 999~~	+27 45 ~~+27 55~~	22 47 10	23 00 37				

Spectr. Temp. ..... Dome Temp./Hum. +20°C / 84.75% . Transparency Conditions . very clear 234

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	FITS	max ADU ~~Quality~~
	shift = +0.5 pixel at set 0.135											
	shift = +0.01 pixel at set 0.125 , left at 0.125											
											✓	
				echelle CCD 18.80	600 .4088	50μ	5010Å		FULL ORDER FROM TOP 4894-4927Å 3rd Full ORDER " " 4936-4965Å		✓	
2000	1.5 20	3.93	F0p	"				500μ	Asi Sp - KK		✓	max ADU 15000
											✓	
				echelle CCD 18.80	600 .4088	50μ	5010Å	1205 600μ	OK		✓	max 12000
											✓	
3000	1.5	3.93	F0p	echelle CCD 18.80	600 .4088	50μ	5010Å	1205 600μ	NO!		✓	3000
											✓	
											✓	
	1.5 20	v= 3.75	A9III	echelle CCD 18.80	600 .4088	50μ	5010Å	1205 600μ			✓	
											✓	
											✓	
2000		B +2	K5II	echelle CCD 18.80						Ici	✓	max 5300

235 #2

Date 1990 Aug 1/2 Observers KK/DF/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.
955.	Comp			2303				ThA	10s
956	Comp			2307				ThA	10s
957	HD186791 RV STD	$19^h41^m30^s$	+10°22'	23:11:22	23:21:25	0^h1^m E			
958	Comparison			23:25:00				ThA	10s
959	Comparison.			23:26:00				ThA	10s.
960	HD196524	$20^h32^m54^s$	+14°15'	23:29:30	0000	0^h12^m E			
961	.Comp				00:01			ThA	10s
962	Comparison				00:07			ThA	10s
963	HD192577 31 Cyg	$20^h10^m30^s$	+46°26'	00:09:40	00 ~~09:40~~ 42:00				
964	Comparison.			00:43:40				ThA	10s.
965	Comp after topup E on HD209790			0102				"	10s
966	HD 209790	22 00.9	+64 0.8	01:11:20	01:46:10	0^h28^m E	64 35		
967	Comp			0148					10s
968 971	Flats 4			0151			64°35		8s
~~972~~	~~Comp~~			~~0204~~				~~ThA~~	~~10s~~

Spectr. Temp. ..... Dome Temp./Hum. +48c 68% Transparency Conditions S/. Hazy 236

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	>11h P.H. High	Program	Remarks	Fit	MAX ADU Quality
											✓	
											✓	
1900	1.5 -2.0	V= 2.72	K3III	echelle CCD 18.80	600 .4088	50μ	5010Å		Std Vel		✓	
											✓	
											✓	
2030 ~~2000~~	1.5 -2.0	V =3.78	F5IV	echelle CCD 18.80	600 .4088	50μ	5010Å		Asm Sp KK	1C;	✓	4560
											✓	
											✓	
2200	1.5 -2.0	B =5.07	K2I *B3V	echelle CCD 18.80	600 .4088	50μ	5010Å		Asm Sp. KK		✓ ADU MAX	4933
											✓	
										Topy started	T=-102.5°C 00:45 ✓	
1435	1.5 -2.0	B =4.63	A3m	echelle CCD 18.80	600 .4088	50μ.	5010Å	.215 500u	Asm. Sp-KK		✓	
				"	"	"	"	"			✓	
				18.80	.4088	50μ		.205 600			✓✓ ✓✓	3927

237 #3

Date 1990 Aug 1/2 Observers Dif/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.
~~973~~	~~Comparision~~			~~02:20:30~~				~~Th-A~~	~~10s~~
972	Comparison			02:20:30				Th-A	10s
973	HD209790	22h 00.5m	+64°08'	02:26:53	0259	01 22 W	+6435		
974	Comp			0300				ThA	10s
975	Comp			03:06				Th-A	10s
976	HD192577 31 Cyg	20h 10.5m	+46° 26	03:08	0337	0349 W	~~+44~~		
977	Comp			0338				ThA	10s
978	Comp			03:42			~~+46 44~~	Th A	10s
979	HD3712 RV Sth.	00h 34m 48s	+55° 51' 07"	03:43:45	03:54:25	+0 28m E			
980	Comp			03:57:00				Th A	10s
981	Flat x4						56° 30'	Jung	8s
-84 985	Bias			0409	4:45				
986	DARK	DARK, BAK							
987	Bias								
988	DARK								

Spectr. Temp. ..... Dome Temp./Hum. 18.0°C/64.2% Transparency Conditions ... clear (light haze) ...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 17°C 65%

238

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	FIT	Quality MAV ICU
				echelle CCD 18.80	600 .4130						✓	
1440	2.0 -2.5	B-4.63	A3m	"	"	50μ	*4860Å		A3m Sp-KK	*4860Å ≈ centered in 1st complete Top order.	✓ ✓	3160
											✓	
	2.0" -3	B-5.07	K2II +B5V	echelle CCD 18.80	600 .4130	50μ	*4860Å		A3m Sp-KK	*Hβ right of center in top order	✓	2946
											✓	
											✓	
2200	3"-4"	V=2.23	K0IIIa	echelle CCD 18.80	600 .4130	50μ	*4860A		A3m Sp-KK		✓	
											✓	
											✓✓✓✓	
											✓	
											✓	
											✓	
											✓	

Backed up to Exch to

239

Date 1990 Aug 2/3 Thu/Fri Observers SAS/DF

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 989	BIAS (4x)			20:14					
990-93	Flats			20:17		0^h	$+30°$		20^s
994	Comp			20:37:27				ThAr	10^s
995	HD 137909 γ CrBor	15 23.7	+29° 27′	20:42:35	21:01:52	02^h 02 W			
996	Comp			21:03:20				ThAr	10^s
997	Comp			21:06:05				Th-Ar	10^s
998	HD 147547 δ Her	$16^h 17^m 30^s$	+19° 23′	21:08:00	21:33:34	01^h 40 W			
999	Comp			21:35:00				ThAr	10^s
1000	Comp			21:46:00				Th-Ar	10^s
ce 1001	HD 183912 β CygA	19^h 26.7	+27° 45	21:51:35	22:04:43	$0^h 57^m 30^s$ E			
1002	Comp			22:07:07	~~22:10:17~~			ThAr	10^s
1003	Comp			22:10:17				ThAr	10^s
1004	HD 186791	$19^h 41^m 30^s$	+10° 22	22:12:45	22:24:30	00^h 53 E			
1005	Comp			22:26:30				ThAr	10^s
1006	Comp			22:29:30				Th Ar	10^s

Spectr. Temp. ..... Dome Temp./Hum. 23/64% ... Transparency Conditions Clear

Focus .....

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

T = -103.6

00 25 1024 4 1 ccd fmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion X Scat	~~PH~~ Sear height	Program	Remarks	Pl. 2 fil.	Quality
				Echelle/ CCD	18.80	.281	.4095	.205	KK-Asm-SP	λ=4861 near top Topped up 20:00	✓	<1647
								.205			✓✓✓	~10000 max
								.205			✓	
2000	2"-3	3.93	F0p						"		✓	
											✓	
											✓	
2000	2"-3	v-3.75	A9III	echelle CCD	18.80	.281	.4095	.205	"	? few lines visible	✓	
											✓	
											✓	
2200	2"-3"	B=4.2	K5III	echelle CCD	18.80	.281	.4095	.205	"		✓	
											✓	
											✓	
2200	3"	v 2.72	K3III	"	"	"	"	"	Std Vel		✓	
											✓	
											✓	

p2 241

Date 1990 Aug. 2/3 Observers SAS/DiF

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.
1007	HD 147547 γ Her	$16^h 17^m 30$	+19° 23	22:51:00	22:54:03	$3^h 1^m$ W			
1008	Comp			22:55:50				Th-Ar	10s
1009-1012	Flats		+19° 23	22:58:08		3^h W	~~48°~~	Tung	20^s
1013	BIAS (4x)			23:10:00					
1014	Comp			23:13:27				Th Ar	10^s
1015	HD 137909 β CrB	$15^h 23.7$	+29° 27'	23:16:37	23:49:26	$04^h 50$ W			
1016	Comp			23:51:25				Th Ar	10^s
1017	Comp			23:54:11				Th Ar	10^s
1018	HD 147547 γ Her	$16^h 17 30$	+19° 23	23:56:33	00:39:13	$04^h 46$ W			
1019	Comp			00:40:20				Th Ar	10^s
1020	BIAS (4x)			00:45:00 ~~00:40:00~~					
1021	Comp			01:07:00				Th Ar	10^s
1022	HD 183912 β Cyg A	$19^h 26.7$	27° 46	01:04:18	01:17:30	02:16 W			
1023	Comp			01:18:53				Th Ar	10^s
1024	Comp			01:27:37				Th Ar	10^s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Clear 242

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion x Grad	SLIT P.H. width	Program	Remarks	FIT	Quality
2000	3"	3.75	A9 III	Echelle/ CCD	18.80	.281 50μ	.4095	.215	KK - Asm Sp		✓	
								.215			✓	
								.205			✓✓	
											✓	
					18.00			.215			✓	
2000	3"	3.93	F0p		18.00	.281 50μ	.4095	.215	KK-Asm Sp	Changed Echelle tilt to 18.00	✓	
											✓	
											✓	
1850	3"	3.25	A9 III		"		"				✓	
											✓	
										Top up 00:50	✓	
											✓	
2000	2.3"	B 4.2	K5 II		"		"				✓	
											✓	
											✓	

P3 243

Date 1990 Aug. 2/3 Observers SAS/DiF

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.
1025	HD 186791	$19^h 41^m 30^s$	$+10° 22$	01:23:30	01:34:58	$02^h 18$ W			
1026	Comp			01:36:24				ThAr	10^s
1027	Comp			01:41:30				ThAr	10^s
1028	HD 196524 β Del	$20^h 32.9$	$+14° 15$	01:43:50	02:04:25	$1^h 56^m$ W			
1029	Comp			02:05:40				ThAr	10^s
1030	Comp			02:08:50				ThAr	10^s
1031	HD 192577 31 Cyg	$20^h 10.5$	$+46° 26$	02:11:47	02:32:58	$2^h 33^m.5$ W			
1032	Comp			02:39:53				ThAr	10^s
1033	Comp			02:46:02	~~33:05~~			ThAr	10^s
1034	HD 209790	$22^h 00^m 54^s$	$+64° 08'$	02:53:05	03:20:40	$01^h 46$ W			
1035	Comp			03:22:00				ThAr	10^s
1036	Comp			03:27:00				ThAr	10^s
1037	HD 3712	$00^h 34^m 48$	$+55° 59$	03:29:00	03:34:13	$00^h 36$ E			
1038	Comp			03:35:19				ThAr	10^s
1039	Comp			03:42:16				ThAr	10^s

Spectr. Temp. ..... Dome Temp./Hum. ..20°/68%.. Transparency Conditions ....Clear.....244

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	Slit Pfl. height	Program	Remarks	FIT	Quality
2200	2"	2.72	K3III	Echelle/ CCD	18.00	.281 50μ	.4095	.215	Std Vel		✓	
											✓	
											✓	
2000	2"-3	v 3.78	F5II	echelle CCD	18.00	.281 50μ	.4095	.215	KK-Asm Sp		✓	
											✓	
											✓	
2000		B 5.07	K2III+ B3V	echelle CCD	18.00	.281 50μ	.4095	.215	KK-Asm Sp		✓	
											✓	
											✓	
2020	2"-3	B= 4.63	A3m	echelle CCD	18.00	.281 50μ	.4095	.215	KK-Asm Sp		✓	
											✓	
											✓	
2500	2"-3 ~~2"-3~~	2.23	K0III a	"	"	"	"	"	Std Vel		✓	
											✓	
											✓	

PH 245

Date 1990 Aug. 2/3 Observers SAS/DIF

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.
1040	HD 12929	$02^h01^m30^s$	+22° 59	03:44:20	03:49:03	01^h48 E			
1041	Comp			03:50:10				Th-Ar	10^s
1042	Comp			03:53:20				Th-Ar	10^s
1043	HD 18884	02^h57^m07	+03° 42	03:58:12	04:03:56	$2^h26^m.5$ E			
1044	Comp			04:07:22				Th-Ar	10^s
1045-1048	Flats (4)		+55°	04:13:00		0^h		Tung	15^s
1049-1052	Flats (4)		+20°	04:30		0^h		Tung	20^s
1053	BIAS (4x)			04:44					
1054	DARK								15^m
1055	BIAS (4x)								
1056	DARK								15^m

Spectr. Temp. ..... Dome Temp./Hum. 20/6.9.86 ... Transparency Conditions .... Clear 246

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	Slit height	Program	Remarks	FT	Quality
2500		V 2.00	K2 Iab	Echelle/ CCD	18.00	.281 50μ	x scat .4095	.215	Std Vel		✓	
											✓	
											✓	
2500	2-3"	V 2.53	M15 III	"	"	"	"	"	Std Vel		✓	
											✓	
											✓✓	max
								.205			✓✓	13000
								.205			✓✓	max 10 000
										(Dark·bak)	✓	
											✓	
											✓	
											✓	
										BACKED UP to Exabyte		

Note: Towards the end of the night the Echelle Tilt had shifted to 18.02. I guess it got hit sometime during the second half. - SAS

247 1990 Fri/Sat

Date Aug 3/4 Observers DiF/SAS

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.
ce01057	Bias (4x)			20:12:00					
1058	Dark			21:00:00 ~~20:15:00~~					15 min
1059	Bias (4x)			21:20:50					
1060	DARK			21:48:15					15 m
1061	Bias (4x)			~22:10					
1062	Comp			23:59:50				ThAr	10 s
1063	HD 3712	00h 34m 48	+55° 59	00:05:25	00:21:23	03h 46 E			
1064	Comp			00:24:07				ThAr	10 s
1065	Comp			00:29:52				ThAr	10 s
1066	HD 183912	19h 26m 42	27° 45′	00:32:09	01:12:42	02h 15 W			
1067	Comp			01:14:06				ThAr	10 s
1068	Comp			~01:17:~~09~~				ThAr	10 s
1069	HD 186761	19h 41m 30s	+10° 22	01:19:13	01:44:51	02h 32W			
1070	Comp			01:47:04				ThAr	10 s
1071	Bias (4x)			01:48:20					

Spectr. Temp. ..... Dome Temp./Hum. +23.9°/ 59.5% Transparency Conditions .. pf. cloudy + haze 248

Focus .....

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

Cloudy until 0h ... 90 again

0 01 256 1024 4 1 CCD fmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion λ beat	Slit height	Program	Remarks	FIT	Quality
				Echelle/ CCD	18.00	.28 50μ	λ=4000 Å .4950	.205			✓	
										Powered down + up @ ~20:30	✓	<240>
											✓	<164>
											✓	<190>
											✓	<163.8>
								.215		Top up 23:30	✓	
2500	3-4	2.23	K0 III a						Std Vel		✓	
											✓	
											✓	
2600	3-4	4.2	K5 II					.215	KK-Aom sp.	ONLY 1068 was written I's write time as listed as 01:35 so I suspect that it is the comp for HD183912.	✓	
3000		2.2	K3 II						Std Vel		✓	
											✓	
											✓	<161>

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Date 1990 Aug 3/4 Observers SAS/DiF

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.
1072	Comp			01:53:30				Th Ar	10^s
1073	HD 202109	$21^h 08.7$	+29°49'	01:55:42	02:27:20	~~0h30W~~			
1074	Comp			02:29:00				Th Ar	10^s
1075	Comp			02:38:38				Th Ar	10^s
1076	HD 215182 η Peg	$22^h 38.3$	+29°42	02:40:23	03:04:54				
1077	Comp			03:06:00				Th Ar	10^s
1078	Comp			03:23:00				Th Ar	10^s
1079	HD 17878 ξ Per	2^h ~~47.6~~ 47.2	+52° ~~21~~ 1'	03:28:20	04:24:42	$01^h 56$ E			
1080	Comp			04:26:30				Th Ar	10^s
1081-1084	~~Two~~ Flats		+52°	04:30		2^h E		Tung	90^s
1085-1088	Flats		+30°	04:45		0^h		Tung	90^s
1089	~~Dark~~ BIAS (4x)			05:04:40					
1090	DARK			05:07					15^m
Aug 6/7	1091 BIAS 4x			20:20					
	1092 DARK 15m								
	1093 BIAS (4x)								
	1094 DARK 15m								

Spectr. Temp. ..... Dome Temp./Hum. 20 / 73% Transparency Conditions light cirrus 250

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion x Grat	Slit P-H height	Program	Remarks	FIT	Quality
				Echelle/ CCD	18.00	.281 50μ	.4950	.215			✓	
2500	4"	3.20	G8II	"	"	"	"	"	Std Vel		✓	
											✓	
											✓	
2550		2.9	G8II	"	"	"	"	"	KK-Asm-Sp		✓	
											✓	
											✓	
1800	3-4"	3.09	G5III+ A5	"	"	"	"	"	"	Thick cirrus	✓	
											✓	
											✓✓	
								.205			✓✓	3420
								.205			✓✓	
											✓✓	
										Top up 05:06 +	✓	
											✓	
										DARK • BAK	✓	
											✓	
											✓	
											✓	

251

Date 1990 Aug 7/8 (Tue/Wed) Observers Fds/SAS

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.
1095	BIAS (4X)			17:43:15					
1096	DARK ~~15~~ m								15m
1097	BIAS (4X)								
1098	DARK								15m
1099	BIAS (4X)			18:30:36					
1100	DARK								15m
1101	BIAS (4X)								
1102	DARK								15m
1103	BIAS (4X)			19:16:00					
1104	DARK								15m
1105	BIAS (4X)								
1106	DARK								15m
1107-1111	Flats		+45°	20:04:20		0h		Tung	55s
1112-1116	Flats		+25°	20:20:00		0h		Tung	55s
1117-1121	Flats		-05°	20:30:00		0h		Tung	55s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 252

Focus .....

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

To Cyan
OV 256 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	Slit P.H.	Program	Remarks	Quality
				Echelle/ CCD	18.00 Gr	.255 .155	.4530 λ_c = 4481		Fits program		
								.185			
								.185			
								.185			

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Date 1990 Aug 7/8 Observers Fds/SAS

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.
1122	Comp			21:14:00				ThAr	7^s
1123	HD 124897 Arcturus	$14^h 11^m 06$	+19°42	21:17:20		$03^h 53$ W			180^s
1124	Comp			21:21:30				ThAr	7^s
1125	Comp			21:25:19				ThAr	7^s
1126	HD 182568 2 Cyg	$19^h 20^m 11^s$	+29°25'32"	21:26:35	22:17:15	$0^h 18$ E			
1127	Comp			22:18:25				ThAr	7^s
1128	Comp			22:21:23				ThAr	7^s
1129	HD 172167 Vega	$18^h 33^m 33^s$	+38°41	22:22:40	22:24:06				
1130	Comp			22:25:23				ThAr	7^s
1131	Comp			22:30:12				ThAr	7^s
1132	HD 184915 K Aql	$19^h 31^m 30$	-07°15	22:32:10	23:02:17	$0^h 14$ W			
1133	Comp			23:03:30				ThAr	7^s
1134	Comp			23:05:15				ThAr	7^s
1135	HD 184930 ε Aql	$19^h 31^m 32$	-01°30'33"	23:06:21	23:26:21	$0^h 38$ W			
1136	Comp			23:27:28				ThAr	7^s

Spectr. Temp. ..... Dome Temp./Hum. 17/80% Transparency Conditions hazy 254

Focus .....

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

Exp. Mtr	Seeing	Pig Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ CCD	60 / 15.40	.195 / .5μ	.4530 / [illegible]	.205	F3s pgm	Top 20:55	
1350		0.06	B2III								
1000		4.97	B5IV								
1000		0.04	A0V								
1000		4.95	B0.5III								
1671	3-4	4.36	B5III								

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Date 1990 Aug. 7/8 Observers Fdz/SAS

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.
1137	Comp			23:29:35				ThAr	7^s
1138	HD 190993 17 Vul	20 02 35	+23° 19' 34"	23:30:56	00:00:56	0^h 43 W			
1139	Comp			00:02:02				Th Ar	7^s
1140	Comp			00:03:33				Th Ar	7^s
1141	HD 196740 28 Vul	$20^h 34^m 10^s$	+23° 45' 54"	00:05:15	00:37:04				
1142	Comp			00:38:04				Th Ar	7^s
1143	BIAS (4x)			00:44:15					
1144	Comp			00:58:52				Th Ar	7^s
1145	HD 224572 σ Cas	$23^h 53^m 56$	+55° 11' 54"	01:01:10	01:38:17	$01^h 32$ E			
1146	Comp			01:40				Th Ar	7^s
1147	Comp			01:44:00				Th Ar	7^s
1148	HD 190993 17 Vul	20 02 35	23° 19' 34	01:45:30	02:21:12	$03^h 03$ W			
1149	Comp			02:22:28				Th Ar	7^s
1150	bias (4)			02:32:20					
1151	dark 15^m			02:34:00					
1152	bias (4)			02:49:20					
1153	dark 15^m			02:51:00					

Spectr. Temp. ..... Dome Temp./Hum. 15°/85% Transparency Conditions Hazy 256

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 14°/84%.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	Slit height P.H.	Program	Remarks	Quality
				Eastman CCD	18.60	.265 115μ	.493 λc = 4481	.205	Fds program		
1428	3-4	5.07	B3V								
1400		5.04	B5IV							Top up 00:44	
1300	3"	4.88	B1Z								
1250	3"	5.07	B3Z								

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Date 1990 Aug 8/9 Observers JWN FDS/SAS

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.
1154	bias								
1155-65	comparison for flexure tests, slit (and spectrograph) oriented N-S as during previous year								
1166-76	comparison for flexure tests, spectrograph rotated 90° CCW to place slit E-W								
CCØ 1177	BIAS (4x)			17:50:20					
1178	DARK			17:52:00					15m
1179	BIAS (4x)			18:07:20					
1180	DARK			18:09:00					15m
1181	BIAS (4x)			18:28:20					
1182	DARK			18:30:00					15m
1183	BIAS (4x)			18:45:20					
1184	DARK			18:47:00					15m
1185-1189	Flats		+45°	19:23:00		0h		Tung	45s
1190-1194	Flats		+25°	19:34:20		0h		Tung	45s
1195-1199	Flats		-05°	~19:45		0h		Tung	45s

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
		CCD	MT	32	64 1024	8	1				
dec = 0°											
dec = 0°											
				Eastle' CCD	18.00	.255 15μ	.455 (1-448)	.205	Fils pigin	Dark slide was left open + Th-Ar source was left on (from earlier tests ??)	
								.135			
								.135			
								.135			

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Date 1990 Aug 8/9 Observers Eds/SAS

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.
1200	Comp			20:12:15				ThAr	7s
1201	HD 124897 Arcturus	14h11m06s	+19°42	20:14:00	20:15:30				
1202	Comp			20:18:20				ThAr	7s
1203	Comp			20:21:40				ThAr	7s
1204	HD 182568 2 Cyg	19h20m10s	+29°25' 32"	20:24:56	20:36:26	01h56 E			
1205	Comp			20:37:38				ThAr	7s
1206	Comp			20:40:18				ThAr	6s
1207	HD 184915 K Aql	19h31m30	-07°15'	20:42:42	21:05:47	01 39 E			
1208	Comp			21:07:05				ThAr	6s
1209	Comp			21:08:26				ThAr	6s
1210	HD 184930 i Aql	19h31m32	-01°30' 33"	21:09:45	21:20:11	01h24 E			
1211	Comp			21:21:28				ThAr	6s
1212	Comp			21:23:18				ThAr	6s
1213	HD 190993 17 Vul	20h02m35	+23°19'34"	21:25:00	21:40:34	01h35 E			
1214	Comp			21:41:40				ThAr	6s

Spectr. Temp. ..... Dome Temp./Hum. 21°/58% Transparency Conditions Clear 260

Focus .....

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

90 again T = -102.9
0 0 256 1024 4 1 ccd fmt

Exp. Mtr.	Seeing	V Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	P.H.	Program	Remarks	Quality
				CCD	18-50	.05 15μ	4530	.05	Test program	Top up ~20h start	
7000											
1500	1.5-2	4.97	B3								
1463	2"	4.95	B05								
1500	1.5-2	4.36	B5								
1500	1-2	5.07	B3								

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Date 1990 Aug 8/9 Observers FDS/SAS

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
1215	Comp			21:43:30				Th-Ar	6s
1216	HD 196740 28 Vul	20h34m10	23°45'54"	21:45:10	22:00:19	01h46 E			
1217	Comp			22:01:37				ThAr	6s
1218	Comp			22:03:49				ThAr	6s
1219	HD 182568 2 Cyg	19h20m10	29°25'32"	22:05:00	22:17:42	0h14 E			
1220 ~~1130~~	Comp			22:19:00				ThAr	6s
1221	Comp			22:21:09				ThAr	6s
1222	HD 184915 K Aql	19h31m30	-07°15	22:22:42	22:48:18	0h3 W			
1223	Comp			22:49:30				ThAr	6s
1224	Comp			22:50:40				ThAr	6s
1225	HD 184930 i Aql	19h31m32	-01°30'33"	22:52:10	23:06:31	0h22 W			
1226	Comp			23:07:41				ThAr	6s
1227	Comp			23:09:56				ThAr	6s
1228	HD 190993 17 Vul	20 02 35	23 19 34	23:11:04	23:27:49	0h13 W			
1229	Comp			23:29:04				ThAr	6s

Spectr. Temp. ..... Dome Temp./Hum. 20°/59%. Transparency Conditions Clear 262

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H	Program	Remarks	Quality
				Echelle/ CCD	18.50	.255 115μ	x hica .45 30	.205	fds prgm		
1500	1"-2	5.04	B5 III								
1500	1"-2	4.97	B3 III								
1500		4.95	B0.5 III								
1500	1"-2	4.36	B5 III								
1500	1"-2	5.07	B3 V								

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Date 1990 Aug. 8/9 ..... Observers Eds/SAS .....

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.
1230	Comp			23:31:04				ThAr	6s
1231	HD 196740 28 Vul	20h 34m 10	23° 45' 54"	23:32:17	23:50:22	0h 04 W			
1232	Comp			23:51:40				ThAr	6s
1233	Comp			23:54:48				ThAr	6s
1234	HD 224572 σ Cas	23h 53m 56	+55° 11' 54"	23:58:00	00:13:04	02h 53E			
1235	Comp			00:14:40				ThAr	6s
1236	BIAS			00:15:47					
1237	Comp			00:34:38				Th-Ar	6s
1238	HD 184515 K Aql	19h 31m 30	-07° 15	00:36:56	01:03:30	02h 19 W			
1239	Comp			01:04:50				ThAr	6s
1240	Comp			01:06:05				ThAr	6s
1241	HD 184930 λ Aql	19h 31m 32	-01° 30' 33"	01:07:40	01:24:11	02h 41 W			
1242	Comp			01:25:36				ThAr	6s
1243	Comp			01:29:53				ThAr	6s
1244	HD 182568 2 Cyg	19h 20m 10s	+29° 25' 32"	01:31:50	01:48:30	03h 17W			

Spectr. Temp. ..... Dome Temp./Hum. 19°/65% Transparency Conditions ..... Clear 264

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	~~Emulsion~~ X grat	P.H. height	Program	Remarks	Quality
				Echelle/ CCD	18.50	0.55 115μ	.4530 Jc-4481	0.205	Feb program		
1500	1-2	5.04	B5 IV								
1300	1-2	4.88	B1 V								
										Top up 00:30	
[illegible]		4.95	B0.5 III								
1600	2-3	4.36	B5 III								
1700	2-3	4.97	B3 III								

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Date 1990 Aug. 8/9 Observers F.d.s./SAS

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.
1245	Comp			01:49:50				ThAr	6s
1246	Comp			01:51:47				ThAr	6s
1247	HD 190993 17 Vul	20h02m35	23°19'34"	01:53:05	02:13:00	02:55W			
1248	Comp			02:14:03				ThAr	6s
1249	Comp			02:15:48				ThAr	6s
1250	HD 196740 28 Vul			02:17:36	02:38:40	02h53W			
1251	Comp			02:40:09				ThAr	6s
1252	Comp			02:43:07				ThAr	6s
1253	HD 224572 5 Cas	23h53m56	55°11'54"	02:44:24	03:01:05	0h04E			
1254	Comp			03:02:26				ThAr	6s
1255	Comp			03:05:53				ThAr	6s
1256	HD 22928 8 Per	03 35 48	47°28'04	03:08:20	03:15:56	03h33E			
1257	Comp			03:17:25				ThAr	6s
1258	Comp			03:20:45				ThAr	6s
1259	HD 224572 5 Cas	23h53m56	55°11'14"	03:22:11					

Spectr. Temp. ..... Dome Temp./Hum. 18°/20% Transparency Conditions .... Clear 266

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ CCD	1850	0.55 115	0.4530 λc - 4481	0.205	Eds pigm		
1700	2"	5.07	B5 V								
1220	2"										
1500		4.58	B1 V								
4030		3.01	B5 III								
		4.88	B1 I								

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Date 1990 Aug 8/9 Observers Fds/SAS

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.
1260	Comp			03:38:25				ThAr	6^s
1261	HD 224572 σ Cas	$23^h 53^m 56$	$55° 11' 14''$	03:39:41	03:57:54	$0^h 52$ W			
1262	Comp			03:59:30				ThAr	6^s
1263	HD 224572 σ Cas	"	"	04:01:20	04:17:24	$01^h 12$ W			
1264	Comp			04:18:44				ThAr	6^s
1265	HD 224572 σ Cas	"	"	04:19:52	04:33:59	$01^h 28$ W			
1266	Comp			04:35:12				ThAr	6^s
1267	BIAS (4x)			04:43:24					
1268	DARK			04:45:00					15^m
1269	BIAS (4x)			05:00:20					
1270	DARK			05:02:00					15^m

Spectr. Temp. ..... Dome Temp./Hum. ...17°/77% ... Transparency Conditions ...Clear ... 268

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion + dispersing	Slit P.H. height	Program	Remarks	Quality
				Echelle/ CCD	18.50	.155 .15	.4530 λ .4481	.205	Fib Pigmx		
1500	3"	4.88	B12								
1500		"	"								
1500		"	"								

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Date 1990 Aug 9/10 Observers Fds/SAS/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.
1271	BIAS (4x)			17:40:30					
1272	DARK			17:42:10					15^m
1273	BIAS (4x)			17:57:30					
1274	DARK			17:59:10					15^m
1275	BIAS (4x)			18:19:00					
1276	DARK			18:21:20					15^m
1277	BIAS (4x)			18:37:00					
1278	DARK			18:39:20					15^m
1279-1283	Flats		+45°	19:05:00		0^h			60^s
1284-1288	Flats		+25°	19:14:45		0^h			60^s
1289-1293	Flats		-05°	19:26:10		0^h			60^s
1294	Comp			20:08:39				ThAr	6^s
1295	HD 124897 Arcturus	$14^h 11^m 06$	19° 42	20:12:15	20:13:15				
1296	Comp			20:15:55				ThAr	6^s
1297	Comp			20:18:48				ThAr	6^s

Spectr. Temp. ..... Dome Temp./Hum. 21°/68% Transparency Conditions ....Clear..... 270

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion × Grat	Slit H.T. height	Program	Remarks	Quality
				Echelle/ CCD	18.50	.255 115μ	Re .4461 .4530		Fob prgm		<164.0>
											<165.4>
											<164.4>
											<165.7>
											<164.3>
											<165.3>
											<164.3>
											<165.4>
								.185			
								.185			
								.185			
								.205		Top up end 19:58	
7000								↓		~~Top up end 19:58~~	

P2 271

Date 1990 Aug 9/10 Observers F.D./SAS/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.
1298	HD 182568 2 Cyg	$19^h 20^m 10^s$	+29 25 32	20:20:00	20:37:44				
1299	Comp			20:38:10				Th Ar	6^s
1300	Comp			20 39 47				Th Ar	6^s
1301	HD 190993 17 Vul	$20^h 02^m 35$	$+23° 19' 34''$	20:41:42	21:08:56	$02^h 07$ E			
1302	Comp			21:04:50				Th Ar	6^s
1303	Comp			21 06:15				Th Ar	6^s
1304	HD 196740 28 Vul	$20^h 34^m 10$	$23° 45' 54''$	21:07:50	21:29:30	$02^h 13$ E			
1305	Comp			21:30:22				Th Ar	6^s
1306	Comp			21:31:50				Th Ar	6^s
1307	HD 184930 i Aql	$19^h 31^m 52$	$-01° 30' 33''$	21:33:05	21:53:16	$0^h 47$ E			
1308	Comp			21:53:52				Th Ar	6^s
1309	Comp			21:55:15				Th Ar	6^s
1310	HD 184915 K Aql	$19^h 31^m 30$	$-09° 15$	21:56:37	22:29:31	$0^h 11$ E			
1311	Comp			22:30:12				Th Ar	6^s
1312	Comp			22:33:02				Th Ar	6^s

Spectr. Temp. ..... Dome Temp./Hum. ..21°/69%. Transparency Conditions .....Clear..... 272

Focus .....

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

Exp. Mtr.	Seeing	V ~~Pg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	~~Emulsion~~ λ & Disp	Slit ~~P.H.~~ height	Program	Remarks	Quality
1500		4.97	B3 IV	Echelle/ CCD	18.50	.255 115μ	.4530 Dc=.4481	.205	Fds prgm		
1500	2"	5.07	B3 IV								
1500	2"	5.04	B5 IV								
1500	2"3	4.36	B5 III								
1285										Some cloud	

pg #3 273

Date 1990 Aug 9/10 Observers Fds/SAS/Jn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CeO 1313	HD 182568 2Cyg	19h 20m 10s	+29° 25' 32	22:33:49	23:13:52	0h 46 W			
1314	Comp.			23:14:44				ThAr	6s
1315	Comp			23:16:40				ThAr	6s
1316	HD 172167 Vega	18h 33m 33	+38° 41	23:22:15	23:23:18	01h 42 W			
1317	Comp			23:23:57				ThAr	6s
1318	Comp			23:29:50				ThAr	6s
1319	HD 224572 σ Cas	23h 53m 56	55° 11' 14"	23:34:44	23:56:04	03h 07 E			
1320	Comp			23:57:00				ThAr	6s
1321	~~Comp~~ bias (4)			00:02:00					
1322	Comp			00:17:05				ThAr	6s
1323	HD 196740 28 Vul	20h 34m 10s	23° 45' 54"	00 18 41	00 44 46	01 02 W			
1324	Comp			00 45 18				ThAr	6s
1325	Comp			00 46 56				ThAr	6s
1326	HD 190993 17 Vul	20 02 35	+23 19 35	00 48 12	01:14:42	02h 04 W			
1327	Comp			01:15:20				ThAr	6s

Spectr. Temp. ..... Dome Temp./Hum. 20°/.85% ... Transparency Conditions ... Cloud!-... thin fog ... 274

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion λ range	Slit PH length	Program	Remarks	Quality
1043		4.97	B3 III	Echelle/ CCD	18.50	.255 16μ	.4530 λc = .4481	.205	Feb prgm	Cloud	
5000		0.04	A9 V						Feb prgm		
1500	2"	4.88	B1 V							Clearing	
										CCD T: -103.5C Topup @ 00:00	
1500		5.04	B5 V								
1500	<2"	5.07	B3 V								

P4 275

Date 1990 Aug 9/10 Observers FDS/SAS/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.
1328	Comp			01:18:23				ThAr	6s
1329	HD 184930 i Aql	19h31m32	-01°30'33"	01:19:22	01:45:39	03h06 W			
1330	Comp			01:46:15				ThAr	6s
1331	bias 4			02:01:00					
1332	dark 15m			02:03:20					
1333	bias 4			02:18:40					
1334	dark 15m			02:20:00					

Spectr. Temp. ..... Dome Temp./Hum. 18°/94%. Transparency Conditions ... Cloud 276

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 18/94%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion × Baffling	Slit D.H. height	Program	Remarks	Quality
				Echelle/ CCD	18.50	.255 115μ	.453 λc = 4481	.205	Foo pigm		
1558	2"	4.3	B5III							Cloud	

#1 277

Date 1990 Aug 10/11 Observers Fds/SAS/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.
CCD 1335	BIAS (4x)			17:30:52					
1336	DARK			17:33:30					15^m
1337	BIAS (4x)			17:49:00					
1338	DARK (			17:51:20					15^m
1339	BIAS (4X)			18:15:00					
1340	DARK			18:17:20					15^m
1341	BIAS (4x)			18:32:40					
1342	DARK			18:34:00					15^m
1343-1347	Flats		$+45°$	19:00:00		0^h			55^s
1348-1352	Flats		$+25°$	19:15:00		0^h			55^s
1353-1357	Flats		$-05°$	19:30:00		0^h			55^s
1358	Comp			19:59:20				ThAr	6^s
1359	HD124897 α Boo	14 11 06	+19 42	20 02 05	20:04:18	02^h48 W			
1360	Comp			20:04:49				ThAr	6^s
1361	Comp			20:07:43				ThAr	6^s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Sl. Hazy 278

Focus .....

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

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	Slit P.H. Height	Program	Remarks	Quality
				Echelle/ CCD	18.50	.255 115μ	.4530 λc-4481		Fds prgm		
								.185			
								.185			
								.185			
								.205		Top up 19:40	
7000		0.06	K2III					.205			

P2 279

Date 1990 Aug 10/11 Observers Fds/SAS/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.
1362	HD 182568 2 Cyg	19h 20m 10	+29° 25' 32	20:09:20	20:36:10				
1363	Comp			20:36:52				ThAr	6s
1364	Comp			20:38:40				ThAr	6s
1365	HD 190993 17 Vul	20h 02m 35	23° 19' 34"	20:40:30	21:16:21	01h 50 E			
1366	Comp			21:17:02				ThAr	6s
1367	Comp			21:19:39				ThAr	6s
1368	HD 196740 28 Vul	20h 34m 10	23° 45' 54"	21:20:38	21:59:19	01 39E			
1369	Comp			22:00:00				ThAr	6s
1370	Comp			22 04 00				ThAr	6s
1371	HD 172467 Vega	18h 33 33	+38° 41	22 04 45	22:06:13	0h 29 W			
1372	Comp			22:07:10				ThAr	6s
1373	Comp			22:09:17				ThAr	6s
1374	HD 184915 K Aql	19h 31' 30	-07° 15	22:10:22	22:50:22	0h 14 W			
1375	Comp			22:51:00				ThAr	6s
1376	Comp			23:11:03				ThAr	6s

Spectr. Temp. ..... Dome Temp./Hum. ...21°/73%. Transparency Conditions . haze + low cloud ...280

Focus .....

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

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1500	2"	4.97	B3II	Echelle/ CCD	18.50	.255 11.5μ	.4530 λc .4481 Å	.205	Fds prgm		
1500	2"	5.07	B3II								
1500	2"	5.04	B5II								
6000		004	A0II								
605	2"	4.95	B0.5II ~~B5II~~							Cloud	

pg#3 281

Date 1990 Aug 10/11 ..... Observers FL-SAS-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.
1376	HD 184930 iAgl	19 31 32	-01 30 33	23:42:48					
1377	bias (4)			23 52					
1378	dark 15m			2354					
1379	Th-Ar.			00:14:37				ThAr	6s
1380	HD 184930 iAgl	19 31 32	-01 30 33	00 15 48	01:02:58	02h27 W			
1381	comp			01:03:53				ThAr	6s
1382	Th-Ar			01:08:06				ThAr	6s
1383	HD 224572 8Gs	23 53 56	55° 11' 14"	01:09:50	01:46:40	01h11 E			
1384	Comp			01:47:30				ThAr	6s
1385	BIAS (4x)			01:56:50					
1386	DARK			01:58:00					15m
1387	BIAS (4x)			02:13:20					
1388	DARK			02:15:00					15m

Spectr. Temp. ..... Dome Temp./Hum. 19°/86% ... Transparency Conditions .. Cloudy 282

Focus .....

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

Exp Mtr.	Seeing	N Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	Slit P.H.	Program	Remarks	Quality
		~~0.36~~	~~B5II~~	Echelle/ CCD	18.50	0.255 115μ	0.4530 λc 4481	0.205	Fds pgm		
									Topup started @ 2353	T=-103.2°C	
1200	2"	4.36	B5II						Fds pgm	partcloudy	
1500	1.2	4.35	B1I								

Mon Tues 283

Date 13/14 Aug 1990 Observers DiF/Tn/KK

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.
CF00360 pk	Flat							Tungsten clear	5s
CF00361 pk	Flat							"	"
CF00362 pk	bias 4X								
00363	comparision			20:34:14			F18 stop	Fe/Ne clear	60s
00364	HD 144287	16 00.0	+25 30	20 43	21:15	222.5W	+25° 15'		
365	Comparision			21:17:28			f18 stop	Fe/Ne clear	60s.
366	Flat			21 49			F18 stop	TUNG 4=1/4	30s
367.	Bias(x4) [DARK. BAK started.]			22 11					
368	Dark 15min								
369	Bias(x4)								
370	DARK 15min								

Spectr. Temp. ..... Dome Temp./Hum. 1.20°C 88% Transparency Conditions ..... Part Cloudy 284

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 1.18°C 92% T = −101° 56 3 0 5 1024 6 1 CCDFMT Approx Max ADCU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				fiber fed CCD	1800/ 52.7	250μ	5120Å				5400 ~~10000~~
				"	"	"					5400
											12000
2100	poor	7.62	G8V	fiber fed CCD	1800/ 52.7	250μ	5120Å		Asm Sp. Kit	Cloudy at end	1100
											12000
				fiber fed	1800/52.7	250μ	5120Å				2700

pg #1 285

Date 1990 Aug 14/15 Observers D.F./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.
cf00371	Comparison			20:17:30			f/18 stop in place	FeNe Clear	60s
372	HD123782 (13 Boo)	14h 04m 38s	49° 36' 00"	20:26:38	20:33:17	3h 40m 30s W			
373	Comparison			20:34:20			f/18 stop in place	FeNe Clear	60s
374	HD144287	16h 00m 00s	25° 30'	20:41:07	20:57:55	2h 9m 54s W			
375	Comparision			20:58:40			f/18 stop in place	FeNe Clear	60
376	Bias 4x (Load bias.BAK)			21:00:20					
377	Flat			21 02			f/18 stop in place	TUNG H=1/2	20s
378	HD147379	16h 16m 36s	67° 28'	21:13:02	21 42	02 48 W	f/18 stop in place		
379	Comp			21:43			f/18 stop in place	FeNe clear	60s
380	HD156633	17h 25.3m	+67° 24'	21:46:30	22:00:00 ~~22:59:40~~	1h 49m 50s W	~~f/18 stop in place~~		
381	Comparison			22:01:40			f/18 stop in place	FeNe Clear	60s
382	HD173740	1950.0 18h 42m 13s	1950.0 +59° 33'3	22:09:50	2304	01 36W			
383	Comp			2305			f/18 stop	FeNe Clear	60s
384	HD173739	1900 18h 41.5	59° 29	23 09	00:00:00	02:30 W			
385	Comparison			00:01			f/18 stop	FeNe Clear	60

Spectr. Temp. ..... Dome Temp./Hum. 10.2°/61.6% Transparency Conditions ... clear w/ high cirrus ...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 17.1°/75.8%

286

563 0 5 1024 61 CCDFMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
7000	O.K.	5.25	M0III-b	ccd fiber fed	1800/ 52.7	250μ	5120Å		KK/Fall 90	- Dual Velocity standard	2000
3500	O.K.	mag. 7.62	G3V	ccd fiber fed.	1800/ 52.7	250μ	5120Å		KK/Fall 90	- first priority star.	
					Note: Full 2 Range = 5020 → 5220 Å center = 5120Å actually						5000
1500	O.K.	mag. 10.1	M0V	ccd fiber fed	1800/ 52.7	250μ	5120Å		KK/Fall 90	- second priority star.	500
5025	O.K.	V = 6.43	dG2 G9V	ccd fiber fed.	1800/ 52.7	250μ	5120Å		KK/Fall 90	- first priority star.	1900
1500	2" O.K.	V 9.61	dM5	ccd fiber fed	1800/ 52.7	250μ	5120Å	~~Red~~	KK/Fall 90	- first priority star ~~(Red words ...)~~ (Good round images HD 185739)	400
2100	O.K.	V 8.90	dM4	ccd fiber fed	1800/52.7	250μ	5120Å	Red	Asn Sp KK	NORTH one of pair	600

pg #2 287

Date 1990 Aug 14/15 Observers D.F./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.
cf00386	HD 173740	18h41.8m	59° 29'	00:06:00	00:52:00	3h 25m W			
387	Comp			00:53:20			f/18 stop in place	FeNe clear	60s
388	Flat			00:56:10			"	Tung/½ ~~clear~~	20s
389	Bias 4X			01:00					
390	Flat			01:30			f/18 stop	Tung/½	30s.
391	Comparision			01:37:30			"	FeNe Clear	60s.
392	HD 1326 A	0h 12.7	+43° 27'	01:38:00	02 22	0 38 E			
393	Comp						~~f/~~18 stop	FeNe clear	60s
394	HD 1326 A	00 12.7	+43° 27	02 32 30	03 00 00	00 02 E			
395	Comp			03 02					60s
396	BIAS (x4)			03 09					
397	HD 8890 B	01 22.6	+88 46	03 19	03 42	01 31 E			
398	Comparision			03:41:40			f/18 stop	FeNe clear	60s
399	HD 8890A	01 22.6	+88 46	03 59	04 01	01 12 E			
400	HD 8890B	01 22.6	+88 46	04 04	04:29:30	00 44 E			

Spectr. Temp. ..... Dome Temp./Hum. [illegible] Transparency Conditions . clear but hazing up. 288
(seeing becoming very roughly bad.)
Focus .....
Spectr. Temp. ..... Dome Temp./Hum. [illegible] [563/015/1024/6/1 ccd fwd] Mean APCU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
520	2"-4 0.8 - poor	V=9.07	dM5	ccd [illegible] fwd	1800/52.7	250μ	5120Å		KK/Fall '90	[illegible] allowed to suspend (by previous observation tonight) (sound this and [illegible] again.)	300
										↓	5000
										– top up of CCD dewar at 1:03	
										Flu = after top up completion	8000
											~~3000~~
2600	poor	V=8.07	uK5	ccd [illegible] fwd.	1800/52.7	250μ	5120Å		KK/Fall '90	some thin cloud	600
2700	2"-3"	V=8.07	M0V	ccd [illegible] fwd	1800/52.7	250μ	5120Å		Asm Sp KK	HD 1326 B too faint for tonight anyway	700
524	* poor	B 8.6	F	ccd [illegible] fwd	1800/52.7	250μ	5120Å		Asm Sp KK	Fiber had filled drum	360
								* high scintillation		of image	
5000	v poor	B 2	A	ccd [illegible] fwd	1800/52.7	250μ	5120Å		Asm Sp KK		2000
800	50-50	B 8.6	F	"	"	"	"		"	Repeat of 397	410

pg #3 289

Date 1990 AUG 14/15 Observers D.F./Jn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cf00401	Comp			04:34			f18 stop	FeNe clear	60s
402	4x Bias			04:36					
403	HD9138	1h24m57s	65° 38'	04:39	04:44	0h31m W			
404	Comparision			04:48:30			f/18 stop	FeNe clear	60s
405	Flat			04:51:40			"	Tung clear	15s
406	Bias (4)			0457					
407	Dark 15m	DARK.BAK							
408	Bias (4)								
409	DARK 15m								
410	Hartmann - IN							FeNe clear	60s
411	Hartmann OUT							"	"

Spectr. Temp. ..... Dome Temp./Hum. 4.5°C/87% Transparency Conditions ....Sl. hazy..... 290

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... [563/04/102x/0/2 confs] Mason ADCU

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5000	poor	v=20	4III	coll film red	1800/ 57.1	270μ	5120Å		Asm Sp KK (Fell 100)		1500
											7000

pg#: 291

Date 1990 Aug 16/17 Observers D.F./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.
cf00412	Bias 4X	20h		20h:07:40					
413	Flat			20:10:35			f/18 stop	Tung clear	15s
414	Comparision			20:13:10			"	FeNe clear	60s
415	HD147787	16h 08m 00s	+25° 30'	20:18	20:42	2h 11m W			
416	Comparision			20:44			f/18 stop	FeNe clear	60
417	HD147379	16h 16m.6	+67° 28'	20 55	21 38	2 44 W			
418	Comp			21 39				FeNe clear	60s
419	HD158633	17 253	+67 24	21 43	21 53	1 51 W			
420	Comp			21 58				FeNe clear	60s
FM 000268.TN	HD173739 seeing test	18 41.8	+59 29	22 03		0 40 W	+59 34	'N' mode	Int x4
421	HD173740	18h 41.8m	+59 29	22 06	23 08	1 49 W			
422	Comp			23 10			f/18 stop	FeNe clear	60s
423	HD173739	18 41.8	+59 29	23 12	00 12	2 53 W			
424	Comp				00 19		f/18 stop	FeNe clear	60s
425	Flat			00 16			"	Tung clear	15s

Spectr. Temp. ..... Dome Temp./Hum. 22.7°/86.9% Transparency Conditions ... clear/hazy 292

Focus .....

CCC Dewar topupat 19:30

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

[562 0 51024 01 cc/fent] Mean AKU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
										CCD T = -101.0°C	
											8000
3820	<2.0"	7.12	68V	CCD/ Fibre fed	1800/52.7	250μ	5120Å		Asm Sp (KK Fall '90)	- first priority star	1500
2600	2.0"	10.1	M0V	CCD/ Fibre fed	1800/ 52.7	250μ	5120Å		Asm Sp (KK Fall '90)	- second priority star	800
4200	1.5"	B 7.09	dK1 G9V	CCD/ Fibre fed	1800/ 52.7	250μ	5120Å		Asm Sp KK	- first priority star	1500 ~~800~~
31×31 pixel		4 frames							Seeing test	Dome NW no wind	
1450	1.5"	V 9.09	dK5	CCD/ Fibre fed	1800/ 52.7	250μ	5120Å		Asm Sp KK	- first priority star	500
1880	2.2"	V 5.9	dM4	CCD/ Fibre fed	1800/52.7	250μ	5120Å		Asm Sp - KK		600
											8000

PG#2 . 293

Date .....1990 Aug 16/17 Observers .....D.F./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.
000 426	Bias 4X.			00:19					
Fm 000 269.Tn	Seeing Test HD 207754	21 46.2	+43 25.00	00 27		0 0	+43 48	"N" male	Int 4
270.Tn	"	"	"	00 30		0 4 W	"	"	"
427.	Comparision			0052.			f/18 stop.	FeNe Clear	60sec
428	Flat.			0055.			"	Tung clear	15s
429	HD201156B	21h 02.7m	+33°44'	00 59	01 51	2h 8m W			
430	Comp				01:53.		f/18 stop	FeNe clear	60s
431.	HD201156A.	21h 02.7m	+33°44'	01 55	0242	3 00 W			
432	Comp			02:44.			f/18 stop	FeNe Clear	60s
433	Bias 4x.			02:46					
434.	HD 8890B	01 22.6	+88 46	0300	04:02	1 04 E			
435	Comp			04:04.			f/18 stop	FeNe clear	60s
436	HD 8890	01 22.6	+88 46	0407	0409	0 58 E			
437	Comparision			04:11			f/18 stop	FeNe clear	60s
438	Flat			04:13			"	Tung clear	15s

Spectr. Temp. ..... Dome Temp./Hum. 20.5°/..83% Transparency Conditions ..5/4 Hazy..... 294

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... [562 0 5 1024 6 1 cedfed] Moon ADCU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3x3 pics	4	Frames			Light	SW	breeze		Seeing test	Dome facing West	2.7
"	"	"			"	"	"		"	"	2.1
										— top-up at 00:36.	
					1800/50.8		4850Å				3600.
							4850Å				3600
2300	2.5"	8.1		Good Fiber fed	1800/ 50.8	250μ	4850Å		Asm Sp (KK Fall '90)	- first priority star. * Both components well separated while guiding	700
2540	2"-3"	7.3	A2?	Good Fiber fed	1800/ 50.8	250μ	4850Å		Asm Sp (KK Fall '90)	- first priority star Seeing not so good now	600
					Comet Levy very nice in binoculars. Similar to Andromeda in appearance						
1150	5"	B 8.6	F8V	CCD Fiber fed	1800/50.8	250μ	4850Å		Asm sp KK		350
7000		2	A	CCD Fiber fed	1800/50.8	250μ	4850Å		Asm Sp KK		1200
											4500

295 pg#3

Date 1990 Aug 16/17 Observers D.F./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.
d00439	HD9138	$1^h 24^m 57^s$	$+5° 38'$	4:20	4:26	$0^h 20^{min}$			
440	Comparision			4:29				FeNe clear	60s.
441	Flat			4:31				Tung clear	30s.
442	Bias 4x				5:45				
443	Dark				5:45				15^m
444	Bias 4x				5:45				
445	Dark				5:45				15^m

Spectr. Temp. ..... Dome Temp./Hum. 20.1°/.93.89 Transparency Conditions ....clear with haze.... 296

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
6300	20	V= 4.84	K4III	ccd fibre-fed	1800/ 50.8	230μ	4850Å		ASM SP CRK Fall 90)	-Radial velocity standard	1000
											8000

297 #1 Fri - Sat

Date 1990 Aug 17/18 Observers KK/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.
CF 446	Flat							Tung clear	10s
447	Comparison							FeNe clear	60s
448	HD 182~~752~~ 57	19 20.2	+11 44	20:23	20:29	01 28E			
449	Comp							FeNe	60s
450	BD + 88° 2			20 46	21 05	^07 E			
451	bias 4x			~~20 46~~ 21 46					
~~452~~	~~BD + 88° 5~~								
452	Comparison							FeNe clear	60s
453	HD 171391	18 29.5	-11 03	21 37	21 54	00 47W			
454	Comparison								60s
455	HD 175225	18 49.3	+ 52 51	22 06	22 14	W	504		
456	HD 186882B	19 41.8	+ 44 53	22 20	22 25	08 08W	278s		
457	HD 186882A	19 41.8	+ 44 53	~~22 27~~		W	43		
458	HD 186882B	"	"	22 32	22 35	W	144		
459	Comp						f18	FeNe clear	60s

Spectr. Temp. ..... Dome Temp./Hum. t24°C 67% Transparency Conditions Hazy 298

Focus .....

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

mean
ADCH

Exp. Mtr.	Seeing	~~Pg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Fiber Feed CCD	1800/52.7	250μ	5170Å	CCD			3000
					"	"	"	"			
4000		5.16	G8 IV		"	"	"	"	std vel		1700
600	OK	8.8	G8						Asm Sp/KK		350
600		~~9.2~~	~~G8~~								
		~~9.2~~								Too thick	
4200		5.14	G8III						std vel		1700
6	2"	5.47	dG8						AK pgm		1700
655										Faint Component	550
4500											1700
1700											740

299 Pg #2

Date 1990 Aug 17/18 Observers KK/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.
CF 460	Flat							Tung clear	4s
CF 461	Flat						at 2312	"	4s
CF 462	Comet Levy	1990 21 37	+13 46	23 00	23 30	0 36 E	+13 46		
463	Comp			23 33			f 18 stop	FeNo Clear	60s
464	Bias 4x	All closed up now		23 43					
465	Dark 15m	LOAD Bias BAK							
466	Bias 4x								
467	Dark 15								

Spectr. Temp. ..... Dome Temp./Hum. 32°C 70% Transparency Conditions Hazy 300

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											3400
											3400
AB					1800/527	200μ	5170Å	CCD	RA 2325	21 36 50 +13 45 20	
4									@ 2335	21 36 45 +13 44 30	
									Backed up to end		

30 pg#1 sun mon

Date 1990 AUG 19/20 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.
FM ∞ 27 Tn	HD163075	17 49.2	+46 40	20 20		00 02W	+46 41	"N" made	Int x4
CF00468FTS	Comp			20 51			f18 stop	FeNe Clear	60s
469	HD 161096	17 38.5	+04 37	20 55	21 06	00 56W			
470	Comp							FeNe Clear	60s
471	BIAS (x4)			21 11	~~21 11~~				
472	Flat			21 26			f18 stop	TUNG Clear	~~8~~ 15s
FM 272 Tn	HD 176844	18 57.0	+40 33	21 22		00 05E	+40 40	"N" made	Int x4
473 FTS	Comp			21 41			f18 stop	FeNe Clear	60s
474	HD 182917	19 21.9	+50 02	21 48	22 12	00 21 W			
475	Comp						f18 stop	FeNe Clear	60
476	HD 182917	"	"	22 16 30	22 42	00 51 W			
477	Comp			22 43					60
478	BIAS x4 [Load Bias.Bak]			22 48					
479	Flat						f18 stop	TUNG Clear	10s
480 Comp									
481	HD 182917	19 21.9	+50 02	23 ~~24~~	23 37	01 41 W			
482	Comp						f18 stop	FeNe A=1/4	15 sec

Spectr. Temp. ..... Dome Temp./Hum. 17.2°C ... 69% Transparency Conditions . Hazy to cloudy 302

Focus .....

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

Fulmnt 56105 1024 6 1 CCDFIXT

Cooled from Room Temp of 20.00

mean HRU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
31 ~5/Pixels		V 6.46	1D III	Fairson & Dave special @ 20EST	Fiber Head	4 frames			Light N wind	Dome WNW Cirrus	3.1
				Fiber CCD	1800/527	250μ	5170Å	15'	Tuplup @ 20EST	CCD T = -103°C	
5000	Poor	B 3.93	K2 III	Fiber CCD	1800/527	250μ	5170Å		stabel	In Cloud	1600
8 secs ? ~~10 secs~~											2500
31x31		V 6.65	K2 III	4 frames					Seeing Test	Dome WSW Light N Breeze	3.0
				Fiber CCD	1800/527	250μ	5170Å				
2650	4"	8.4	M b				"		CH Cyg pgm		500
2530		8.4	M b						CH Cyg pgm		500
											5
							5170Å			Continuum ≥ 500	5000
600	3"	8.4 VAR	M b	Fiber CCD	1800/6208	250μ	Hα		CH Cyg pgm	Hα peak 2800 * Angle may not be quite RIGHT	
Std Comp	30 secs	FeNe @ A = 1/4									

303 pg #2 Sun mon

COMET Levy passed 2 1/2° South of S Equ very FNE in Binoculars

Date 1990 Aug 9/20 Observers TG

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
483.Pts	HD182917	19 21.9	+50 02	2335	2352	201 W		~~FeNe A=1/4~~	~~10 sec~~
484	Comp							FeNe A=1/4	10sec
485	BM CASS	00 ~~48.8~~	+63 33	0001	0016	0305 E			
486	"	"	"	0017	0027	0253 E			
487	Comp							FeNe A=1/4	10s
488	FLAT							Tung A=1/2	10s
489	FLAT							"	10s
490	Bias x4	[Load Bias.BAK]		0035					
491	BIAS(4)			0049					
492	DARK 15m	DARK.BAK							
493	Bias (4)								
494	DARK 15m								

Spectr. Temp. ..... Dome Temp./Hum. ..+14°C...68% Transparency Conditions ....Clear? Cloudy 30%

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... * Same CCD bin forward. OK for Hα Region too

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1200	3"	8 24 wp	Mb	Fiber CCD	* 1800/62°.8	350μ	6600Å		Obs pyn		Hα peak 6000 1000 cont
				"	"	"					
240	4"	✓ 8.3→ 9.3		"	"	"	6600Å		Obs pyn	Port Cloudy	Hα Peak 900 cont = 300
80										More Cloudy	
											4500
											4500

~~Not backed up tonight.~~

Backed up Aug 21/90

CCD T still -103.2°C at end

305 mon/TUES

Emulsion Batches:

Date 1990 AUG 20/21 Observers J.n PTS = Photon Timeing Photograph

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FIT00 342 mki	Flat			20 48	21 01	0 0	platform	TUNG A=1/4	
343.	Flat			21 09		"	"	TUNG A=1/2	3600
344	Comp					"	"	FeNe A=1/4	365
345.	DARK			23 04	00 04				
FIT00346. HRT	Hartmann - IN							FeNe 1/2	120s
347. HRT	Hartmann - OUT							"	"
348. HRT	Hartmann - IN							"	"
349. HRT	Hartmann - OUT							"	"
350. KK	Comparison, full aperture							FeNe 1/8	300s

Spectr. Temp. ..... Dome Temp./Hum. 11.8°C 70% Transparency Conditions Cloudy mostly 306

Focus .....

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

No observing after all

Exp. Mtr. H β	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1050 20	ND=2.0			PTS	1200/6000	8.5	6600°				
2659/30	ND=2.2								Actually not stopped till 2235		
140/410	ND=2.2								Hartmann mask IN for all		
410/410											
										after 9 [A] steps	
										shift OUT IN = +2.5	
										after 5 [S] steps	
										central shift ≈ +0.5 pix	
80											

307 Tues wed

Date 1990 AUG 21/22 Observers MKi-Tn

Photon Time Tug Spectrograph

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.
351 MKI	Flat	Had to use manual shutter		1927	2028	0		TUNG A clear	3600
Fm 273Tn	HD163075	1749.2	+46 41	2035	4 frames	00 28W	+46 40	'N' male	Int x4
352	Comp			2100	2105	f18 stop in No ND		FeAR clear	300
353	HD 184467	1929.5	+28 51	2114	2119 30	00 31E			
354	Fe-A Comp.				2128	f18 stop	No ND	FeAR clear	200
355	HDE 226868	1954.6 1900	+34 56	2131	2137	00 38E			370
356 MKI	FLAT			2149	2249			TUNG A=1/4	3600

Spectr. Temp. ..... Dome Temp./Hum. +19°C 78% Transparency Conditions ..... FINE - Cloudy 308

Focus .....

Dome open & Fans on by 1940 EST

Spectr. Temp. ..... Dome Temp./Hum. +16°C 85%

AST TIME 10" slow

Exp Mtr	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2000/25	ND	2.0		FIBERFed PTS	1800/628	BS	6600Å			Signal was down from last night.	
3x31 pixels		V 6.46	KO	[Dome WWW]	Fiberfed Head	(Slit East Breeze)			seeing test Then adj	made to pp plug signal	much higher
90/5	1			FIBER PTS	1800/628	BS	6600Å				
2500/30	2"	V 6.59	dK5	"	"	"	"		stdvel	[Known to vary Aug 7-8/1990]	
90/5				"	"	"	"				
450/20	2"	B 9.74	BOTb	"	"	"	"		Mtl pgm	Cloud at end	
2059/30	ND	=2.0		"	"	"	"				
									Fits pocket up to end Jan		

309 pg#1 Thurs Fri

Date 1990 AUG 23/24 Observers MKi-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
FIT00357.MKi	Flat no header			19 19	20 13		Diffuser in	Jung A=1/8	
274.Tn	HD171232	18 28.5	+25 25	20 30		00 11E	+25 36	N made	Int x4
358.	Comp					f18 stop not used	Fe AR Clear	no ND	M30.
359	Comp			20 23			Fe AR Clear	f18 stop ND0.1	200
360.MKi	HD171232	18 28.5	+25 25	20 31	20 47	00 06W			
361.MKi	Comp			20 50			Fe AR Clear	f18 ND0.1	200
362	HD234677	18 31 35	+51 38	21 01	21 02	01 19W			
363	Comp						Fe Ar Clear	f18 ND0.1	200
364	HD197433	20 38.8	+75 14	22 19	00 19	01 32W			
365	Comp						Fe AR Clear	f18 ND0.1	200
366	PU VUL	20 16.8	+21 15	00 31 31	00 45	02 16W			800s
367	"	"	"	00 47 30	00 56	02 27W			500
368	BM Cass	00 48.6	+63 33	01 04	01 45	01 17E			
369	Comp						Fe AR Clear	f18 ND0.1	200
370	HD 6314	00 59.0	+39 27	01 56	02 31	00 41E			

Spectr. Temp. ..... Dome Temp./Hum. 1.22°C 72% Transparency Conditions ... FIRE 310

Focus .....

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

Dome open at @ 19:30
Fans on by 19:10

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1200/25 HD22		ND 2.2		Fiber Feed PTS	1800/62.8°	BS	6600Å				
31 x 11 pixels	OK	7.73	G8II			Fiber Head			Seeing test	Dome SSW, Light fast breeze	
85/10										Counts too high.	
70/5											
1900/25	<2"	7.73	G8III						std vel	cuts to 2500/sec	
100/8											
300/15	2"	8.6	K6Ve						MK pgm	FID drawn	
70/5											
1300/20	2"	8	G5 +K0V						MK pgm	cuts to 1800	
70/5											
600/10	2"	10	M0III M8						MK pgm		
200/5	2"		"						"	ND 0.6 in beam	
600/10		8.7-9.3								ND Removed	
1200/25	3"	6.57	F0Vn						Telluric Std	Brighter of PAIR some cloud.	
										Westone a wide pair	

311pg#2

Date 1990 AUG 23/24 Observers MKi/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.
Fm 275Tn	HD6314	00 59.0	+39 27	02 32		00 39E		N'made	Int x4
371	Comp						FeAR Clear	f18stop	200
372	HD21754	03 25.3	+12 36	02 48	02 55	02 43 E	ND 0.6	in*	
373	FLAT on Timer 3hrs			03 09		Diffuser IN	ND 2.0	TUNG A=18	10,800

Spectr. Temp. ..... Dome Temp./Hum. 117° 86% Transparency Conditions ... Sl. Foggy 312

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Light East wind

Exp. Mtr.	Seeing	Ptg. Mag	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
31×31 pixels		6.57	10Å/n	Fiber Int PTS	1800/28	85	6600		Seeing Test	Fiber Hol / DOME SSW 4 frames	
70/8				Fiber Int PTS	1800/28	85	6600				
2000		4.15	(~~5Å/n~~ ~~KO II-III~~)	SP Type	KO II-III				Mk. pgn	fog* cloud	
500/30	Dif			Fiber Int PTS	1800/28	85	6600?				

313 1991 Fri Sat

Date 1990 AUG 24/25 Observers mki-Tn

Emulsion Batches:

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.
374 mki	FLAT 3hrs			16 45	19 45		ND=2.0	TUNG A=1/8	3hrs
Fm 00 276Tn	HD 171232	18 28.5	+25 25		19 51	00 45E	f18 stop	"N" mode	Int x4
375 mki	Comp			19 54			No ND	FeAR Clear	200
376 mki	HD 171232	18 28.5	+25 25	19 59 41	20 10	00 27E	No ND		
377 mki	Comp						f18 stop No ND	FeAR Clear	200
378 mki	HD 197433	20 38.8	+75 14	20 22	22 22	00 20E			2hrs
379 mki	Comp			22 24			f18 stop No ND	FeAR Clear	200
380 mki	HD 197433	20 38.8	+75 14	22 31	23 42	00 58W			4300
381 mki	Flat in A			23 48	00 18		ND=2.0	TUNG A=1/8	
382 mki	Flat in B			00 20	00 32		"	"	660
383 mki	Comp			00 36			f18 stop only	FeAR Clear	200
384 mki	HD 197433	20 38.8	+75 14	00 38	02 38	03 57W			
385 mki	Comp						f18 stop only	FeAR Clear	200
386 mki	HD 6314	00 59.0	+39 27	02 46	03 06	0 01E			1200
Fm 277Tn	HD 6314	"	"			00		"N" mode	Int x4

Spectr. Temp. ..... Dome Temp./Hum. 121°C 77% Transparency Conditions . Fine .....

Focus .....

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

Dome open by 1930
Fans on by 1945

Exp. Min (1945)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3500/50				Fiber Fed PTS	1800/628	BS	6600A	CH A			
31x31	OK	V 7.73	G8II						4 Frame Seeing test	Dome SSW Light breeze (East)	
85/5											
2000/20		V 7.73	G8II						std vel		
600/20		V ≈80	G5 +40V						MK Pyx	Time TAG 1800-3600 pixel #s	
75/6											
150/20		V ≈8	G5 +40V						MKP	oscilation in CHA notch Time TAG 1800-3600 pixel #s	
3500/30								CHA	Obvious Popine/oscillation seen again		
50/2500								CHB	CHB looks OK		
20/85					[902-3301 Wells Fargo]	Wells Fargo called about a power glitch @ 00 EST				i.e. The alarm went off	
3/2500	2"-3"	V ≈8	G5 +40V							Time tag 1800-3600 pixel #s	
0/90											
50/2800	2"	V 657	FOVn						Telluric std	cuts to 3300/sec	
31x3 pixels	<2"	"	"			Fiber Heal	4 frames		Seeing test	Dome facing W. very light west breeze	

31S pg#2

Date 1990 AUG 24/25 Observers M.K.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.
387	HD 221491	23 27.5	+34 24	0315	0345	0209 W			
388	Comp						Fe AR Clear	f18 step only	200s
389	HD 22468	03 31 39	+00 16 00	0351	0448	0009 E			
390	Comp						Fe AR Clear	F18 step only	200
391	Flat on timer			0457			Tung A=1/8	NP 2.0	3hrs

Spectr. Temp. ..... Dome Temp./Hum. +18°C ..... 90% Transparency Conditions ... Hazy 316

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +18.5°C 91%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
H.B.		V		Fiber							
4:/2800	2"	6.5	B9.5	PTS	1200 l/mm	BS	6600Å	CHB	Yellow sil	V sun/ = 250 km/sec	
f.											
150/6800	3"	V 6.0	G9.5						Mk. pgm	counts to 8200/sec Time=TAG 2900-2900	
15/110											
30/2500											

317

Date Aug 29/30 1990 (Wed/Thu) Observers SAS / 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.
Mki ~~PD~~ 393	Flat	platform		19:27	20:27		ND 2.0	Tung A=1/8	3600
394	Comp			20:56			F/18 Stop	FeA clear	200s ~~150~~
395	HD 182917 CH Cyg	19h21.9	+50°02	21:05:06	22:12:00	01h 02 W			4000s
396	HD 182917 CH Cyg	"	"	22:12:	23:19:15	02h 10 W			4000
397	HD 182917 CH Cyg	"	"	23:20:30	00:27:12	03h 18 W			4000
398	Comp			00:28:27			F/18 stop	FeA clear	200s
399	HD 221491	23h 27.5	34°24	00:37:05	01:37:05	0h 28 W			3600s
400	Comp			01:38:50			F/18 stop	FeA clear	200s
401	~~[illegible]~~ HD 223094	23h 41.5 ~~00h 48.6~~	28°09	01:44:55	01:48:55	0h 18 W			240s
402	Comp			01:49:31			F/18 stop	FeA clear	200s
403	BM Cass	00h 48.6	63°33	02:00:47	02:26:10	0h 12 E			1500s
404	Comp			02:27:01			F/18 stop	FeA clear	200s
405	Flat	platform		02:47	~~01:52:26~~	4h	ND 2.0	Tung A=1/8	10800

Spectr. Temp. ..... Dome Temp./Hum. 20°/42% Transparency Conditions ....Clear..... 318

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 15°/74%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50/2400				PTS (Fibre)	1800/ 43°.3	BS	6600Å	CHB	presumably T_{eff}		
10/80											
30/1200	2"5	8.4	M							15 meg to drive No	
20/800	"	"	"							13 meg "	
20/800	"	"	"							13 meg	
10/80											
30/1200	4"	V 6.65	B8V						Telluric Std	No tap.	
10/90											
50/2400	4"	V 7.45	K5III						Std Rad Vel		
10/90											
10/350	4"	V 8.9.5									
10/80										DDS clock on AST is 8 sec slow	
50/2400											

319 pg #1

Date 1990 Aug. 30/31 (Thu/Fri) Observers SAS/Jn./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.
406	Flat	plat form					ND 2.0	Tung ~~CO~~ A=1/8	3^h
407	Comp			19:36:21			ND 0.3	FeA A=1/2	200^s
~~Fmag~~ 408	HD 171232 *	18^h 28.5	+25° 25	19 45 59	19 50 59	00 21 E	ND 0.2 *		300^s
Fmag 278.0 Tn	HD 171232	18 28.5	+25 25	19 52		00 19 E	no ND	* No mark	Int ×4
409	Comp						ND 0.3	FeA A=1/2	200^s
410	HD 182917 CH Cyg	19^h 21.9	+50° 02	20:05	21:12	00:07 W	no ND		4002s
411	HD 182917 CH Cyg	19 21.9	+50° 02	21:14	22:21	01:16 W	"		4017
412	HD 182917 CH Cyg	19 21.9	+50 02	22:23	23:31	02:25 W	"		4048
413	HD 182917 CH Cyg	"	"	23:31	00 38 50	03 34 W	"		4010
414	Comp			00 39			ND 0.3	FeA A=1/2	200
415	HD 182917 CH Cyg	19 21.9	+50 02	00 45	01:52:06	4^h 47 W			4020
416	Comp			01:53:04			ND 0.3	FeA A=1/2	200
417	HD 221491	23 27.5	+34 24	02 02	03 02	1 50 W	ND 0.6		3600
418	Comp			03 03			ND 0.3	FeA A=1/2	200
419	BM Cass	00 48.6	+63 33.0	03 11 37	03 32	W	no ND		1200

Spectr. Temp. ..... Dome Temp./Hum. 26/54% ... Transparency Conditions .... Clear 370

Focus .....

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
/2000				PTS Image Fed	1800/50°	BS	4820 Å	CHB		AST clock correct	
10/40									↓ Signal in CHB without ND was a 4500 cts, ~~[illegible]~~ ??		
60/3500	<2"	V 2.73	6.8 III	~~[illegible]~~ ?	~~[illegible]~~				−35.9±0.5 Std Vel	* in stellar beam to cut signal	
31×31 pixels		"	"	ND filter removed		Fiber Head	4 frames		seeing test	Dome facing SSE	
/140											
30/1100	>2"	Var 8.40	M	PTS Image Fed	1800/50°	BS	4820 Å			12.6 mag to Drive "4"	
10/750	3"-2"	"	"	"	"	"	"			≈ 10 mag to Drive "4"	
10/250	3"	"	"	"	"	"	"			10 mag	
5/800		"	"	"	"	"	"				
5/110			"	"	"	"	"				
/200	2"-4"	Var 8.40	D7	"	"	"	"				
/150				"	"	"	"				
5/2800	>2"	V 6.8	M5 III		"	"	"		Telluric Std	Cirrus to 3200/sec Some cloud	
7/110				"	"	"	"				
30/1100		V 9.0 013		"	"	"	"				

321 #2 Thurs - Fri

Date 1990 Aug 30/31 Observers SAS/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.
420	Comp			03 32 18					200
421	HD 12029	01h53.0	+28° 54	03:40:34	03:45:34	0h6 W	No N.D.		300s
422	Comp			03:46:17			ND 0.3	Fe A 1/2	200s
423	HD 14386 MIRA	02 14 18	-3 26	03 56	04 56	0 58 W	ND 1.2		3600s
424	Comp			04:58:00			ND 0.3	Fe A A=1/2	200
425	Flat	platform (on timer)		05 08 52		00	ND 2.0	TUNG A=1/8	2hrs
	MKI initiated, but night turned out cloudy								
426	Flat	AUG 31/Sept 1		16 06	18 06		ND 2.0	TUNG A=1/8	2hrs
427	Flat	Sept 1/2		?19 35	?22 35		ND 2.0	TUNG A=1/8	3hrs
428	Fe Ar Comp (test)				?22 56		ND 0.3	Fe Ar A=1/2	200

Spectr. Temp. ..... Dome Temp./Hum. +17°C 69% Transparency Conditions ... Clear 322

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 77%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
A B											
5 / 100				PTS Echelle	1800/ 50°8	BS	4810 Å	CHB			
60/ 300	3"	V 0.81	12.5						Std Rad Vel		
10/130											
30 /1100	3-4"	VGR 4	11?							Time Tag 1200-2000 pids	
10 / 110											
50 /2100											
				PTS	1800/50°8	BS	4830 Å				
								All Fit PCS or PTS backed up on 3.5" floppy to this point			
A B											
30 1100	[Signal down by 1/2 From # 425]			PTS	1800/50°8	BS	4820 Å	In anticipation of possible observing; no go.			
10/ 110				"	"	"	" *			* λ Region checks out OK	
					Comp Signal level ≈ same as previous comps this page.						

323 Sun – mon

Date 1990 Sep 2/3 Observers 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
429	Flat	not the	3 hr intended	≈ 19 42			ND 2.3	TUNG A=1/4	1150
430	Comp			~~20 54~~			ND 0.3	FeAr A=1/2	200s
431	HD 182917 (CH Cyg)	19 21.9	+50 02	20 54	21 35	00 41 W	no ND		2400
432	Comp			21 36			ND 0.3	FeAr A=1/2	200
433	Comp after P.P. plate adj.			22 07			"	"	200
434	HD 182917 (CH Cyg)	19 21.9	+50 02	22 13	23 19	2 26 W	no ND		4000
435	Comp			23 21			ND 0.3	FeAr A=1/2	200
436	BM Cass	00 48.6	+63 33	23 28	00 06	2 18 E	no ND		2224
437	Comp						ND 0.3	FeAr A 1/2	200
438	HD 221491	23 27.5	+34 24	00 14	00 41	0 20 E	ND 0.2		1570
439	Comp						ND 0.3	FeAr A=1/2	200
440	Flat on timer.			00 55			ND 2.3	TUNG A=1/4	3hrs

Spectr. Temp. ..... Dome Temp./Hum. +20°C 70% Transparency Conditions ... Clearing 324

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +16°C 72%

Exp Mtr A/B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ λ	P.H.	Program	Remarks	Quality
40/2000				PTS Fiber Fed	1800/508	BS	4820Å	SHB			
10/110										not copied to H? 2.8 MEG in "N"	
15/400	4"	VaR 8.4	M	PCS PTS						Time Tag 500-3600 pixels	
5/105										copied ok to H:	
10/120											
10/400	poor	VaR 8.4V	M	PTS						windy & hazy	
10/100											
15/400	V poor	VaR 8.8 - 9.3									
70/2500	poor	V 6.65	BSV						telluric Std	cuts to 3200	
40/3000											

325 Mon - Tues

Date 1.9.90 Sep. 3/4 Observers Mki - Th

Emulsion Batches:

Diffuser in for 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
441 mki	Flat			18 32	19 59	0 0	plt form	Tung H=1/4	5160
442	Comp					∴ f18 stop is 1N	ND 0.3	FeAR H=1/2	200
443	HD182917 CHCyg	19 21.9	+50 02	20 15	21 21.50	00 32W			
444	Comp						ND 0.3	FeAR H=1/2	200
445	HD182917	19 21.9	+50 02	21 29	22 35.48	01 46W			4005
446	HD182917	19 21.9	+50 02	22 44.10	23 51	03 01 W			
447	Comp			23 55			ND 0.3	FeAR H=1/2	200
448	HD182917	19 21.9	+50 02	23 59	01 06	04 17W			
449	"	"	"	01 06	01 58	05 09W			
450	Comp						ND 0.3	FeAR H=1/2	200
451	BM CASS	00 48.6	+63 33	02 13	02 53	00 34W			
452	Comp						ND 0.3	FeAR H=1/2	200
453	HD221491	23 27.5	+34 24	03 01	03 27	02 10 W	ND 0.2		1600
454	Comp			03 28			ND 0.3	FeAR H=1/2	200
455	Flat			03 44			ND 2.3	Tung H=1/4	3hr
456	Flat Wed Sept 5/6			18 52			"	"	3hr

Spectr. Temp. ..... Dome Temp./Hum. 46.2°..66% Transparency Conditions ... FINE 326

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 43.2°...79% increasing cirus cloud

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50/2000	NO	2.3		Fiber Fed PTS	1800/50.8	BS	4820Å	CHB			
5/110											
15/600	3"	VAR 9.4V	M							6.7 mag to N: 500-3600 pice 1st Timing	
5/110											
20/650	2-3"	VAR 8.4	M							7.4 mag to N: V thin cloud	
20/800	2"	VAR 8.4N	M							Counts briefly to 1000/sec	
5/100											
40/500	2"-4"	VAR 8.4N	M							6.9 mag on D"	
30/400	"	8.4	M							Cloud at start (cnts to 700)	
									Pcnt rate	dramatically higher by 01 30 DSI	
0/600	4"	VAR 8.8-9.3							cloud	Bg 01 50 again cnts to 900 in clear	
4/120											
40/2500	4"	V 6.65	BBV						telluric std	Some cloud Some cnts to 1500	
10/100											
50/2500											
50/2400											

No OBS This night.

327 Fri-SAT

Date 1990 Sep 7/8 Observers Jn mki. pleasin

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.
457	Flat 3 Hrs			1604	1904		ND=2.3	Tung A=1/4	
458	Comp					F18 stop out	no ND	Fe A A=1/4	
459	HD182917 CHCYG	19 21.9	+50 02	195440	20 36	00 00 W	+50 22		2400
Fm 28 Tn	not on Reg list HD182917 Seeing test	"	"	2037		00 01 W	4 frames	Real Time error	Int x 0
460	HD182917	"	"	2039	21 46 32	01 19 W			
461	Comp			2148			no ND	Fe A A=1/4	200
462	HD182917	19 21.9	+50 02	220420	22 44 30	02 10 W			2400
463	Comp			2246			no ND	Fe Ar A=1/4	200
464	HD3765	00 35.3	+39 40	225617	2313	02 37 E	no ND		
465	Comp						no ND	Fe A A=1/4	200
Fm 28 Tn	HD3765	00 35.3	+39 40	2315		02 35 E	+40 07	Real Time copin	Int x 0
466	BM CASS	00 48.6	+63 33	2322	00 18	00 46 E			3351
467	Comp			00 18			no ND	Fe A A=1/4	
468	FLAT on timer			00 54		0 0	platform	TUNG A=1/4	3 secs 10,800 31

Spectr. Temp. ..... Dome Temp./Hum. +16°C 61% Transparency Conditions . Mostly Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +10°C 60%

Dome open & turns on by 19 00

Exp. Mtr.	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50 / 2400				Fiber P.T.S	1800/5.0°	B'S	4820	CHB			
70/120											
10 /300	3"-5"	VAR 8.4V	M							2.0 mag to "D" 500 > 3600 pixel # time tag	
3.3 pixels	poor	"	M	very cool area moving N	High press	Fiber head			seeing test	Light NNW Breeze Dome facing NW	
10 /300	v poor									3.2 mag to "D"	
10 /300	v poor	8.4v	M							1.4 mag to "V"	
10 /120											
20 /1000	v poor	V 7.36	dK5						std vel	cnts to 1450/sec	
	v								~~std vel~~		
				Dome East, Light Breeze					seeing test	should have had Int=4 FOR 1/15 sec Integration SAME FOR 1st seeing test tonight	
10 /300	poor	VAR 8.5-9.3 v's									
10 /100											
60 /2500	ND 2.3										
						Time tag files copied to "N" root directory					

329 SAT/SUN

Tn Hdy Ron 2 Large ~~Eq~~ Emulsion Batches:

Date 1990 Sep 8/9 Observers Tn mki phone in

Tours - 2.5 hrs

Ring Nebula Obs, / Diffuser in for sources

(AS USUAL)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
469 mki	Ring Nebula	18 50.4	+32 54	21 36 50	22 08	2 09 W			1888
470	Comp	~~18 50.4~~	~~+32 54~~	22 09			~~f18IN~~ NO ND	FeA A=1/4	200
471	HD 182917	19 21.9	+50 02	22 16 30	23 16 30	2 47 W			
472	Comp						f18IN but no ND	FeA A=1/4	200
473	BM CASS	00 48.6	+63 33	23 24 37	00 04	1 55 E			2366
474	Comp						f18 stop no ND	FeA A=1/4	200
475	HD 222368	23 34.8	+5 05	00 17 19	00 32 48	0 12 E	no ND		
OT000 171TN	HD 222368 DRIVE Test	"	"	00 37	00 40 30	0 05 E	.	"N" mode	Int x4
476	Comp			.			f18 Stop no ND	FeA A=1/4	2605
OT000 172TN	HD 222368	23 34.8	+5 05	00 48	00 53 16	00 08 W		"N" mode	Int x4
477	Flat on timer			01 05					

Spectr. Temp. ..... Dome Temp./Hum. +13°C 67% Transparency Conditions PART. Cloudy 330

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +12°C 80%

Exp. Mtr. A B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ WL	P.H.	Program	Remarks	Quality
5/15				Fiber Fed PTS	1800/500	BS	4820Å	CHB		Hard To say where on Ring	
5/65											
5/350	2-3	var -8v	M						CH Cyg pgm	No Ti notgyd this time	
8/165											
10/200	2-3"	CHR 8.8 -9.3V								Cloudy - (Clear so at end)	
5/70											
10/2000	3"	B 4064	F7V						std vel	*Some cirrus to 400 sec in a out of cloud	
39.59 pds		"	"	200 frames		Fiber Feed	Dome South No Wind	"		Cloudy Int x 4 = 1/155 Integrator	
5/75											
39.34				300 frames		Fiber Feed	Dome SSW			Cloudy	

331 Tues/Wed

Date Sept 11/12 1990 Observers Eds / Tn
Eclelle Rotten

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.
0	Prompted flat			19:19				~~Th-Ar~~	60s
2	Th-Ar								10s
3	Arcturus HD124897	14 11.1	19 42	19:23:05	19 25 27	04 16W			
4	Th-Ar			19 26 24					10
5	Th-Ar			19 29 45					
~~6~~	~~HD [illegible]~~	~~19 37 80~~	~~-7 15 0~~		Too low, too faint ...				
6	Th-Ar.			19 41 00					10
7	61 Cyg HD 195556	20 26 58	48 36 55	19 44 15	20:34 10	00 50E			
8	Th-Ar			20:35:29					10
9	Th-Ar			20:47:45					10
10	6 LAC HD 213420	22 26 10	42 36 39	20:51:01	21:42:93	01 40E			
11	Th-Ar			21:43:28					10s
12,13,14,15,16,17	6 flats @ 2 2s	512, 512, 512, 512, 512, 512							

Spectr. Temp. ..... Dome Temp./Hum. ..+17°C...66% Transparency Conditions Part. cloudy - mostly cloudy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..+15°C...70%

332

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. & Nolla Tilt	Grating/ Tilt	Slit	Emulsion	Filt.	Program	Remarks	Quality
	*			17.91	.4440	w: 4.5μm h: 25h	w: 22θ h: 400μm	4565 600		* HARD To deal: seeing with poor guiding images.	1334
											2832
10087		-0.04	K1.5III								602
											2828
											3040
											2822
2860		4.45	B2.IV								528
											2696
											2825
2298		4.51	B2.IV								463
											2819

333 Wed-Thurs

Date 1990 Sep 12/13 Observers F.L.S.-T.G.

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.
	Pompeel flat								90s
	flat								90s
	Th-Ar				19:27				10s
	MD 124897	14 11.1	19 42	19:30:26	19:36:55	0431 W			
	Th-Ar								
	Th-Ar			19 46 28					
	MD 172167 Vega	18 33 33	38 91	19 49 25	20 07 27				
	Th-Ar				20 08 09				10
	4 flats @ 40s	746, 752, 750, 747							

Spectr. Temp. ..... Dome Temp./Hum. +22.2 ... 79% Transparency Conditions . PART. Cloudy .....

Focus .....

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

334

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											1760
											1754
											2815
544		-0.04	K2III							in & out of Cloud.	~~1761~~
											2883
											3058
3848		0.04	A0V								1092
											2968
							All backed up & Repeated				

335

Date Sept. 13/14 ... 1990. Observers ... Fds ... (Sassabu on phone)

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.
	Prompted Flat			18:08					90s
	Flat			18:11:13					90s
	Th-Ar			18:57:05					10s
	MD 172167	18 33 33	+38 41	18:59	19:00:52				
	Th-Ar			19:02					10s
	Th-Ar ~~MD 195556~~								10s
	MD 195556	20 26 58	48 36 55	19:09:33	19:59:24				
	Th-Ar			20:00:50					10
	Th-Ar			20:05:08					10
	MD 213420	22 26 10	42 36 39	20:08:47	20:24:03				
	Th-Ar			20:26					10
	Th-Ar			20:34:02					10
	MD 172167	18 33 33	38 41	20:34:02	20:38:13				
	ThAR			20:39:18					10
	MD 172167	18 33 33	38 41	20:40:14	20:44:04				
	Th-AR			20:45.					10

Spectr. Temp. ..... Dome Temp./Hum. 123°/67° Transparency Conditions ..Light Cloud/hazy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 20/92°

336

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					17.91	105μ .259	[illegible]	4565 600	4934		3136
											3137
											3928
8000		004	A0V								1646
											3962
											.
14 15		4.95	B2.5IV								320
											3995
											3983
4565		4.59	B2IV								109
											3229
											3530
10000		0.04	A0IV								1953
											4040
10000		004	A0V								1754
					⇒ 4 flats @ 38s 1808, 1810, 1806, 1809 ; 4 flats @ 78: 340, 341, 347, 342						4675

337

Date Sept. 16/17 Observers F.d.S. (Sussex on phone)

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.
	Prompted fkil								90s
	Flat								90s
	Th-Ar								20s
	Arcturus MD124897	14 11 06	19 42	19 04 09	19 06 42				
	Th-Ar								20
	Th-Ar								
	Vega MD172167	18 33 33	+38 41	19 12 53	19 15 09				
	Th-Ar								10s
	ThAr								10
	6 LAC MD 213420	22 26 10	42 36 39	19 27 36	20:17:55				
	Th-Ar								20
	Th-Ar								20
	Vega MD172167	18 33 33	38 41	20 28 28	20 30 46				
	Th-Ar								20
	Th-Ar								20
	6 LAC. MD 213420	22 26 10	42 36 39	20 44 07	21 34 03				

Spectr. Temp. ..... Dome Temp./Hum. 12.5/59% Transparency Conditions Clear

Focus .....

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

388

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Solvent	~~P.H.~~	~~Program~~	Remarks	Quality
						1.5m	Acetone	4565			
					17.94	.259	.225	Geel	-4939		3732
											3748
											7894
10500		00	K2 III								793
											7205
											7161
		0.00	A0 V								1497
											3628
											4121
4000		45	B2 IV							Huge 4pt ~~[illegible]~~ heater turnaround	772
											6535
											6333
10100		000	A0 V								1623
											7660
											6007
3170		45	B2 IV							Huge 4pt.	

339

Date Sept. 16/17 Observers Fels (SASSelov on phone)

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
	ThAr								20
	Th Ar								20s
	Vega MD172167	18 33 33	38 41	21:51:42	21:56:09				
	Th-Ar.								20s
	4 flats @ 20s	715, 702, 669, 700							
	4 flats @ 45s	1552, 1538, 1547, 1542.							
	Th-Ar								20
	δ Per MD22928	03 35 48	47 28 04	22:53:24	23:03:19 ~~23:01:19~~				
	Th-Ar.								20s
	δ Per MD22928	03 35 48	47 28 04	23:07:45	23:37:44				
	Th-Ar								20s
	δ Per MD22928	03 35 48	47 28 04	23:40:44	00:10:45				
	Th-Ar								20
	δ Per MD22928	03 35 48	47 28 04	00:13:33	00:53:40				
	Th-Ar								
	δ Per MD22928	03 35 48	47 28 04	00:56:24	01:36:27				

Spectr. Temp. ..... Dome Temp./Hum. ..6.8/.64.6 Transparency Conditions .. Clear.../..snow.....

Focus .....

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

360

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											5655
											5483
10000		300	A2V								1757
											6162
										Top up @ 22:19	
			New grating TILT ?		18.68	150 -.241	400 .225	x 4401	x8. .50160	4PT on comp!	3877
? 10min		300	B5III						exposure meter broke.	Huge 4pt.	428
											2908
? 30min		300	B5III								1299
											2950
? 30min		300	B5II							Dry. Cloud (thin cirrus)	875
											1458
		300	B5III							PTs, cloud,	1396
											1532
		300	B5III								1498

341

Date ....Sept. 16/17..... Observers ...Fels...(Sanderson on hand)

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
	Th-Ar								20
	Th-Ar								
	HD 29139 α TAU	04 30 11	+16 18	01 48 30	01 52 30				
	Th-Ar								
	Th-Ar								
	HD 22928	03 35 48	47 28 04	02 00 33	02 40:30	03 30 30			
	Th-Ar								
	4 flats @ 27s	875, 879, 875, 861							
	4 flats @ 40s	1298, 1280, 1264, 1282							
	Close up ~03.00 hour angle ... + to bed								

Spectr. Temp. ..... Dome Temp./Hum. 6.4/.69% Transparency Conditions .....Clouds.....

Focus .....

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

342

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											3047
											3096
?		0.86	K5 III						STD UEL		289
											2913
											2876
		3.00	B5 III								1513
											3794

363

Date Sept. 17/18 ... 1990. Observers ... Fels ... (Mk1 backup)

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.
	Prompted Flat								60
	Th-Ar								20
	HD 172167 Vega	18 33 33	38 41	22 16 40	22 20 11				
	Th-Ar								20
	HD 172167 Vega.	18 33 33	38 41	22 23 26	22 26 20				
	Th-Ar								20
	Th-Ar								20
	HD 22928	03 35 48	47 28 04	22 38 58	23 23 27				
	Th-Ar								20
	HD 22928	03 35 48	47 28 04	23 25 58	00 03 15				
	Th-Ar								20
	HD 22928	03 35 48	47 28 04	00 05 32	00 48 15				
	Th-Ar								20
	HD 22928	03 35 48	47 28 04	00 50 26	01 30 27				
	Th-Ar								20
	HD 22928	03 35 48	47 28 04	01 33 32	02 13 34				

Spectr. Temp. ..... Dome Temp./Hum. 6.9°/66% Transparency Conditions ... Clear .....

Focus .....

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

Exp. Mtr	Seeing	Ptg Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion Slit Height	~~P.H.~~ Λ	Program	Remarks	Quality
				Echelle - IRTheim	1566	1500μ .241	4000 .225	4451	λ Grating .5016		1952
											3363
10000		004	A0 V								1838
											3323
10000		004	A0 V								1771
											3394
											4513
6000		300	B5 III							4pt.	1227
											2797
6000		300	B5 III								1218
											2726
6000		300	B5 III								1170
											3145
8000		300	B5 III								1548
											3460
8400		300	B5 III								1564

345

Date Sept. 17/18 Observers F.O.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.
	Th-Ar								20
	Th-Ar								20
	HD29139	04 30 11	+16 18	02 24 12	02 33 47				
	Th-Ar								20
	Th-Ar								20
	HD22928	03 35 48	+47 28 04	02 48 14	03 26 53				
	Th-Ar								
	4 flats @ 55s	1994, 1999, 1997, 2001							
	4 flats @ 33s	1214, 1207, 1210, 1211							

Spectr. Temp. ..... Dome Temp./Hum. 09.9/74% Transparency Conditions . Clear.....

Focus .....

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

346

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											3362
											3420
10000		0.85	KSIII						STD-Vel.		1020
									Top up PE 02 35		3255
											3212
10000											2021
											3624

347 Thurs - Fri

Date 1.9.90. Sep. 20/21. Observers F.d.S. - J.G.

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.
	Prompted flat								30s
	Th-Ar								20s
	Vega HD 172167	18 33 33	38 41	20 03 42	20 04 52	01 10W			
	Th-Ar			20 05 22					
	Th-Ar			20 09				Th AR	20s
	6 LAC HD 213420	22 26 10	42 36 39	20 12 41	20 33 36	02 16E			
	Th-AR			20 39 32				Th AR	20s
	4 flats @ 10s	325, 322, 321,	318						
	4 flats @	1688, 1644, 1644,	1637			≈02 00E	≈0°	Same RA as 6LAC	Drive on
	Th AR			20 58					20s
	6 LAC HD 213420	22 26 10	42 36 39	21 00 13	21 24 50	01 25E			
	Th-Ar			21 26 23					20

Spectr. Temp. ..... Dome Temp./Hum. +14°C 76% Transparency Conditions Clearing by 19:40 EST

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +12°C 78%

348

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt (Echelle)	~~Slit~~	Emulsion X-Sc.	~~F.M.~~ λ	Program	Remarks	Quality
				Echelle Reticon	17.91	1054 .359	-4440	4567			979
											7602
10000	2.5"	+0.04	A0V								1643
											7545
											8495
2027		4.51	B2IV							cloud by 20 30 T=-0.047	350
											7604
											7288
2439		4.51	B2IV							T=+0.028 clouded out again.	442
										[Topped 22:40 T=+0.011]	7640

349 mon-TUES

~~Photon Tly Sheet tonight instead of Echelle Patrol~~

Emulsion Batches: .....

Date 1990 Sep 24/25 Observers Tn (Mt. phone in.)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FT100 478	Comp			19 52 46			F18 stop no ND	FeAr A=1/2	200s
479	HD 182917 CH Cyg	19 21.9	+50 02	19 58 06	Astro clock 20 43 00	01 15 W			
480	Comp			20* 44			f18 stop no ND	FeAr A=1/2	200s
481	HD 182917 CH Cyg	19 21.9	+50 02	20 50 31	21 31	02 03 W			
482	Comp						f18 stop no ND	FeAr A=1/2	200s
483	BM Cass	00 48.6	+63 33	21 52 50	22 35	02 22 E			
484	Comp						f18 stop no ND	FeAr A=1/2	200s
485	HD 3765	00 35.3	+39 40	22 42 21	23 04	01 38 E			
486	Comp	(named	487 by mistake)		23 07	~~01 35 E~~	f18 stop no ND	FeAr A=1/2	200s
284 Tn	HD 3765	00 35.3	+39 40		23 06	01 35 E			Int x4
Tag 487	MIRA HD 14386	02 14.3	-3 26	23 21	23 39	02 41 E			
488	Comp				23 45			FeAr A=1/4	200s
Tag 489	HD 14386	02 14.3	-3 26	23 52	23 56	02 23 E			
490	Comp								200s
491	Flat (not on timer)			00 11 37	02 45		f18 stop ND 2.2	TUNG A=1/4	

Spectr. Temp. ..... Dome Temp./Hum. +13°C 68% Transparency Conditions ... 51 hazy - cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +11°C 73%

good SW wind (increasing strength)

350

Exp Mtr A / B	Seeing	Ptg Mag	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
10 / 130				Fiber fed PTS	1800/50Å	BS	4820A	CHB			
10 / 350	5" poor	2 over 8	Mb							cuts to 600/sec by end not Time tagged	
10 / 160										*Header time 08 hrs not 20 hrs	
10 / 450	4"	8	Mb							~~Header Time 08 hrs instead of 20 hrs EST~~	
8 / 450	3.5"	Var 8.8-9.3								Cloud by 2215	
8 / 140											
20 / 600		7.36	dK5						std vel	mostly Cloudy cuts to 1300/sec	
10 / 180									Renord	to 486 Tu	
34x39 ~~180~~			Fiber Had view		(Mod South Wind)				Seeing test	cloudy, Dome ESE	
1 / 3000 3000		MAX	M		(guider off to avoid ~~[illegible]~~) Occasional	high cuts of 7000/sec			MIRA pyr	cuts 300 - 3000/sec In & out of Cloud (Tmeg to E)	
6 / 160											
40 / 3000				most in	Uniform cloud till exp end.				(thick cloud)	Time Tag 1.5 meg to "E"	
8 / 60										Complete cloud at End	
50 / 2300											

#1351 Wed-Thurs

Date 1990 Sep 26/27 Observers T.n. & Fds

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.
	Flat Prompted (on Vega)			1922				TuNG	10s
	Comp			1923				ThAR	20s
	HD 172167	18 33.6	+38 41	1925	1931	00 59 W			
	Comp			1932				ThAR	
	Flat							Tung	20s
	comp							ThAR	20
	HD 213420	22 26 10	42 36 39	195145	20:48:49	01 38 E			
	comp			20:49:38				ThAR	20
	HD 213420	22 26 10	42 36 39	20:50:38	21:42:01	00 45 E			
	comp			21:42:44				ThAR	20
	4 flats @ 18s	713, 688, 698, 699						TUNGSEN	
	comp			220208				ThA	20s
	HD 143856 Mira	02 14.3	−3 26	220553	23 23 38	02 48 E			
	Comp			232538				ThA	20s
	4 flats @ 10s	717, 698, 727, 696							
	comp							Th AR	20s

Spectr. Temp. ..... Dome Temp./Hum. +14°C 80% Transparency Conditions sl. hazy

Focus .....

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

Best Coss Focus at start = 2191 T=+13°C

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
7496				Coudé Rotican	17.70	160μ	.4706	4842Å			842
1762											3566
225,000	OK	V +0.04	A0V								4669
											3537
											1668
					17.91	KS .259	.4949	4567		Topup @ 19:40 during λ change T=+01.036	9343
3005	5"	4.51	B2 IV								021
											7856
3002		4.51	B2 IV								674
											8386
											3099
					17.70	KS .241	.4711	4842Å	Mira pgm		
6000	5"	VAR ≤3	M						Mira pgm	near min?	764
											2776
					18.66	150μ	.5019	4481		Topup 23 30 during λ change	32[illegible]

#2 353
Wed-Thurs

Date 1990 Sep 26/27. Observers Fds - 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.
	δ Per. HD 22928	03 35 48	47 28 04	23 44 16	00 09 47	3 27 E			
	Comp				00 11 28			Th 4R	20s
	δ Per HD 22928	03 35 48	47 28 04	00 12 42	00 33 27	3 04 E			
	Comp				00 34 24				20s
	δ Per HD 22928	03 35 48	47 28 04	00 38 01	01 03 35	2 33 E			
	comp			01 04 30					20s
	comp			01 07 27					20s
	HD 29139	04 30 11	+16 18	01 10 22	01 16 17	3 13 E			
	comp			01 17 38				Th 4R	20s
	comp			01 21				Th 4R	20s
	δ Per HD 22928	03 35 48	47 28 04	01 22 59	01 51 46	1 44 E			
	Comp							Th 4	20s
	δ Per HD 22928	03 35 48	47 28 04	01 54 38	02 22 46	1 13 E			
	Comp			02 23 37				Th 4	20s
	δ Per HD 22928	03 35 48	47 28 04	02 24 32	02 52 26	0 43 E			
	comp				02 53 12			Th 4	20s

Spectr. Temp. ..... Dome Temp./Hum. +12°c 90% Transparency Conditions ... Sl. hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +11°f 93%

Some Fog

354

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion & grating	P.H. Å	Program	Remarks	Quality
0000	2"	3.00	B5 III	Echelle Rc tron	Echelle 18.68	150μ .241	x=.5019	4461Å		Dewar T=+0.051	2207
											3500
10600		3.00	B5 III								2151
											3842
12000		3.00	B5 III								2528
											3682
											3709
10000		0.85	K5 III								1069
											3066
1097											3023
1200		3.00	B5 III								2382
											3028
12000		3.00	B5 III								2577
12000		3.00	B5 III							T=+0.063	2465
					4 flats @ 6Ss	2484, 2466, 2455, 2448.				Topup @ 03	3470

355

Date ..... Observers .....

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

357