

Flexure Tests

June 30/Jul 1

SHS Echelle CCD

July 18/19/90

" Eds " "

Aug 8/9/90

Jewison " " E-W & N-S orientation

file names

SP xxxxxx.

TAG xxxxx.

CF xxxxx.

CE xxxxx.

CC xxxxx.

Photon counting Reticu

same, in Time tagged mode

CCD on fiber. Linked spectrograph

CCD on echelle spectrograph

CCD on Cassegrain spectrograph

Dare Reticu files are organized by night, rather than spectrum



Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions 4

Focus

Spectr. Temp.

Dome Temp./Hum.

[illegible]

5

Mon/Tue

Date 1990 April 23/24 Observers SAS/Miki

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		Exp. Mtr.
								Type/Filter	Exp.	
207.Mki	Flat			16:27 ^{??}			ND 2-0	Tung 1/8	7300	4/200
208	Comp			20:24				FeA 1/4	200 ^S	5/50
209	Comp @ Hx			21:11			Reversed	FeA clear	200 ^S	
210	HD 52961	6 ^h 58.1	+10° 55'	21:19	22:22	05 ^h 16w	+10° 44'			10/250
211	Comp			22:28				FeA clear	200 ^S	10/200
212	HD 52961	"	"	22:34	23:00	05 ^h 47w	Reversed			5/100
213	Comp			23:01				FeA clear	200 ^S	5/100
214	α Leo (Regulus)	1950 10 ^h 07	+12° 01'	23:17	00:03	03 ^h 46w	Reversed +12° 03'	FeA ND 2-0	2100 ^S	10/200
215	Comp			00:04				FeA clear	200 ^S	10/200
216	HD 109995	1950 12 ^h 36.26	+39° 34' 58"	00:34	01:14	02 ^h 27w	Reversed +39° 18'	ND ND	2400	10/200
217	Comp			01:15				FeA clear	200 ^S	10/200
218	HD 114762	1900 13 ^h 07.5	+18° 02'	01:33	01:43	02 ^h 23w	Reversed +17° 30'		2000 ^S	5/250
219	Comp			01:44				FeA clear	200 ^S	10/200
220	Flat @ 6560Å			01:55	02:55	02 ^h 28w	11	Tung 1/8	3600 ^S	2/1000
221	Comp			03:10				FeA clear	200 ^S	10/200

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Date 1990 April 23/24 Observers SAS/Mai

Emulsion Batches:

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[illegible]

Dome Temp./Hum.

Transparency Conditions

Spectr. Temp.

Dome Temp./Hum. 99/55%

Transparency Conditions . . . Scattered cloud . . . 8
 + haze

[illegible]

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Date 1990 Apr 24/25 Observers SAS

Tue/Wed

Emulsion Batches:

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[illegible]

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

Observers KK - SAS

Emulsion Batches:

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Spectr. Te

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
230.KK	Compassion							FeNe A _{1/2}	3600
231.KK	HD 95689 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				FeNe AK+	3600
239.KK	Tungsten							Tungsten A _{1/8}	7200

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Thu/Fri

Date 1990 April 26/27 ... Observers S.H.S./Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
240.KK	Tungsten			15:10				Tung A 1/8	7200
241.KK	Camp			20:02				FenJ V4	360
241.SHS	HD 82582 ^{seering test}	(2000) 09 ^h 34.3	(2000) +46°54		19 54	00 30 W		1/16 sec	Fen ⁺ x4
242.KK	HD 95689 ^{2 VHa}	(1900) 10 ^h 57.6	(1900) +62°17	20:13	20:33	0 ^h 28 ^E			
243.KK	"	"	"	20:34	20:59	0 ^h 02 E			
244.KK	"	"	"	21:00	21:24	0 ^h 22 W			
245.KK	"	"	"	21:25	21:47	0 ^h 46 W			
246.KK	"	"	"	21:48	22:01	0 ^h 00 W			
247.KK	"	"	"	22:02	22:13	0 ^h 12 W			
248.KK	Camp							FenJ V4	360
249.KK	Flat	platform		05:23				Tung A 1/8	7200
0	Prompted Flat			22:42					20 ^s
1	Camp			22:43					20 ^s
2	Polaris	01 ^h 22.6	+88°46	22:44	23 14	11 12 W +			5000
3	Camp							Th AR	205

(Tel. E. of Pier = Reverse)

Th-AR

Th AR

Spectr. Te

Focus ...

Spectr. Te

Exp. Mr.

#

1450/1400

160/130

4 Frame

1000/1300

1700

600

700/700

1000

1300

1400/1450

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

2500

2600

2700

2800

2900

3000

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Emulsion Batches:

Date 1990. APR 26/27... Observers SAS/TN

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
4	Polaris	01 22.6	+88 46	23 17	23:48	11 43 W	89°09			5000
5	Comp			23:49				Th Ar	20	494
6	HD 137909 β CrB	15 23.7	+29 27	23:55						
6	Comp			23:55				Th Ar	20 ^s	
7	HD 137909 β CrB	15 ^h 23.7	+29°27	00:01	01:01	00 24 E				1513
8	Comp			01:02				Th Ar	20 ^s	
9	Comp			01:04				Th Ar	20 ^s	
10	HD 124897 α Boo Arcturus	14 ^h 11.1	+19°42	01:07	01:13	01 ^h 08 W				5000
11	Comp			01:13.5				Th Ar	20 ^s	
12	Comp			01:15.5				Th Ar	20 ^s	
13	HD 121370 η Boo	13 ^h 49.9	+18°54	01 18.5	01 42.3	01 52 W				2000
14	Comp							Th Ar	20 ^s	
15	Comp			01 54				Th Ar	20 ^s	
16	HD 121370 η Boo	13 49.9	+18 54	01 57.2	02 50	02 59 W				5000
17	Comp							Th Ar	20 ^s	

Spectr. Temp. Dome Temp./Hum. 72°C 58% Transparency Conditions *hazy* 16

Focus

Spectr. Temp. Dome Temp./Hum.

Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	5000		B 2.02	F8V	Echelle Retran	Echelle 17.10	50u .281	5160A 5160A	110 110	KK-pgm	(X grating .4376 intended)	1804
20	494											1159
												1205
	1513		B 3.93	F0p								695
												1244
												1270
	5000		B 1.19	K2IV								1598
												1238
												1321
	2000		B 3.27	G0							Darwin $T = -0.375$	600
											Darwin $T = -0.554$ @ 0139	1338
											$T = -0.690$ at 0144	
											$T = -0.850$	1301
	5000		B 3.27	G0							Top up dome 1st @ 0150	
											$T = -0.700$ at start exp	1582
											$T = -0.440$ at 0213	1460

17 #3

Emulsion Batches:

Date 1990. Apr. 26/27.... Observers SAS./T.A.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
18	Comp							TLA	20s
19	HD 15961 α Oph	17 ^h 30.3	+12° 38	02:58	03:33.4	00 02 W			
20	Comp							TLA	20
21	Comp			03:37				TLA	20 ^s
22	HD 182640 δ Aql	19 20.5	02 55	03:41	04:32	0 ^h 48E			
23	Comp			04:33				TLA	20 ^s
	Flats	4 @	17 ^s		2034, 2020, 1998, 1977				
		4 @	14 ^s		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 fazy 18

Focus

[illegible]

19 pg #1

Fri/Sat

Date 1990. April. 27/28.. Observers SAS/Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp	Spectr. Temp.
250.KK	Comp			20:07			with F18 stop	Fene clear	360 ^S	250
242.SAS	HD 82582	(2000)	(2000)							
250.KK	Seeing test	09 ^h 34.3	46° 54'	19:55	4 frames	31x31	intx4			250
	α UMa	(1900)								
251.KK	HD 95689	10 ^h 57.6	+62° 17'	20:17	20:48	00 ^h 09E				250
252.KK	"	"	"	20:51	21:10	00 ^h 13W				250
253.KK	"	"	"	21:11	21:28	00 ^h 31W	+61 51			250
254.KK	"	"	"	21 29		W				250
255.KK	"	"	"	21:43	21 57	01 00W				250
256.KK	"	"	"	21:58	22 06	01 ^h 09W				250
257.KK	Comp			22:07			with F18 stop	Fene clear	360 ^S	250
258.KK	Flat	platform					"	Tung A=1/8		250
0	Prompted flat			22:24						250
1	Comp			22:31				Th-Ar	20 ^S	250
2	HD 8890	01 ^h 22.6	+88° 46'	22:39	23 18	11 19 W				250
3	Comp							Th Ar	20	250

21 pg #2

Emulsion Batches:

Date 1990 April 27/28 Observers SAS/TN

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Nr.
4	HD 8890 Polaris	01 ^h 22.6	88° 46'	23:20	23 50	11 50 W				2100
5	Comp			23:51				THA	20 ^s	
6	Comp			23:56				THA	20 ^s	
7	HD 137909 β CrB	15 23.7	29° 27'	23:59	00:59					1051
8	Comp			01:00				THA	20 ^s	
9	Comp			01:02.5				THA	20 ^s	
10	HD 124897 α Boo	14 ^h 11.1	19° 42'	01:05.5	01:12	01 03 W				2037
11	Comp			01:12						
12	Comp			01 19				THA	20	
13	HD 121370 η Boo	13 ^h 49.9	+18° 54'	01 25	02 22	2 35 W				1381
14	Comp							THA	20	
15	Comp			02 26				THA	20	
16	HD 15961 α Oph	17 30.3	+12 38'	02 32	03 09	0 ^h 18 E				1500
17	Comp			03:10				THA	20	
	Flats	4 @ 26 ^s	3188, 3163, 3137, 3120	4 @ 20 ^s	2387, 2369, 2351, 2356					4044

23

Sat/Sun

Date 1990 Apr 28/29 Observers SAB/Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
259.KK	Comp						with F115 stop	Fene clear	360 ^s
260.KK	HD 124897 ^{< 1300}	14 ^h 11.1	19° 42'	23:37:40	23:46:50	00:18E			
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 F115 Stop	Fene clear	360 ^s
FH000243.Tr	HD 128718 ^{seeing test}	14 ^h 36.9	42° 50'	01:15	4 frames	00:42 W int x 4	(89 x 39)		
266.KK	Flat			01:22			with F115 stop	Tung A 1/8	720 ^s
	APR 29/30	SAS-Tr	Turned out cloudy after all,						
267.KK	Flat			20:29:18		00	With Filter stop	Tung H=V8	7200

Spectr. Temp.

Dome Temp./Hum! 70°/..59%.

Transparency Conditions

Hazy, cloud.

26

Focus

Spectr. Temp.

Dome Temp./Hum. 15°/66%

[illegible]

27

Mon/Tue

Date 1990... April/May 30/1 Observers SAS./Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
0	Promptel Flat			20 04						
1	Comp							Th-A	20 ^s	
2	α Aur Capella	1990.5 05 ^h 16.0	+45° 59	20:08	20:11	05 12 W		Th-A	20	2800
3	Comp							Th-A	20	
4	α Aur Capella	"	"	α 20 13	20:20	05 21 W				5200
5	Comp			20:22				Th-A	20 ^s	
6	HD 47105 γ Gem	1900 06 ^h 31.9	+16° 29							
6	Comp							Th-A	20 ^s	
7	HD 47105 γ Gem	(1900) 06 ^h 31.9	+16° 29	20:29	20:58	04 39 W				2800
8	Comp			20:58.5				Th-A	20 ^s	
9	Comp			21:06				Th-A	20 ^s	
10	HD 76644 ϵ UMa	08 ^h 52.4	+48° 24	21:08	21:59	03 18 W				2500
11	Comp			21:59.5				Th-A	20 ^s	
12	Comp							Th-A	20 ^s	
13	HD 8890 Polaris	01 ^h 22.6	+88° 46	22:08	22:19	10 ^h 29 W				512

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

Transparency Conditions *St. Hazy* 28

Focus

Spectr. Temp. Dome Temp./Hum.

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					Edelle/ Reticon	17.10	50μ 0.281	X.4377 751701	110	KK pign	Dewar tilt 3°2	2067
	2200		V 0.08	G6III+ G2III								567
	5200		"	"							(I bumped inhibition) Dewar was bumped.	1125 1445 1130
	2800		B 1.9	A0IV								1125 898 1130
	2500		B 3.32	A5								1040 641 1060
	572		B 2.02	F8V							Cloud	1188 223

Spectr. Temp.

Dome Temp./Hum.

Dome Temp./Hum. 15.7/71.0..

Transparency Conditions *cloudy* *30*

[illegible]

31

Tue/Wed

Date 1990 May 1/2..... Observers Tr/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	Exp.
0	Prompted Flat						Filter in for all exposures	Xc-5104 Filter ✓	20 ^s
1	Comp			19:51					20 ^s
2	α Leo Regulus	1990.5 10 07.5	12 01	19:55	20:05	00 18W		Xc-5104 Filter	
3	Comp			20:06				Th A	20 ^s
4	α Leo HD 87901	1900 10 03 03	+12 27	20:07	20:47	01 ^h 00 W		Filter	
5	Comp			20:48				Th A	20 ^s
6	Comp			20:49				Th A	50 ^s
7	HD 87901 α Leo	"	"	20:50	21:35	01 49 W			
8	Comp			21:36				Th A	50 ^s
9	Comp			22:20.54				Th A	40 ^s
10	HD 87901 α Leo	"	"	22:24.22	23:14.5	03 ^h 29 W			
11	Comp			23:16				Th A	40 ^s
12	Comp			23:22				Th A	40 ^s
13	HD 137909 β CrB	25 ^h 23.7	+29 27	23:27	00 25 35	E			
14	Comp							Th A	40 ^s

Spectr. Te

Focus ...

Spectr. Te

Exp. Mtr.

1100

5000

5000

5000

998

1100

Spectr. Temp. Dome Temp./Hum. 12°/45%...

Focus

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions .. Clear, some cirrus³²,
windy

[illegible]

Date 1990 MAY 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	Exp.
15	HD137909 BCARBOX	15 23.7		00 28	01:28	0 ⁿ 24 W			
16	Comp			01:30				T/A R	40
17	Comp			01:40				M A	40 ^s
18	HD 8890 Polaris	01 ⁿ 22.6	+88° 46	01:41.5	02:41	09 ⁿ 25 E			
19	Comp			02:42				T/A	40 ^s
20	HD 8890 Polaris	01 ⁿ 22.6	88° 46	02:43	03:43	08 ⁿ 25 E			
21	Comp			03:44				T/H A	40s
	Films	4@ 19 ^s	937, 929, 924,	920					
		4@ 10 ^s	482, 481, 478,	481					
	backed up	MAY 01 90.DAT							

34

Spectr. Temp.

Dome Temp./Hum. 4°/55%

Transparency Conditions Clear..... 34

spotted Comet Austin as early as 02 30 EST

[illegible]

35

Date 1990 May 2/3

Wed/Thur

Observers 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	Exp.
274.mci	Comp			20:37				FeA 1/4	200 ^S
275.mci	MWC 560	07 ^h 21 ^m 01 ^s	-07° 32' 12"	20:49	21:08	04 ^h 04 ^m		FeA 1/4	200 ^S
276	Comp			21:09				FeA 1/4	200 ^S
277	Comp at new λ			21:27				FeA clear	200
278	HD 52961	06 ^h 58.1	+10° 55'	21:36	21:51				
279	"	"	"	21:53	22:10				
280	Comp			22:12				FeA clear	200 ^S
281	HD 109995	¹⁹⁵⁰ 12 ^h 36 ^m 26 ^s	+39° 34' 58"	22:45	23:26	01 ^h 11 ^m		FeA clear	200 ^S
282	Comp @ 6530			23:27				FeA clear	200 ^S
283	Comp @ 4820			23:36				FeA 1/4	200 ^S
284	HD 109995	¹⁹⁰⁰ 12:34:00	+39:51	23:40	00:410	01 ^h 56 ^m W			180 ^S
285	Comp			^N 00:11				FeA 1/4	200 ^S
286	HD 14579	16 ^h 01.5	39° 24'	00:24	00:34	01 07 E			
PH000244 ^{SAS}	Seeing Test HD 144579	"	"		39x39	4 frames	int x4	FeA 1/4	200 ^S
287	Comp			00:43					

Spectr. Temp. Dome Temp./Hum. 7°/44%

Transparency Conditions .. *scattered cloud* .. 36

Focus

Spectr. Temp. Dome Temp./Hum. ... 5°/46%

  1st quarter moon

[illegible]

37 P2
Date 1990 May 2/3 Observers SAS

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Spectr. Ten
Focus....
Spectr. Ten

Exp. Mtr.

1700/80

170/1

A E

45 19

1800 3

46 K

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions 3

Focus

Spectr. Temp. Dome Temp./Hum.

[illegible]

SAT-SUN

Date 1990 MAY 5/6 Observers Tn

Emulsion Batches:

[illegible]

41 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	Exp.
FIT00298.mki	Flat			19 34	20 12			TUNG A=1/8	
299	Comp			20 16				FeAR A=dark	200
FM 246.TN	Seeing Test HD103095	11 47.2	+38 26	20 24		00 38 E	+37 50	1x4	
FIT00300.mki	HD103095	11 47.2	+38 26	20 26.25	20 45 10	00 18 E			
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 42.46	+25 46.49	23 02.34	23 41	03 16 E	+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	4x1x4	20
307	Comp								
FM 248	HD144579 seeing Test (Repeat)			00 16		00 59 E	4 Frames		
308	HD171232	18 28.30	+25 25	00 22.50	00 51	02 52 E	+25 30		
FM 249.TN	Seeing test HD171232			00 53		02 50 E	4 Frames		

Spectr. Temp. Dome Temp./Hum. $+15^{\circ}\text{C} \dots 75\%$ Transparency Conditions PART. Cloudy 62

Focus

Gusty SSW wind "V" worn

Spectr. Temp. Dome Temp./Hum.

Dome & Fans on only by 20 EST, due to Flat Running

Exp. Mtr	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30 1900	ND=20			PCS Red Coll	1800/62.7	BS	6580			Shift to dmp for same angle	
8 70	40 ND, diff see in as usual										
4 Frames 31x31 p/nds				Dome facing SSE		Fiber Opt. (clear hole in cloud)				V Gusty SW wind Spring test Dome T +18°C now	
30 500	6.45	6.45	G8Vp						std vel	cut only to 800 in clear sky	
30 1950	ND 2.0			PCS Red Coll	1800/62.7	BS	6580 A			while doubly	
10 75										Fans on, Dome opened again	
15 400	6.99		FH8						Sp phot std	Very gusty & poor tracking	
15 65											
20 800	5"	6.66	G8						std vel	But Telerep badly in wind	
31x31 p/nds	"	"		Note Int x 0. 1/60 sec by mistake					sky v clear	still sl windy but not so bad	
10 65				PCS Red Coll	1800/62.7	BS	6580A				
31x31		6.66	G8	Int x 4 = 1/5 sec						gentle SW wind now	
10 300	5"	7.73	G8 III						std vel	Then cloud	
										light SW breeze now	

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions .. *Cloudy.. haze.....* *44*

Focus

Spectr. Temp. Dome Temp./Hum.

[illegible]

45

Fri/Sat

Date 1990. May. 11/12.. Observers SAS / Mki

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.
<u>Hartmann tests</u> 1990.5 coord									
AC (1)	Regulus	10 07.9	+12 01			02 ^h 00 W			
AD (2)	"								
AE (3)	β Gem	07 44.8	+28 03			04 ^h 33 W			
AF (4)	α UMa	11 03.2	+61° 48		21:25	01 ^h 27 W			
AG (5)	η UMa	13 47.1	+49° 22		21:45	01 ^h 00 E			
AH (6)	α Cvb	15 34.3	+26° 45		21:56	02 ^h 36 E			
AI (7)	α Oph	17 34.6	+12° 34		22:13	04 ^h 20 E			
AJ (8)	ϵ Boo	14 44.5	29 07		22:25	~1 ^h 18 E			
AK (9)	α Cep	21 18.3	62° 32		22:46	07 ^h 30 E			
00310.Mki	Comp			23:43				FeA clear	200 ^s
311	HD 109995	12 ^h 36 26	39° 34' 58	00:06	00:37	03 ^h 00 W			
FM000751.SAS	HD 109995	"	"	00:39		inf x 4	31 x 31	4 frames.	
312	Comp			00:45				FeA Clear	200 ^s
313	Comp			01:34				FeA Clear	200 ^s

Spectr. T.

Focus...

Spectr. T.

Exp. Mtr.

5/90

12/90

5/90

5/90

Focus

Spectr. Temp. Dome Temp./Hum.

[illegible]

47

Date 1990 May 11/12... Observers SAS/Mki.....

Emulsion Batches:

Spectr. Te

Focus . . .

Spectr. Te

[illegible]

Spectr. Temp. Dome Temp./Hum.

[illegible]

49

Sun/Mon
Date 1990 May 13/14 Observers SAS / Miki

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
323. Miki	Comp			20:29				FeA Clear	200 ^S	5/60
324	HD 52961	6 ^h 58.1	+10° 55'	20:35	20:45		"Reversed" 10° 45'		600 ^S	10/200
325	"	"	"	20:45	21:39	5 ^h 45 W				10/200
326	Comp			21:40				FeA Clear	200 ^S	9/50
327	HD 109995	12 ^h 36 ^m 26 ^s (1950)	+39° 34' 58"	22:02.5	22:32.5	01 ^h 03 W				10/250
328	Comp							FeA Clear	200 ^S	10/60
329	HD 87901 ^{Leo}	10 ^h 03 ^m 03 ^s (1900)	+12° 27'	22:53	23:23	04 ^h 25 W	Reversed 12° 07'	ND 200		15/500
330	Comp			23:24				FeA Clear	200 ^S	7/60
331	HD 114762	13 ^h 07.5	+18° 02'	23:44	23:51	01 ^h 48 W		No N.D.	400 ^S	10/500
332	Comp							FeA Clear	200 ^S	10/65
333	HD 174638 ^{Phx}	18 46 23	+33 15	00:13	01:13:10	02 ^h 26 ^m E.		N.D. 0.6	3600 ^S	30/2500
334	HD 174638 ^{Phx.}	"	"	01:16	02:16	01 ^h 24 E		N.D. 0.6	3600 ^S	35/2000
335	Comp			02:17				FeA Clear	200 ^S	10/40
336	BM Cass	00 ^h 48.6	+63° 33'	02:35	03:06	06 ^h 38 E		N.D.		10/100
337	Comp			03:07	03:11			FeA Clear	200 ^S	

Spectr. Temp. Dome Temp./Hum. 100/71%

Transparency Conditions *Some Cirrus* 50

Focus

Spectr. Temp. Dome Temp./Hum.

[illegible]

P251

Date 1990..May..13/14... Observers SAS/Hki.....

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.
338-Hki	HD 5679	1990.5 01 ^h 01 ^m 26	+81°49.5	03:18	03:57 05	05 ^h 56E			
339	Comp			03:57.5				Fel Clear	200S
340	Flat	platform					ND 2.0	Tung 1/8	
FIT00341	fts apparently done next evening.			<u>Ta noted Nov 96</u>					
MAY 15/19 Cass Photographic focus test									
50711 F	Focus Test	(400secs comp)	1/200 stellar	03 50	00 04	2 27W +19		FeNe Clear	400S 200S
50711	will be next stellar exp #								

Spectr. Te

Focus....

Spectr. Te

Exp. Mir.

10/25

10/19

30/1920

No filter beh

Cass Photog

5300

3385

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions Clear 52

Focus

Spectr. Temp.

Dome Temp./Hum. 08/73%

[illegible]

Spectr. Temp. 53°F Dome Temp./Hum. $11^{\circ}/75\%$
 Focus ... Set 388. For 1200/50.8, Set 391 for 830/40.2
 Spectr. Temp. 47°F Dome Temp./Hum. $16.8^{\circ}\text{C}/83\%$

Transparency Conditions ... Clear! ... to part cloudy. ⁵⁴

Exp. Mtr.	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	Il20-e	1	Asm/Sp KK/pgm	1166 FeNo comp NO DIFFUSER 1220	OK
1500	3"	7.20	G8V	"	830/40.2	BS	Il20-e	1	KK pgm	60 sec FeK α = 727 cts Some cloud Fld Drugg	Weak
							Il20E			very cloudy from NE	
780 4900 5700	3"	3.93	Fop	BC	1200/50.8	BS	Il20-e	1	KK pgm	Set 388 [2215] Cloud again	Weak
				"	"	"	Il20	1	Il20 from FeB14 b4/b4 from Frig		right on
11 650	3"	3.93	Fop	"	"	"	Il20-e	1	KK pgm	100 = 1187 exp water	OK
2300	3"	6.8	G8V	"	"	"	"	1	"	H α 29	s/4K
2170				"	"	"	"			RA on circle 14 03.2	
5900		5.5	F7V	"	"	"	"	1	"	20 = 875 counts	OK
5900		B 4.24	K3III	"	"	"	Il20-e	1	Std. Vel		OK
										All FeNo comp s/weak (give 50% more)	
										* I remember this as an isolated star, brightest in field.	
										Note MAY 25. Same Fld noted But HD 103095 is very prominent.	

55

Thurs - Fri

Pg #1

Emulsion Batches:

Date 1990 MAY 24/25... Observers Fda-Tr - Dif.....

Echelle Reticon

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison		Exp. Mtr.
								Type/Filter	Exp.	
0	Prompted Flat		white apoving telescope					TuNG	20s	
1	Comp							Th AR clear	10s	381
2	Comp							"	10s	372
3	HD 147394	16 16.7	+46 33	20 38	21 31	E	+46 23			4000
4	Comp							Th AR #	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	00 33 E				4000
10	Comp								10s	
11	Comp							ThA	10s	
12	HD 147394 2th	16 16.7	+46 33	00 04	00 35					4000
13	comp							Th AR	10s	
14	HD 147394	"	"	00 37	01 13		+46 24			4000

58

no wind at all all night

no wind at all all night

Exp.	Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emission	P.H.	Program	Remarks	Quality
1/3					<i>Echelle</i>		100u	4922A				392
	≈ 4000		$\frac{B}{3.74}$	B5IV						Fds pgrm	$T = +0.097$	1142
	537											379
	4158		$\frac{B}{3.74}$	B5IV						Fds pgrm	$T = +0.096$	1203
												288
	4230		$\frac{B}{3.74}$	B5IV						Fds pgrm	$T = +0.083$	1238
	582											422
2/3											backed up & sent to VELA (Fds)	

59

Fri-SAT

Pif = JAMES DIFRANCESCO

8th 680 Emulsion Batches:
IIgoe... 118.... MAY 23

Date 1990 MAY 25/26 Observers Tn - Dif

[illegible]

Spectr. Temp. 63°F Dome Temp./Hum. +17°C 48.5% Transparency Conditions Hazy - cloudy 60Focus 388Spectr. Temp. 57°FDome Temp./Hum. +12°C 66%

Diff OUT for FeNe Comp

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<u>12000</u>	<u>OK</u>	<u>3.93</u>	<u>Fop</u>	<u>BC</u>	<u>1200/508</u>	<u>B8</u>	<u>Ilube</u>	<u>1</u>	<u>Asn Sp-KK</u>	<u>FeNe comp 130 sec = 1200 cuts</u>	<u>Fire</u>
<u>10,600</u>		<u>0.02</u>	<u>F8V</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>"</u>	<u>cloudy</u>	<u>Fire</u> <u>OK</u>
<u>11,600</u>	<u>so so</u>	<u>2.02</u>	<u>F8V</u>	<u>BC</u>	<u>1200/508</u>	<u>B5</u>	<u>"</u>	<u>1</u>	<u>Asn Sp-KK</u>	<u>cloudy</u>	<u>Fire</u> <u>OK</u>
<u>8600</u>	<u>OK</u>	<u>5.5</u>	<u>F7V</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>"</u>	<u>part cloudy</u>	<u>OK</u>
<u>8940</u>	<u>OK</u>	<u>3.78</u>	<u>F5IV</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>"</u>	<u>cloudy</u>	<u>slut</u>
<u>3045</u>		<u>B</u>								<u>secondary well sep from primary</u>	
<u>4100</u>	<u>so so</u>	<u>4.63</u>	<u>A3m</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>"</u>	<u>part cloudy</u> <u>Disp = 7.6</u>	<u>slut</u>
<u>7950</u>	<u>OK</u>	<u>4.24</u>	<u>K3III</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1</u>	<u>st/vel</u>	<u>v hazy</u> <u>set 386 T=58f</u>	<u>OK</u>
<u>3446</u>											
<u>5600</u>											
<u>16 frames</u>	<u>OK</u>										
<u>31x31</u>	<u>OK</u>	<u>7.6</u>	<u>G5IV</u>	<u>Dome West</u>	<u>1200 no data</u>						

[Fusion since Tour end 2300 EST]

(1st 4 sl str) (2nd 4 with less gain)

No wind at all, medium Aurora

Spectr. Temp. $+63^{\circ}$

Dome Temp./Hum. 17.0°C...60%

Transparency Conditions FINE - slazy 62

Focus ..386.....

Spectr. Temp. 4612.....

Dome Temp./Hum. 15°C.....60%

Dome opened & Fans on by 1950

Log temp started at begin of night,

Exp. Mtr.	Seeing	Fig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
23x23 B filter 3000 3002	OK	7.31 B	K5 III	4 Frames	G=5430 1200/508	1200	Dome West		Seeing test	* Note (Int in Real time this time)	
31x31	5.50	7.20 F8 II	BC		1200/508	BS	II-0-e	1	Asm Sp-KK	* 80 sec FWH (no Diffuser) = 870 cas	
31x31		7.01 F8 II	4 Frames	Dome	1200	SW	no wind		Field of HD 103	0.95 checks with one drawn MAY 21	
31x31		6.04 K5	4 Frames	Dome	1200	SW	no wind		Seeing test for	(no comparison note in BS yet) low dose & meridian	

W 63

Tues-Wed

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

Emulsion Batches:

Ilford 118... MAY 23

5^m 68^o D.A.L. eq. 2 H. 9... MAY 26 25hrs

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
Fmccg 261-TN	Seeing Test HD 113811	13 01.2	+40 08		20 46	00 08 E	+39 25	1/1 Int 15 sec	Int x4
50725	HD 103095	11 47.2	+38 26	21 00	23 33	03 53 W	+37 49	FeNe Clear	80 80 80 80
50726	HD 122742	13 58.6	+11 16	23 44	02 01	04 11 W	+10 52	"	80 80 80 80
50726T	Spot Calc for 50725-27.				15 min @ 15V	D4 D3 D2 3900 4300 4810			
50727	HD 137909	15 23.7	+29 27	02 10	02 27	03 11 W	+29 11	FeNe Clear	130 130
50728	HD 159561	17 30.3	+12 38	02 35	02 53	04 31 W	+12 38	"	160 160
50728T	Spot Calc for 50728-29				02 53 17.5V 15 min @ 04 3900	15V 4300	15V 4810		
50729	HD 182640	19 20.5	+2 55	03 03	03 58	W	+3 07	FeNe Clear	130 130
50729F	Focus test			Comp/Stellar		M	n	"	200 100

Spectr. Te.

Focus...

Spectr. Te.

Exp. Mir.

D. Filter

39.39

2890

2100

2450

1900

10000

35800

1819

17000

440

Spectr. Temp. $+59^{\circ}\text{F}$

Dome Temp./Hum. 13°C...55% H

Transparency Conditions . . . *PART. Cloudy & hazy* . . . 64

Focus 388-388.....

Spectr. Temp. ...50.5°f.....

Dome Temp./Hum. 17.5°C $58\% \text{H}$

Dome open & Fun on by 20:10 EST

Exp.	Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B-7HER	V	OK	7.31	K5II	4 frames, N ^o inst	1200	(NOT b/c/d on MKII)	Hazy sky	Dome WSW	[light North]	wind	
2870	B	OK	7.20	G8V	BC	1200/508	BS	I40e	1	Ason-sp	80sec Fene, no Diff 938cfs Fld checks OK	v slwts
2450	B	poor	6.80	G8V	"	"	"	"	1	"	Set 386 T=54f	
1900	B	poor	3.93	Fop	BC	1200/508	BS	I40e	1	Ason-sp	(set 388 focus)	
3550	B	22	A5III	"	"	"	"	I40e	1	"	T=52of Set 385 still	OK
16919	B	poor	3.68	FoIV	BC	1200/508	BS	III J-dg	1	Ason sp	Note mag hue been labeled '28" instead of '29" should be obvious anyway	OK
17000	B	Set 388, T=	1508f	"	"	"	"	I40-e	1			

P267

Emulsion Batches:

Date 1990 May/June 31/1... Observers KK/SAS/DiF

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mir.
c 15	HD 136202	15 ^h 14.2	+2° 09	21:10	21:30	1 ^h 28 E				100
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				101
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				100
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				~10s	100
25	"	"	"	22:44:25	22:44:50	03 ^h 32 E				200
26	"	"	"	22:45:45	22:46:13					300
27	"	"	"	22:47:00	22:47:46					400
28	"	"	"	22:49:00	22:49:06					50
29	"	"	"	22:50:05	22:50:45	03 ^h 26 E				350

Transparency Conditions .. Clear 68

Focus

Dome Temp./Hum.

Mean

[illegible]

P3 69

Emulsion Batches:

Date 1990 May/June 31/1... Observers SAS/DiF/Fds.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
30	Comp			22:52:38				FeNe Clear	90 ^s
31	Comp			22:07:45				FeNe Clear	90 ^s
32	HD 147933 ^e Ph A	16 ^h 19 ^m 35 ^s	-23° 13'	23:07.5	23:24	0 ^h 40 E			
33	Comp			23:25				FeNe Clear	90 ^s
34	Comp			23:33				FeNe Clear	90 ^s
35	HD 146051	16 ^h 09.1	-3° 26'	23:36.5	23:42	0 ^h 11 E			
36	Comp			23:45				FeNe Clear	90 ^s
37	Comp			23:52				FeNe Clear	90 ^s
38	HD 145001	16 ^h 03.6	+17° 19'	23:55.5	00:10	0 ^h 22 W			
39	Comp			00:12				FeNe Comp	90 ^s
FM 000262 SAS	^{Seeing test} HD 144579			~ 00:20	31x31	pixels	int x4		
40	Comp							FeA Clear	120 ^s
41	Flat			01:23				FeA Tung 1/2	8 ^s
42	flat			01:25				Tung 1/2	8 ^s
43	flat			01:26				Tung 1/2	8 ^s

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ... *Clear* *70*

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				C.C.D. Hiro-100	1800/ 50.8	B5	4860A				
60		V 5.22	B3II								
350		B 4.32	Ma5III						Std. Vel.		4200
150		V 5.00	G5II							brighter of pair	3400
					1800/ 67.87		6600A				9300

Transparency Conditions Clear 72

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

[illegible]

73

Date 1990 June 1/2 Observers SAS/DIF

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.
CF 52	(4x) bias			15:08					
53	dark			15:11					7200
54	(4x) bias			00:40					
55	Flat			00:53			F18 stop diff IN	Tung clear	40 ^s
56	Flat			00:54					40 ^s
57	Flat			00:55					40 ^s
58	Flat			00:56					40 ^s
59	Comp						F18 stop	Fene clear	300 ^s
60	HD 124897 ^{Archvus}	14 ^h 11.1	19° 42	01:24					10 ^s
61	"	"	"	01:46	01:47				30 ^s
62	"	"	"	01:48		3 ^h 57 ^m W			60 ^s
63	"	"	"	01:50					120 ^s
64	Comp			01:54			F18 stop	Fene clear	310 ^s
65	HD 172167 ^{Vega}	18 ^h 33 ^m 33 ^s	38° 41 ["]	02:01					10 ^s
66	"	"	"	02:03					30 ^s

Spectr. Ter

Focus....

Spectr. Ter

Exp. Mtr.

7000

Spectr. Temp. Dome Temp./Hum. 18° ..

Transparency Conditions. *hazy. 3. partly cloudy* ⁷⁴

Focus

593 0 1 1024 20 1 oedfint

Spectr. Temp. Dome Temp./Hum.

$$T = -100^{\circ}\text{C}$$
[illegible]

P2 75

Fri/Sat

Date 1990 JUNE 1/2 Observers SAS/DJF

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.
67	HD172167 (Vega)	18 ^h 33 ^m 23 ^s	+58° 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			F18 stop	Fene Clear	300 ^s
80	HD 186791 (Tarazed)	19 ^h 41	+10° 22	02:59	03:04				10 ^{min}
81	"	"	"	03:10	03:30	9 ^m 36 ^s W			20 ^{min}

Spectr. Tr.

Focus...

Spectr. Tr.

Exp. Mtr.

19000

38200

28500

48300

Spectr. Temp. Dome Temp./Hum. *14°/52%*Transparency Conditions *Thick haze* *76*

Focus

Spectr. Temp. Dome Temp./Hum.

Ex	Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1	19000				CCD fibre led	^{1800/} 50°8	DS	$\lambda = 4860$				1500
2	38200					"						3000
3											Cloud.	<267>
4												1900
5												10000
6												10000
7												10000
8												10000
9												10000
10												1000
11												10000
12												1000
13												1000
14												1000
15												1900
16	28500		2.72							Std Vel		1300
17	48300		"							"	intermittent clouds ... an ambitious exposure	2000

Date 1990 June 1/2. Observers DIF/SAS

Emulsion Batches:

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[illegible]

79

Mon/Tue

Date 1990 June 4/5. Observers SAS. / Nancy Masocco. / Fds

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
0	Prompted Flat									
1	Comp			20:32				Th-Ar	10 ^s	
2	HD 147394 ^{2 Her}	16 ^h 16 ^m 44	+46° 33	20:37	21:17	2 ^h 27 E				1440
3	Comp							Th-Ar	10 ^s	
4	HD 147394	"	"	21:21.5	22:02	1 ^h 42 E				1490
5	Comp							Th-Ar	10 ^s	700
6	HD 147394	"	"	22:07	22:47	0 ^h 56 E				700
7	Comp							Th-Ar	10 ^s	674
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	22:55.5	23:39.5					2099
14	comp							Th-Ar	10 ^s	
15	HD 147394	"	"	23:45	00:25	0 41 W				2685
16	comp							Th-Ar	10 ^s	
17	HD 147394	"	"	00:27	01:07	01 ^h 24 W				2390

Date 1990 June 4/5..... Observers Fdz./BAS/Masacco.....

Emulsion Batches:

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[illegible]

Spectr. Temp. Dome Temp./Hum. 8°/64%.

Transparency Conditions... *Clear, some cirrus*

Focus

Spectr. Temp. Dome Temp./Hum.

[illegible]

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

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[illegible]

343

Dome Temp./Hum. *16°/66%*

Transparency Conditions *Partly Cloudy*..... 84

Focus

Spectr. Temp. Dome Temp./Hum.

[illegible]

85

Date 1990 June 7/8 Observers SRS/Masacco/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	Exp.
0	Prompted Flst			20:21					10 ^s
1	Comp			20:22				Th-Ar	10 ^s
2	HD 147394 ^{2 Her}	16 ^h 16 ^m 44 ^s	+46° 33	20:29	21:09	2 ^h 23 E			10 ^s
3	Comp							Th-Ar	10 ^s
4	HD 147394 ^{2 Her}	"	"	21:13	21:53	01 ^h 38 E	+46° 25		10 ^s
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			10 ^s
8	Comp							Th-Ar	10 ^s
9	Comp				22:22			Th-Ar	10 ^s
10	HD 124897	14 ^h 11.1	+19° 42	22:24	22:25.5	00 ^h 57 W			10 ^s
11	Comp			22:26.5				Th-Ar	10 ^s
12	Comp			22:31				Th-Ar	10 ^s
13	HD 147394 ^{2 Her}	16 ^h 16 ^m 44 ^s	+46° 33	22:34	23:05				10 ^s
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.

[illegible]

P2/ 87

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

Emulsion Batches:

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[illegible]

Dome Temp./Hum. ... 16 / 51%

Transparency Conditions 88

Dome Temp./Hum. 15° / +55%

[illegible]

89

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

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 Filter	Comparison Type/Filter	Exp.
0. Pif cf00084	4x Bias			~20:30					
* 85	Flat						Filter Holder VP for all Exp.	Tung Clear	2 ^s
86	Flat							Tung Clear	2 ^s
87	Comp							FeNe Clear	2 ^s
88	Comp			23:35				FeNe Clear	20 ^s
89	Flat			23:40				Tung Clear	20 ^s
90	Flat			23:43				Tung Clear	40 ^s
91	Flat			00:06			With Red Filter	Tung Clear	40 ^s
92	Comp			00:10			"	FeNe Clear	40 ^s
93	bias 4x			00:15					
94	Flat			00:19			"	Tung Clear	40 ^s
95	Comp			00:21			"	FeNe Clear	40 ^s
X 96	HD 172167 ^{Vega}	18 ^h 33 ^m 33 ^s	38°41'	00:52			"		300 ^s
97	Comp						"	FeNe Clear	40 ^s
X 98	HD 172167 ^{Vega}	"	"	01:03			"		300 ^s

Spectr. Te

Focus....

Spectr. Te

Exp. Mir.

Spectr. Temp. Dome Temp./Hum. $15^{\circ}/76\%$...

Transparency Conditions... Windy, some... cloud... 90

Focus

 $T = -100$ 90 again

Spectr. Temp. Dome Temp./Hum.

608 0 4 1024 18 1 ccd fnt <no>

Exp. Mir.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Fibre fed	830/ 46.5		6600 Å		Mk1 - BCD tests		
					830/ 46.5		9044 Å				10000
					"						2000
					830/ 48.0		9572 Å				5000
					830/ 46.5 48.0		9044 10000				10000 2200
					"		"				14000
					831/ 48.0		9572 Å				5000
					"		"				1600
	5"	204 AD			"		"				4600
					831/ 46.5		9044 Å				10000
	5"	"	"		"		"				2500

P2 91

Date 1990 June 10/11 Observers Miki/SAS/DiF

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	Filters Declination	Comparison Type/Filter	Exp.
99	Flat			01:13			F1/8 stop Red filter	Tung Clear	40 ^s
99 100	Flat			01:16			"	Tung Clear	200 ^s
100 101	Comp			01:24			"	FeNe clear	200 ^s
101	Comp			01:26			"	FeAr clear	20 ^s
x 102	(H) 172167 ^{Vega}	18 ^h 33 ^m 33 ^s	+38° 44'	01:29			"		300 ^s
x 103	"	"	"	01:40			"		150 ^s
104	Comp			01:45			"	FeNe clear	10 ^s
105	Flat			01:46			"	FeNe clear	20 ^s
106	BIAS 4x								
107	Flat			01:54			"	Tung clear	20 ^s
108	Comp			01:57			"	FeNe clear	2 ^s
109	Comp			02:00			"	FeAr clear	100 ^s
110	BD 172167 ^{Vega}	18 ^h 33 ^m 33 ^s	+38° 44'	02:06		0 ^h 30' W	"		60 ^s
111	"	"	"	02:09			"		30 ^s
112	"	"	"	02:11					15 ^s

Spectr. Te

Focus...

Spectr. Te

Exp. Mir.

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

92

Focus

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Fibro fed	831/ 46.5		9044 Å		Mk - CCD tests	Forgot to write	9000
					831/ 49.3		10025 Å				7500
					"		"			Only one line	350
					"		"			two lines	430
	6"	0.04	A08		"		"				1500
	6'	"	"		891/ 45.0		8509 Å				10000
					"		"				10000
					"		"				8000
											<207>
					831/ 39.7		6575 Å				7000
					"		"				10000
					"		"				3600
	6.5"	"	"		"		"				10000
		"	"		"		"				5200
		"	"		"		"				2700

p3 93

Date 1990 June 10/11 Observers S.N.S. / M.J. / D.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 Filter	Comparison Type/Filter	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 F18 stop	Fe-Ne Clear	60 ^s 150
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-Ne Clear	60s
125	Comp			03:28			"	"	60s
126	Comp Flat			03:31			"	Tung Clear	60s

Spectr. Te

Focus...

Spectr. Te

Exp. Mr.

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *Windy, bad seeing: 94*
 Focus
 Spectr. Temp. Dome Temp./Hum. *18-13C / 73.0-83%*

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	ADU Quality
	6"	0.04	hcr	CCD - Fibre led	831/ 39.7		6575H		McL - CCD tests		1500
					"		"				<208>
					"		"				
	6"	0.04	A62		831/ 43.6		8004A				12000
					"		"				
					"		"				
					"		"				
				CCD Fibre led	831/ 43.6		8004A				
				"	831/ 50.7		10507A				
				"	"		"				370
	5-6"	0.04	AOV	"	"		"				600
				"	"		"				
				"	831/ 55.8		515 A09				<208>
				"	"		"				

Date 1990 June 10/11 Observers SAS/Mki/PiF

Emulsion Batches:

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[illegible]

97

Mon Tue

Date 1990 JUNE 11/12 Observers SAS/Mic

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.
Edmond 263.585	Seeing Test HD 120245	13 ^h 43 ^m 25 ^s	+39° 23' 33"	20:45					
chap 133. pi f	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	HD 124897 ^{Arcturus}	14 ^h 11.1	+19° 42'	22:46		01° 34' W	Red Filter		40 ^s
136	BIAS 4x			23:50			"		
137	HD 124897	"	"	23:54		02° 43' W	Red Filter		60 ^s 120 ^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} in (Oct 91)		00:45					
X 141	Comp	not written		00:48			"	Fene clear	120 ^s
142	HD 172167 ^{Vega}	18 ^h 33 ^m 33 ^s	+38° 41'	00:52		0° 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. Te

Focus...

Spectr. Te

Exp. Mtr.

SA 000

SA 000

154 000

154 000

162 000

Spectr. Temp. Dome Temp./Hum. 14.0/65%...

Transparency Conditions Clear..... 98

Focus

90 again

Spectr. Temp. Dome Temp./Hum.

614 0 4 1024 20 1 CCD FMT

ADU

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				cen - fire-fed	82/ 49.3		10025A		Mci	31x31; intx4 (suspect file) (26/06/90) - due to pifzret blowup	14000 8200 14000 8200
											8300
50 000	5"	0.04	K15W							CCD Problems - did NOT WRITE	8000
854 000 10000										HAD to reboot ALL systems - some sort of hardware failure	12500
											155
										CCD warming - topped up	2000
											8500
102 000	5"	0.04	A012								4600
	4"										9000
											8000
										Grating moved off region then back.	1300

p2 99

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	Exp.
ECf 00/46	Flat			01:25			Red Filter F/18 stop	Tung clear	2 ^s
X 147	Comp <i>not written</i>			01:27			"	Fene 1/4	2 ^s
148	HD 172167 <i>Vega</i>	18 ^h 33 ^m 33 ^s	+38° 41'	01:31		0 ^h 02 E	Red Filter		10 ^s
149	"	"	"	01:33		0 ^h 0 ^m	"		15 ^s
150	BIAS (4X)			01:44					
151	HD 206267	21 ^h 35 ^m 51 ^s	+57° 02'	01:48	01:58	02 ^h 37 E	"		10 ^{min}
152	"	"	"	02:00	02:10	02 ^h 25 E	"		10 ^{min}
153	"	"	"	02:11.5	02:21.5	02 ^h 12 E	"		10 ^{min}
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}
158	"	"	"	02:54	03:04	01 ^h 30 E	"		10 ^{min}
159	"	"	"	03:06	03:16	01 ^h 18 E	"		10 ^{min}
160	Flat			03:17			" F/18 stop	Tung clear	35 ^s

Spectr. Tem

Focus.....

Spectr. Tem

Exp. Mtr.

21000

22500

4700

500
4000

5550

6070

6700

6100

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions .. *Clear, bad seeing* .. 100

Focus

CCD $T = -92.0$

Spectr. Temp. Dome Temp./Hum.

90 CGAIN

ADU

[illegible]

Transparency Conditions *Clear* 102

Spectr. Temp.

Dome Temp./Hum. ... 14°/71%.

ADU

[illegible]

Spectr. Temp. Dome Temp./Hum.

Focus

Spectr. Temp. Dome Temp./Hum.

104

(1) Pool

MCx

AEU

Quality

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	App. Quality
					CCD- Fibre fed	1800/ 52.7		5120 Å				(1Pcal) <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 D.I.F. - Tn.

Emulsion Batches:

CCD Spectroscopy

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CF00174	Flat			21 00 20 50				Tung Clear	20sec
CF00173	Bias x4			20 55					
175	Comp			21 05	written after all			FeNe Clear	60sec
176	HD 126053	14 18.1	+01 43	21 14	22 02	00 58 W			48 min
FM 000 264.7N	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			32 min
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		61 min
181	Comp			00 08				FeNe Clear	60s
182	BD +66° 946	17 370	+68 27	00 20	01 01	00 55 W	+68 20		49 min
183	Comp			01 13				FeNe Clear	60s
184	FLAT			01 18				Tung Clear	20s
185	Dark			01 19					60 min

Spectr. Ter

Focus...

Spectr. Ter

Exp. Mir

Spectr. Temp. Dome Temp./Hum. $+22^{\circ}\text{C}..65\%$ Transparency Conditions $..PART..Cloudy.....106$

Focus

Dome opens 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
13000				CCD FiberTel	1800/52.7		5125				A 04
13000											3170
2700	poor	V 6.27	G1V	CCD	1800/52.7		5125A		std vel	Cloudy here	3700 4400 700 700
13000	poor	V 6.66	4G8	[Int x 0] CCD	4 Frames		Moderate N Wind		seeing test	IN DR10S Dome SW	700
3750		V 6.66	4G8	CCD	1800/52.7		5125A		std vel		700
											3700
				FiberTel	1800/52.7		5125A				11000
1200	5" poor	V 8.2	K0	"	"		"		Asm Sp-KK	Fnt companion visible to North Tel on East Side	13000 350 370
				"	"		"			[Fid Drawn on back of card]	
1069	4" V	9.2	M5	"	"		"		Asm Sp-KK	East Side still / S/Hazy	270 300
[Note check fids and both cards in Deck for +68 946]											exp. mtr: 1069 counts
											5000 6900 200 2200

109

Sun Mon

Date 1990 JUNE 17/18 Observers TJ

Emulsion Batches:

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[illegible]

Done
Tues - wed
Date 1.9.90. 1.40E. 1.9/20.

Observers D.F./T.R./M.L.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	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	00 38 W		FeAR	11 min
199	Comp								120
200	DARK								660
201	Flat						F18 stop	TUNG H=1/2	10 sec
202	n							TUNG clear	10 sec
203	Bias x4								
204	HD 124897	14 11.1	+19 42	22 43	22 44	02 02 W	NO Diffuser F18 stop	FeAR clear	1 min
205	Comp								30 sec
206	Flat						clear	TUNG H=1/2	20 sec
207	DARK							TUNG clear	30 sec
208	Bias x4								
209	VW Cep HD 187433	20 38.46	+75 14.3	00 01 23 50	00 16	02 47 E			15 min
	VW Cep = HD 197433 ≠ HD 187433								

Spectr. Te

Focus...

Spectr. Te

Exp. Mir.

No. 1148

990

700

Spectr. Temp. ~~117°~~ ^{512H} Dome Temp./Hum. 117° 51% H Transparency Conditions part. cloudy 112

Focus

Spectr. Temp. Dome Temp./Hum.

CCDFMT for H₂ obs [573 0 5 1024 8] ADU

Exp. Mtr. <i>20-1140P</i>	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CCD Fiber Opt	1800/63	250u	H ₂			still cold Temp @ 20 30 T=-102.5	
990	OK	^v 6.27	G1V				H ₂		std vel	part cloudy	400
											2300
											4600
							Actual W/L				703
					1800/52.9				575 05 1024 81	5194A indicated	
					1800/52.6				CCDFMT	"	
		^v 6.04	K2IIIp		1800/53.2		75 200A		std vel	5148 indicated	4500
7000					"		"		"	5241A " Ideal setting	4800
										ADU = 9000	4500
											78
		^v 8	G5.60 K5				520A		H ₂ - pym	suspect file (20508190) due to p12 net blowup contact binary ADU = 235	5000 225

113 Tues-Wed. Pg#2

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

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.
210	VW Cep ^{HD 197433}	20 ^h 28 ^m 46 ^s	+75° 14.3'	00 17	00 32	230 ^{deg} E	1		15 min.
211	4x Bias								
212	HD 197433 ^{VW Cep}	20 ^h 38 ^m 46 ^s	+75° 14.3'	00 36	00 51	E	From Encoder		15 15 min
213	HD 197433 ^{VW Cep}	"	"	00 54	01 10	E	+75 34		
214	Comp.			01 12			no diffuser F/8 stop	FelNo Clear	30 sec
215	Bias (4x)			01 17.					
216	HD 197433 ^{VW Cep}			01 18	01 27				9 min.
217	HD 197433 ^{VW Cep}			01 29 30	01 46				15 min
218	Bias (4x)			01 49					
219	HD 197433 ^{VW Cep}			01 50	02 05	00 58 E			15 min
220	HD 197433 ^{VW Cep}			02 07	02 23	00 40 E			15 min
221	Comp							FelNo Clear	30 sec
222	Bias Average of 4								
223	Flat							TUNG clear	20 sec
224	HD 197433 ^{VW Cep}			02 33	02 48	+75 37			15 min
	VW Cep = HD 197433 ≠ HD 187433								

115 Tues-Wed. pg#3

pg #3

Date 1990 June 19/20 Observers DF/Tn/Mk

Emulsion Batches:

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Spectr. Temp.

Focus . . .

Spectr. Ten

[illegible]

Exp. Mtr.

450

710

Spectr. Temp.

Focus

Spectr. Temp.

Exp. Mtr.	Secing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
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$$APC = 8000$$

Spectr. Temp.

Focus

Spectr. Temp.

Exp. No.	Seeing	Ptg.	Sp.
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Exp. Mtr.	Seeing	Ptg.	Sp.	Inst.	Grating/	Slit	Emulsion	P.H.	Program	Remarks	Signature
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Spectr. Temp. Dome Temp./Hum. 20°/58....

Transparency Conditions *Some Cloud* 20

Focus

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1 ccd fnt

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max of Quality Stats on centre
					CCD Echelle/ CCD	17.50	0.261 100µ	x 4 ml 05000	Swam 450µ	FDs - CCD tests	Topped @ 20.30 →	
			B									946
	10 000		1.29	K2 III						STD VEL	STD	2179
											2.0 pro Rotorband pass stat in rotator T = -102.3 prog.	248
	20 000		"	"						STD VEL.		949
												263
												277
	1000		V 3.99	B5 II						Fds - CCD TEST	pt. cloudy.	
	5000											
			"	"								
	2000		0.00	A0 II								
	1000		"	"								
	5000		"	"								

P2 121

Date 1990 June 25/26 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	Exp.
17 18	comp							Th-Ar	20
18	HD 186741	19 41 30	+10 22	01:03:00	01:13	0 ^h 34 E			
19	Comp			01:14:45				Th-Ar	20 ^s
20	comp							"	"
21	HD 180554	19 ^h 11 55	+21 12' 49"	01:31:00	02:05:35	0048 30W			
22	comp							"	20
23	comp			02:13				Th-Ar	20 ^s
24	HD 206778	21 ^h 39 ^m 3	+9° 25'	02:17:00	02:27:10	01 18 E			
25	comp							"	"
26	Comp			02:35				Th-Ar	20 ^s
27	HD 195556	20 ^h 26 ^m 58 ^s	+48° 36' 55"	02:58	03:38	01 07 W			
28	Comp			03:40				Th-Ar	20 ^s
29									
30	4 flats @ 20s								
31									
32									
33	4 flats @ 10s								
34									
35									
36	4 flats @ 30s								
37									
38									
39									
40									
41									
42	BIAS x4 BIAS	this last file is a very peculiar bias I took while averaging in. very odd, etc							

CE 00041.P4
42Spectr. Te.
Focus....
Spectr. Te.

Exp. Mir.

2000

1000

1500

970

Locks

123

Wed/Thu

Short

Date .. ~~Tue. 27/2/8~~ Observers .. ~~Fels./SAS~~ / ~~SAT~~

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

Spectr. T.

Focus...

Spectr. T.

Exp. Mr.

2495

858

1000

92 125

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

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.
65	comp			23:01:25				ThAr	20 ^s
69	HD 144470 ^{W Sco}	16 ^h 00 ^m 57 ^s	-20°23'	23:04	23:27.46	01 28 W			
70	comp							ThAr	20 ^s
71	comp			23:35:34				ThAr	20 ^s
72	HD 172167 ^{Vega}	18 ^h 33 ^m 33 ^s	+38°41'	23:42:02 42	23:44:44	0 ^h 45.40E			
73	comp			23:47				ThAr	20 ^s
74	comp			23:50:10				ThAr	20 ^s
75	HD 180554 ^{1 Vul}	19 ^h 11 ^m 55 ^s	21°12'49"	23:52:00	00:32:16				
76	comp							Th-Ar	20 ^s
77	comp			00:38:20	00			Th-Ar	20 ^s
78	HD 186791	19 41 30	10 22	00:42:34	01:01:48				
79	comp							Th-Ar	20 ^s
80	comp			01:12				Th Ar	20 ^s
81	HD 195556 ^{W Cyg}	20 26 58	48 36 55	01:15:30	01:57:10				
82	comp							ThAr	20 ^s

Spectr. T.
Focus...
Spectr. T.

Exp. Mtr.

350

5000

430

1500

350

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions .. Clear, .. bad seeing .. 126.

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ CCD	18.405	0.263	X G22 c4555	250u 450u	F09-CCD TESTS		
390	4"	3.96	B1V								
3000											
430		4.77	B4IV								
1500		2.72	F22III						SD-UVB		
350		4.95	B2.5IV								

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

Emulsion Batches:

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[illegible]

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
				<i>Echelle/</i>							
				<i>CCD</i>	<i>18 405</i>	<i>263</i>	<i>X grat</i>	<i>450</i>			
							<i>04555</i>				
<i>540</i>	<i>6+</i>	<i>338</i>	<i>B35</i>						<i>FDS-</i>		
									<i>CCD 4555</i>	<i>CCD alternating -85°C end.</i>	
										<i>1/27/80 up.</i>	

129

Date ~~June 30~~ ^{Jul} 1..... Observers ~~Fels~~ ^{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	Exp.
94 94	30 ^m dark								30 ^{min}
95	" "								30 ^{min}
96	superbias (6x)								
97 - 106	Flats			20:43					each 55 ^s
107	superbias (6x)								
108	comp 0° 4 ⁿ E								
109	" " 3 ⁿ W								
110	" " 2 ⁿ W								
111	" " 1 ⁿ W								
112	" " 10 ⁿ E								
113	" " 1 ⁿ W								
114	" " 0°								
115	" " 1 ⁿ W								
116	" " 1 ⁿ W								
117	" " 1 ⁿ W								
118	" " 1 ⁿ W								
119	comp +25° 7 ⁿ E								
120	" " 6 ⁿ E								
121	" " 5 ⁿ E								
122	" " 25° 4 ⁿ E								
123	" " 25° 3 ⁿ E								
124	" " 25° 2 ⁿ E								
125	" " 1 ⁿ E								
126	" " 0°								
127	" " 1 ⁿ W								
128	" " 2 ⁿ W								
129	" " 3 ⁿ W								
130	" " 4 ⁿ W								
131	" " 5 ⁿ W								
132	comp +45° 5 ⁿ W								
133	" " 4 ⁿ W								
134	" " 3 ⁿ W								
135	" " +45° 2 ⁿ W								
136	" " 1 ⁿ W								
137	" " 0°								

Flexure tests
↓

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions 132

Focus

Spectr. Temp.

Dome Temp./Hum.

[illegible]

133

Sun/Mon

Emulsion Batches:

Date ~~July 1st~~ / ~~July 2nd~~ / ~~July 3rd~~ Observers ~~Fds/SAS~~

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
147 147	Superbias (6x)								
148	DARK								30"
149	"								30"
150	"								30"
151	Superbias (6x)								
152 → 161	flats			20:07					57"
162	superbias (6x)			20:43					
163	comp			20:52				Th-Ar	20"
164	HD 124897 ^{Arcturus}	14 ^h 11 ^m 06 ^s	+19° 42'	20:55	20:58	01 ^h 04 ^m W			200
165	Comp			20:59:20				Th-Ar	20"
166	comp			20:02:03				Th-Ar	20"
167	HD 144470 ^{ω Sco}	16 ^h 00 ^m 57 ^s .3	-20° 23'	21:04:30	21:43:15	0 ^h 01 ^m E			1000
168	Comp			21:44:30				Th-Ar	20"
169	HD 144470 ^{ω Sco}	"	"	21:46:00	22:26:42	0 ^h 42 ^m 20 ^s W			900
170	Comp			22:27:54				Th-Ar	20"

Dome Temp./Hum. 17°/52%

Transparency Conditions.. Clear.. light breeze... 134

Spectr. Temp.

Dome Temp./Hum.

90 CGAIN

256 1024 4 | confmt

[illegible]

P2 135

Sun/Mon

Date 1990 July 1/2 Observers Fds/SJS

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.
171	Comp			22:31:45				ThAr	20 ^s
172	HD 120315 η UMa	13 ^h 43 ^m 3.6 ^s	+49° 48' 45"	22:37:42	22:46:08	03 ^h 21 ^m W	49° 25'		
173	Comp			22:47:25				ThAr	20 ^s
174	Comp			22:49:45				ThAr	20 ^s
175	HD 147394 ϵ Uta	16 ^h 16 ^m 44 ^s	46° 33' 05"	22:51:35	23:16:29	01 ^h 19 ^m W			
176	Comp			23:18:02				ThAr	20 ^s
177	Comp			23:29:34				ThAr	20 ^s
178	HD 172167 γ Leo	18 ^h 33 ^m 33 ^s	+38° 41'	23:35:30	23:38:14	0 ^h 36 ^m E	+38° 53'		
179	Comp			23:39:37				ThAr	20 ^s
180	Comp			23:42:01				ThAr	20 ^s
181	HD 180554 δ Vul	19 ^h 11 ^m 55 ^s	21° 12' 49"	23:46:20	00:24:00	0 ^h 29 ^m 40 ^s E	+21° 26'		
182	Comp			00:25:20				ThAr	20 ^s
183	Comp			00:27:36				ThAr	20 ^s
184	HD 186791	19 ^h 41 ^m 30 ^s	10° 22'	00:29:30	00:39:50	0 ^h 43 ^m E	+10° 40'		
185	Comp			00:41:10					

Spectr. Te.

Focus...

Spectr. Te.

Exp. Mr.

3000

1500

5000

100

500

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions

Clear

136

Focus

Spectr. Temp. Dome Temp./Hum.

slit

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Gratings/ Tilt	Slit Width	Emulsion X front	P.H. height	Program	Remarks	Quality
2					Echelle/ CCD	18.41	100μ 0.263	0.4555	0.205 = 600μ	Fds Prgm		
	3000		V 1.86	B3V								
	1500		V 3.89	B5E								
	5000		V 0.04	A0V							Topped up 23:25	
	800	4"5	V 4.77	B4E								
	1500		2.72	K2III						S/V		

P3 137

Date 1990 July 1/2 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	Exp.
186	Comp			00:45:20				ThAr	20 ^s
187	HD 195556 w Cyg	20 ^h 26 ^m 58 ^s	+48° 36' 55"	00:52:45	01:37:26	0 ^h 30 E			
188	Comp			01:38:54				ThAr	20 ^s
189	Comp			01:41:47				ThAr	20 ^s
190	HD 180554 1 w	19 ^h 11 ^m 55 ^s	21° 12' 49"	01:44:35	02:23:25	01 ^h 38 W			
191	Comp			02:24:40				ThAr	20 ^s
192	Comp			02:29:37				ThAr	20 ^s
193	HD 195556 w Cyg	20 ^h 26 ^m 58 ^s	+48° 36' 55"	02:32:20	03:17:20	01 ^h 10 W			
194	Comp			03:18:35				ThAr	20 ^s
195	Comp			03:22:17				ThAr	20 ^s
196	HD 11415 E Cas	01 ^h 47 ^m 12 ^s	+63° 10' 40"	03:24:30	03:39:42	3 ^h 51 E			
197	Comp			03:41:05					
198	Superbians (x6)	Top up pos.		03:56:00					
199 → 208	Flats	"	"	04:01:00					53s
209	Superbians (x6)			04:24:00					
210 211	DAER "			04:27:30 05:00					30 min "

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions ...

Clear
some cirrus.

138

Focus

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

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	slit P.H. height	Program	Remarks	Quality
				Schalle/ CCD	18.41	0.263 120μ	X gra ^s • 4555	0.205 600μ	for prism	T = -102.2	
800		995	B25D							Destroyed during PIEZFIT	
800	4"-5	477	B47								
790		478	B25D								
1000	4"	538	B30D								
										Destroyed during transfer	

139

Mon/Tues

Emulsion Batches:

Date 1990 July 2/3 Observers FJ/SAS

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
ce00212-pf	bias (6x)			18:10:00					
213	DARK			18:37:00					30 ^m
214	DARK			19:13:00					30 ^m
215	BIAS (6x)			19:55					each
216-225	Flats			20:00					55 ^s
226	bias (6x)			20:27					
227	Th-Ar comp Arcturus			20:40:50				ThAr	20 ^s
228	HD124897	14 ^h 11 ^m 06 ^s	+19° 42'	20:44:30	20:47:30	0 ^h 58' W			180 ^s
229	Comp			20:48:50				ThAr	20 ^s
230	Comp			20:51:5				ThAr	20 ^s
231	HD144470	16 ^h 00 ^m 58 ^s	20° 23'	20:56:08	21:19:33	0 ^h 21' E			1000
232	Comp			21:20:34				ThAr	20 ^s
233	HD144470	"	"	21:21:55	21:44:10	0 ^h 04' W			1600
234	Comp			21:45:37				ThAr	20 ^s
235	HD144470	"	"	21:47:10	22:06:34	0 ^h 26' W	120° 25'		1800

P2 141

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	Exp.
236	Comp			22:07:40				Th Ar	20s
237	HD 144470 ^{w 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 ^{w 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	Black bias (6x)			00:16:30					

Spectr. Tr.

Focus...

Spectr. Tr.

Exp. Mir.

1000

1400

1273

1000

1400

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

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Secing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit 6.00	Emulsion	P.H. Length	Program	Remarks	Quality
23				Echelle/ CCD	18.41	0.263 100µ	x 6.24 0.4555	0.205 600µ	Fds program		
1000		3.96	BIV								
1400	2.3	"	"								
1273	2"	4.77	B458								
10000		0.04	APV							Saturated	
1400		3.85	B513								
										Topped up @ 00:22	

P3 143

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	Exp.
251	Comp			00:27:50				Th Ar	20s
252	HD 195556 w' cyg	20 ^h 16 ^m 58 ^s	+48° 36' 55"	00:30:30	01:15:10	0 ^h 48 E			1000
253	Comp			01:16:34				Th Ar	20 ^s
254	Comp			01:21:54				Th Ar	20 ^s
255	HD 186791	19 ^h 41 ^m 30 ^s	18° 22'	01:23:30	01:33:49	0 ^h 14 W			1500
256	Comp			01:34:56				Th Ar	20 ^s
257	Comp			01:37:42				Th Ar	20 ^s
258	HD 180554 1 Vul	19 ^h 11 ^m 55 ^s	21° 12' 49"	01:40:10	02:05:10	01 ^h 26 W			1333
259	Comp.			02:26:42					
260	bias (6x)			02:29:30					
261-270	FIATS			02:43:00	03:05:00				55sec
271	bias (6x)								
272	DARK			03:12:50	03:42:50				30min
273	DARK								"

Spectr. Te

Focus...

Spectr. Te

Exp. Mir.

pl 145

Date 1990 July 3/4 Observers SAS/DiF (KR 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	Exp.	Spectr. T.
cf00241	4x averaged bias			21:10						Focus...
cf00242	Flat						F18 stop	Tung clear	30 ^s	Spectr. T.
243	Comp			21:24			F18 stop	Fen clear	60 ^s	Exp. Mtr.
PH 244	HD 144579	16 01.5	39 24	21:31:41	21:51:41	0 ^h 16 W			✓	2500
FN0002675K	"	"	"	21:54						
245	Comp			22:00					60 ^s	
246	Bias (4x)				22:12					
247	HD 149162	16 ^h 27.9	+03°17	22:13.07	23.00.07	0 ^h 58 W			✓	900
248	Bias (4x)			23:02						
249	HD 154417	17 ^h 00.2	0°51	23:07:50	23:16:21	0 ^h 42 W			✓	2500
✓ 250	HD 161096	17 38.5	+4°37	23:23:01					60 ^s ✓	6100
✓ 251	Comp			23:25:55			F18 stop	Fen clear	60 ^s	
252	Flat			23:28				Tung clear	35 ^s	
253	HD 158633	17 ^h 25.3	+67°24	23:40:37	23:53:15	0 ^h 58 W			✓	2500
254	Bias			23:58						

PZ 147

Date 1990 July 3/4 Observers SAS/DiP

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.
255	BD +68 946	17 ^h 37	+68° 24	00:08:40	01:09	2 ^h 3 ^m W			350
256	Comp			01:13:50			F/18 stop	FeNe clear	60 ^s
257	HD 17 3739	18 ^h 42 ^m 13 ^s	+59° 33' 3	01:18:25	02:23:53	02 ^h 11 W			3728
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			580
264	Bias (4x)			03:10:00					
265	HD 222 368	23 ^h 34.8	05° 05	03:18:30	03:29:00	01 ^h 39 E			830
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 03:56:30			"	Tung clear	each 30 ^s
272	Bias (4x)			03:58:40	04:09				
273	DARK								

Spectr. Tem

Focus.....

Spectr. Tem

Exp. Mtr

1000

889

300

300

Transparency Conditions 150

Dome Temp./Hum.

Dome Temp./Hum.

[illegible]

153

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

or der
separation
Filter
used

Emulsion Batches:

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Spectr. Ter

Focus....

Spectr. Ter

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
c100286	Flat			20:56:00			f/18 stop in place	Tung clear	40s	
287	Bias (4x avg)			20:58:00			"			
288	HD 172167 (Vega)	18 ^h 33 ^m 33 ^s	38° 41'	21:02:00	21:03:00		f/18 stop in place		60s	45000
289	HD 172167 (Vega)	"	"	21:05:30	21:10:40	2 ^h 21 ^m E	"		300s	315000
290	Comparison			21:16:20			"	Ref clear	20s	—
291	HDE 226868 (Cygnus X-1)	19 ^h 58 ^m (1900.5)	38° 10' (1900.5)	21:45:00	22:05:10	2 ^h 53 ^m E	"		20 min	560
292	HDE 226868 (Cygnus X-2)	"	"	22:09:00	22:29:00	2 ^h 27 ^m E	"		"	350
293	HDE 226868 (Cygnus X-1)	"	"	22:37:30	22:57:30	2 ^h 3 ^m E	"		20 min	260
294	Bias (4x)			23:01:00			"		—	—
295	Comparison			23:04:00			"	Ref clear	200s	—
296	HDE 226868 (Cygnus X-1)	19 ^h 58 ^m (1900.5)	38° 10' (1900.5)	23:11:00	23:31:00	1 ^h 31 ^m E	"		20 min	270
297	HDE 226868 (Cygnus X-1)	"	"	23:35:00	23:55:00	1 ^h 00 ^m E	"		20 min	600
298	Bias (4x avg)			00:01:00			"		—	—
299	Flat			00:03:10			f/18 stop in place	Tung clear	40s	
300	HDE 226868 (Cygnus X-1)	19 ^h 58 ^m (1900.5)	38° 10' (1900.5)	00:06:00		0 ^h 32 ^m E	"		20 min	480

Spectr. Temp.

Dome Temp./Hum. ... 41.8.4 / 52.6

Transparency Conditions ... clear but slightly hazy

Focus

Spectr. Temp.

Dome Temp./Hum. ... 41.6.4 / 46.0

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

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				1.6m Len CCD	83 / 50.0		10100A				11000
				"	"		"				1500
45000	OK	0.0	A0V	"	"		"				5550
375000	"	"	"	"	"		"				7100
—	"	—	"	"	"		"				300
360	"	~9.0	09.71ab	"	"		"				240
350	"	"	"	1.6m Len CCD	83 / 50.0		10100A				200
260	poor	"	"	"	"		"			- thin haze gradually thickening as night progresses	180
—											125
—		—		1.6m Len CCD	83 / 50.0		10100A				280
~370	poor (clouds)		0.971ab	"	"		"			WARNING: - bright moonlight with cirrus could easily contaminate spectra	~370
600			"	"	"		"				220
				"	"		"				8500
430			0.971ab	"	"		"				200

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	Exp.
✓ 100304	Comparison			22:00:00				Red clear	200s
✓ 305	Comparison			23:26:00				FeA order separate Filter	200s
✓ 306	4x avg. BIAS			23:29:00					—
✓ 307	Flat			23:34:00				Tung order sep.	40s
✓ 308	HD 209975 (19 Cep)	^(1900.5) 22 ^h 04 ^m 51 ^s	^(1900.5) +62° 14'	23:39:20	23:49:10	3 ^h 15 ^m 30 ^s E	A/18 stop in place	order sep. Filter	600s
✓ 309	Dark			23:57:00	00:07:00				600s
✓ 310	HD 209975 (19 Cep)	^(1900.5) 22^h 04^m 51^s 22 ^h 04 ^m 51 ^s	^(1900.5) +62° 14'	02:53:00	03:13:20	1 ^h 00 ^m 00 ^s W	A/18 stop in place	order sep. Filter	20 min
✓ 311	HD 209975 (19 Cep)	^(1900.5) 22 ^h 04 ^m 51 ^s	^(1900.5) +62° 14'	03:16:00	03:35:50	0 ^h 32 ^m 00 ^s W	"	"	20 min
✓ 312	HD 209975 (19 Cep)	^(1900.5) 22 ^h 04 ^m 51 ^s	^(1900.5) +62° 14'	03:37:30	03:57:30	0 ^h	"	"	20 min
✓ 313	Comparison HD 3712 (K Cas)	^(1900.5) 0^h 39^m 58^s 0 ^h 39 ^m 58 ^s	^(1900.5) +56° 29' +56° 29'	03:57			"	Red order sep.	200s
✓ 314	HD 3712 (K Cas)	0 ^h 39 ^m 58 ^s	+56° 29'	04:07:00	04:09:46	+1 ^h 24 ^m 00 ^s E	"	order sep.	200s
✓ 315	HD 3712 (K Cas)	0 ^h 39 ^m 58 ^s	+56° 29'	04:11:30	04:15:30	1 ^h 24 ^m 00 ^s E	"	"	200s
✓ 316	Dawn Sky	0 ^h		04:16:50				"	200s
✓ 317	Bias (4x)				04:25				—
✓ 318	Flat				04:28				40

Spectr. T.

Focus...

Spectr.

Exp. Mr.

324

5100

2540

15500

10000

13000

210

Spectr. Temp. Dome Temp./Hum. 19.6 / 51.6

Transparency Conditions ... clear - with small clouds 18

Focus

Spectr. Temp. Dome Temp./Hum.

→ cloudy!
cc format: 674/01611024/1011

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
—				red Libp	831	?	10100A		Hardy	- despite a couple of technical	
—				- fed	50.0	234	—		Cyg X-1	failures and a sudden	
—				"	"		"			clouding over. No seeing	
—				"	"		"			remains alright.	
324		V=5.1	0916	red Libp	831		10100				150
		5.1	0916	fed	50.0		—				
				fed	831		10100A				324
8700	not	V=	0916	red Libp	831		10100A				270
	exposed	5.1		fed	50.0		—				
2540	"	"	"	"	"		"				185
15500	"	"	"	"	"		"				
—	poor	V=2.2	"	"	"		"			pushing down, here!!	
10000	poor	V=2.2	K III	"	"		"				700
13000	poor	"	"	"	"		"			really pushing down, here!!!	620
210	—	—	—								

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions 160

Focus

Spectr. Temp. Dome Temp./Hum.

[illegible]

161

Date 1990 July 12/13 ^{Thur/Fri} Observers SAS/D.F.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mr.
✓ 321	BIAS (4X)			21:21						
✓ 322	FLAT			21:29:50			F18 stop	Tung clear	12s	
✓ 323	Comparison			21:34:00			F18 stop	Fene clear	30s	
✓ 324	HD 135101	15 ^h 08 ^m 16	+19° 39'	21:37:40	21:59:52	01:53 W	"		~22 min x 732	2000
✓ 325	BIAS (4X)			22:07:30			"			
✓ 326	Comparison			22:10:50			"	Fene clear	30s	
✓ 327	Flat			22:11:45			"	Tung clear	10s	
✓ 328	HD 135101	15 ^h 08 ^m 16	+19° 39'	22:15:00	22:42:30	2 ^h 36 ^m 30 W	"		x 1650	2000
✓ 329	BIAS			23:06						
✓ 330	HD 135204	15 ^h 08 ^m 48	-0° 58'	23:08:37	23:31:12	3 ^h 24 ^m 00 W	F18 stop		x 755	2000
✓ 331	HD 182572	19 ^h 20.2	+11° 44'	23:37:00	23:46:10	0 ^h 32 E			x 550	2000
✓ 332	Comp			23:48			F18 stop	Fene clear	30s	
✓ 333	Flat			23:50			"	Tung clear	10s	
✓ 334	HD 217014	22 ^h 52 ^m 33	+20° 14'	23:56	00:06:44	03 ^h 44 ^m E	"		x 644	2000
✓ 335	HD 167433 (VW Cep)	20 ^h 46 ^m 40	+75° 14.3	00:24:00	00:39:00	0 ^h 32 ^m E	"		15 min	70

Spectr. Temp.

Dome Temp./Hum. $18.2^{\circ}/61\%$ Transparency Conditions $\text{Clouds: C. cirrus with some cumulo-strati}$ 162

Focus

Spectr. Temp.

Dome Temp./Hum. $15.7^{\circ}/60\%$

ccd format: 554/015/1024/10/1

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				"						was topped at 20h	
12s	0.4			ccd-fibre led	1800 53.2	250 μ	5200A			} Note: Grating really at 51.9° so because of these results as 115 not quite centered at 5200A	<153>
30s	0.4	V=6.7 65V		"	57.9	"	"				12000
2000	4-5	6-68	65V	"	"	"	5200A		Hyd std		1100
				ccd-fibre led	1800 53.2		5200A			Grating realigned at 53.2° (checked)	-
				"	"	"	"				10000
2000	4-5			"	"	"	"		Hyd std		1000
1200	5"	6.6	65V	ccd-fibre led	1800 53.2		5200A		Hyd std		820
3000	4'	5.16	68 II	"	"	"	"		Std vel		1500
											8000
											10000
3050		5.53	65V	"	"	"	"		Hyd std		1400
1170				ccd-fibre led	1800 53.2		5200A		Hyd	overwritten!!! (course!)	700

p2 163

Date 1990 July 12/13 Observers SAS (D.F.)

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.
✓ 335	HD 197433 ^{VW} cep	20 ^h 38 ^m 40 ^s	+75°14.3	00:42:00	00:57:00		N18 stop		154
✓ 336	4x avg BIAS			00:59:00					
✓ 337	HD 197433 ^{VW} cep	20 ^h 38 ^m 40 ^s	+75°14.3	01:00:00	01:15:30	0 ^h 16 ^m E	N18 stop	clear	154
✓ 338	HD 197433 ^{VW} cep	"	"	01:19:30	01:34:50	0 ^h 3 ^m W		clear	154
✓ 339	BIAS 4x			01:55					
✓ 340	BIAS Clear			01:57			F18 stop	Tung clear	8 ^s
✓ 341	Comp			02:00			"	Fene clear	30 ^s
✓ 342	HD 197433 ^{VW cep}	20 ^h 38 ^m 40 ^s	+75°14.3	02:04:45	02:18:10	0 ^h 46 W			x805
✓ 343	"	"	"	02:19:40	02:31:00	0 ^h 59 W			x680
✓ 344	HD 197433 ^{VW cep}	"	"	02:33	02:43:40	0 ^h 12 W			x640
x 345	4x averaged BIAS			02:45:00					
✓ 346	HD 197433 ^{VW cep}	20 ^h 38 ^m 40 ^s	+75°14.3	02:47:15	02:58:00	0 ^h 26 W	Dec drum +75°40		x645
✓ 347	HD 197433 ^{VW cep}	"	"	02:59:30	03:08:45	0 ^h 37 W			x515
✓ 348	HD 197433 ^{VW cep}	"	"	03:11:28	03:21:40	0 ^h 50 W			x612
✓ 349	4x avg. BIAS.			03:23					
VW Cep = HD 197433 ≠ HD 187433									

Spectr. Tem

Focus.....

Spectr. Tem

Exp. Mir

967

775

400

1000

1000

1000

1000

1000

1000

Spectr. Temp. Dome Temp./Hum. 115.7/58.5

Transparency Conditions ... clearing with 164
some high cirrus

Focus

Spectr. Temp. Dome Temp./Hum.

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

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
967				ccd 600-Red.	1800 53.2		5200A		Hdy.		
775				ccd 600-Red.	1800 53.2		5200A		Hdy.		300
400				"	"		"		"		350
										ccd dewar topped @ 1:40	
										T = -94	14 000 10 000
1000	3-4"	ny	6.5 K08	ccd fly 600-Red.	1800 53.2		5200A		Hdy - contact bary		600 500
1000	"	"	"	"	"		"				600 500
1000	"	"	"	"	"		"				600 500
1000	"	"	"	ccd fly 600-Red.	1800 53.2		5200A		Hdy - contact bary.	one of those BAD files	600 500
1000	"	"	"	"	"		"		"		600 500
1000	"	"	"	"	"		"		"		600 500

P3 165

Date 1990 July 12/13 Observers SAS/DIF

Emulsion Batches:

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[illegible]

Transparency Conditions *some cloud in S.,* 166
otherwise clear.

FOCUS

Dome Temp./Hum. ... 14°/62%

[illegible]

167

Mon/Tues.

Date 1990 July 16/17 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	Exp.
0 pif 00274	DARK			18:25:00					30 ^m
275	DARK			18:58:30					30 ^m
280-284	Flats		0°			0 ^h			75 ^s
285-289	Flats		20°			0 ^h			75 ^s
290-294	Flats		40°			0 ^h			75 ^s
295	Bins (4x)			20:51:00					
296	Comp			20:53:35				Th-Ar	20 ^s
297	HD 124897 Arcturus	14 11.1	+19° 42'	21:00:15	21:03:15				
298	Comp			21:04:48				Th-Ar	20 ^s
299	Comp			21:08:00				Th-Ar	20 ^s
300	HD 166182 102 Her	18 ^h 04 ^m 29 ^s	20° 47' 55"	21:13:00	21:46:40	01 ^h 01' E			
301	Comp			21:48:00				Th-Ar	20 ^s
302	Comp			21:51:00				Th-Ar	20 ^s
303	HD 160762 2 Her	17 ^h 36 ^m 38 ^s	46° 04'	21:53:10	22:09:47	00 ^h 09' E			
304	Comp			22:11:06					

Spectr. Temp. Dome Temp./Hum. .. 22/67%.

Transparency Conditions ... Clear. K8

Focus

90 cgs in.

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Gratings/ Tilt	Slit width	Emulsion	slit P.H. height	Program	Remarks	Quality
				Echelle / CCD	14.11	0.272 60μ	x Gr + 0.4555	0.205 600μ	Fds prgm	Topped @ 19:36	
5000		0.06	K2 III							2470819.5851 SC = -25.5677	
300	2"	A. 3.6 ^V	B2 IV								
300	2"	3.80 ^V	B3 IV						Program Standard.		

p2 169

Date 1990.. July.. 16/17... Observers Eds./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	Exp.
305	Comp			22:13:27				Th Ar	20 ^s
306	HD 166182 ^{102 Her}	18 ^h 04 ^m 29 ^s	20° 47' 55"	22:15:45	22:48:33	0 ^h 01 W			
307	Comp			22:49:45				Th Ar	20 ^s
308	Comp			22:52:35				Th Ar	20 ^s
309	HD 172167 ^{vega}	18 ^h 33 ^m 33 ^s	+38° 41'	22:54:10	22:57:10				
310	Comp			22:58:10				Th Ar	20 ^s
311	Comp			23:00:00				Th Ar	20 ^s
312	HD 180163 ^{η Lyr}	19 ^h 10 ^m 21.2	+38° 58' 26"	23:01:30	23:40:33	0 ^h 12 E			
313	Comp			23:41:48				Th Ar	20 ^s
314	Comp BIAS			23:44				Th Ar	20^s
315	Comp			23:59:25				Th Ar	20 ^s
316	HD 160762 ^{ι Her}	17 ^h 36 ^m 38 ^s	+46° 04'	00:04:15	00:48:10	02 ^h 30 W			
317	Comp			00:49:30				Th Ar	20 ^s
318-322	5 flats	0 ⁿ	+20°	01:01:00		0 ⁿ		Tung	75s
323-327	5 flats	0 ⁿ	+40°	01:13:00		0 ⁿ		'	'
328 329 330	Star Supernovas (4) > DARKS			01:30:00 01:36:40 02:08:00					30 min

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions ... *Some scattered cloud! 170*

Focus

Spectr. Temp. Dome Temp./Hum.

hazy; cloud from SW @
00:15.

[illegible]

171

Date July 17/18/19. Observers Fels/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	Exp.
cep 331. P4	bias x 4.			18:12					
332	DARK 30m			18:12:40					
333	bias x 4								
334	DARK 30m			18:49:00					
335	bias x 4								
336-340	5 flats @ 80s	0 ^h	+20°	19:37		Slit height = .185			
341-345	5 flats @ 80s	0 ^h	+40°	19:51:00		" "			
346	bias x 4			20:06:00					
347	DARK 15m			20:11					
348	DARK 15m			20:30:25					
349	DARK 15m			20:50:00					
July 18/19.									
350	bias x 4			18:30:00					
351	DARK 15m			18:35:00					
352	bias x 4			18:54:50					
353	DARK 15m			18:57:30					
354	bias x 4			19:15:00					
355	DARK 15m			19:17:30					
356	bias x 4			19:35:30					
357	DARK 15m			19:38:45					
358	bias x 4			19:55:00					
359	DARK 15m			19:57:45					
360	bias x 4			20:23:00					
361	DARK 15m			20:25:00					
362-407	Flexwe TESTS with Tung lamp			20s exp.		Slit width = .225			
408	bias x 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	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				July 19							
				±							
				2200 410	Bias 4x		18:04:00				
				411	Dark 15 ^m		18:07				
				412	Bias 4x		18:25				
				413	Dark 15 ^m		18:28				
				414	Bias 4x		18:46				
				415	Dark 15 ^m		18:51				
				416	Bias 4x		19:09				
				417	Dark 15 ^m		19:10				
				418	Bias 4x		19:23				
				419	Dark 15 ^m		19:30				
				420	Bias 4x		19:47				
				421	Dark 15 ^m		19:50				
				422	Dark 15 ^m		19:50				
				423	Bias 4x		20:55				
				424	Dark 15 ^m		20:58				

173 #1

Fri/Sat

Date 1990 July 20/21 Observers Fds/SAS/Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce 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			20:35:30				Th-Ar	20 ^s
432	HD 124897 ^{Archives}	14 11.1	+19 42	20 42 00	20:45:00				20 ^m 1600
433	Comp			20:46:53				Th Ar	20 ^s
434	comp			20:49:40				Th Ar	20 ^s
435	HD 160962 ^{i Her}	17 ^h 36 ^m 38	+46° 04	20:53:00	20:18:05	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 57 50				
439	Comp							Th-Ar	20 ^s
440	Comp							"	"

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

1500

1700

Spectr. Temp. Dome Temp./Hum. 21°/71%

Transparency Conditions .. Part. Cloudy 174

Focus

90 c gain

Spectr. Temp. Dome Temp./Hum.

00 256 1024 41 ccd fms

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit Width	Emulsion	Δλ P.H. res. Ld	Program	Remarks	Quality
				Echelle/ ccd	19.11	0.277 60μ	x 6 grat s4555	0.205 600μ	Fds. prgm	topped up 18.32 T-102	
											<166>
											<165>
											<165>
16200		0.95	152 III						std vel		
1500		3.80 ^V	B3 IV						Program standard		
1200		4.36 ^V	B2 IV								

175 #2

Fri - Sat

Date 1990 July 20/21.... Observers Fels-SAS-Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.
441	HD 172167 ^{Ursa}	18 33 33	38° 41'	22 02 55	22 06 10					500
442	comp			22:07:17				Th A	20s	
443	bias x4			22:09:40						
444	Comp			22 24 R				Th A	20s	
445	HD 180163 ^{eta Lyr}	19 10 21	+38 58 26	22 26 00	23 00 25	00 36 E				1300
446	Comp			23 02 00				Th A	20 sec	
447	Comp			23:03:50				Th Ar	20 ^s	
448	HD 166182 ^{102 Her}	18 ^h 04 ^m 29 ^s	20° 47' 55"	23:05:50	23:32:24	01 ^h 01 W				1200
449	Comp			23:34:30				Th Ar	20 ^s	
450	Comp			23:36:55				Th Ar	20 ^s	
451	HD 160762 ^{i Her}	17 ^h 36 ^m 38 ^s	+46° 04'	23:40:00	23 58 56	01 58 W				1350
452	Comp			00:00:05				Th Ar	20 ^s	
453	Comp			00:01:57				Th Ar	20s	
454	HD 180163 ^{eta Lyr}	19 10 21	+38 58 26	00 06 35	00 35 08	01 00 W				1200
455	Comp			00:30:18				Th-Ar	20s	
456	Comp			00:38:08				Th-Ar	20 ^s	
457	HD 184171 ^{gamma Cyg}	19 28 33	34 14 25	00:39:35	01:19:35	01 ^h 25 W				1058

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

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	Slit P.H. Height	Program	Remarks	Quality
5000		0.04	A0V	Echelle/ CCD	19.11	0.278 600	x Grating 14555	0.205 600	Fds pgn		
										Topup during Bias	
1300	3"	4.39	B25IV							problem - aa 00467.pf	
1200	3"-4"	4.36	B2IV							Comp source left on during exp!	
1350		3.80	B3IV								
1200		4.39	B35IV								
1088	3"-4"	4.74	B3IV								

177 #3

Fri-Sat

Date 1990.144V.20/21..... Observers Fels-Th-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	Exp.
ce 00458	Comp			01:20:55				Th-Ar	20 ^{sec}
459	Comp			01:22:56				Th-Ar	20 ^s
460	HD 166182 ^{102 Her}	18 ^h 04 ^m 29 ^s	20° 47' 55"	01:24:45	01:59:00	03 ^h 38 ^m W		Th-Ar	20 ^s
461	Comp			02:01:01				Th-Ar	20 ^s
462	Comp			02:03:26				Th-Ar	20 ^s
463	HD 160762 ^{iller}	17 ^h 36 ^m 38 ^s	46° 04'	02:05:10	02:31:50	04 ^h 30 ^m W		Th-Ar	20 ^s
464	Comp			02:32:54				Th-Ar	20 ^s
465	Comp BIAS 4x			02:34:30				Th-Ar	20 ^s
466	Comp			02:49:24				Th-Ar	20 ^s
467	HD 190163 ^{η Lyr}	19 10 21	38° 58' 26"	02:51:20	03:31:03	03 ^h 55 ^m W		Th-Ar	20 ^s
468	Comp			03:32:45				Th-Ar	20 ^s
469	Comp			03:38:11				Th-Ar	20 ^s
470	HD 22928 ^{SPer}	03 ^h 35 ^m 48.1	47° 28' 04"	03:40:35	04:00:25			Th-Ar	20 ^s
471	Comp			04:03:15				Th-Ar	20 ^s
472-475	4 flats @ 60s	5 Per position			Scit negn = -185				
476-479	" " "	OHA, +40 dec							
480-483	" " "	OHA, +20 dec							
484	" " "								
485	" " "								
486	DARK 15m	→ 486-DARK 15m.							
487	BIAS X4								

Spectr. Temp. Dome Temp./Hum. ... 17.5°C / 86% Transparency Conditions ... Clear 178

Focus

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

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion	Set P.H. height	Program	Remarks	Quality
				Echelle/ CCD	19-11	277 60μ	4555	0205 600μ	Fds pgrm	ORDER 125 Central 2 448 11.7m	
1106	3-4	436	B2 IV								
1500		380	A3 V								
1600										During top up	
1000		4.39	B2.5 II							Problem on CCD. - central circular drumming.	
2000		3.91	B5 III							problem still there	

PI 179

Mon/Tue

Date 1992... July 23/24... Observers Feds./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	Exp.
opif 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			20:56:48					
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.

Focus.....

Spectr. Temp.

Exp. Mtr.

8450

P2181

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

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

Focus

Spectr. Temp. Dome Temp./Hum.

Exp.	Exp. Mtr	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	Slit P.H.	Program	Remarks	Quality
					Echelle/ C10	18.60	0.277 60μ	04555	0.205 60μ	Fds prgm		
	1500	2"	3.80	B3II						program sid		
	1300		4.36	B2II								
	1200	2"	4.39	B2.5II								
	1100	2"	4.74	B3II								
	5000		0.04	40g								

p3 183

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	Exp.
518	Comp			23:08:36				Ph Ar	20 ^s
519	HD 160762 ^{1 Her}	17 36 38	46° 04'	23:11:20	23:28:57	01 ^h 38 W			
520	Comp			23:29:53				Th Ar	20 ^s
521	Comp			23:32:12				Ph Ar	20 ^s
522	HD 166182 ^{102 Her}	18 ^h 04 27	20° 47 55	23:34:30	24:02:00	01 ^h 42 W			
523	Comp			00:03:10				Ph Ar	20 ^s
524	Bias during setup			00:07:10					
525	Comp			00:18:50				Th Ar	20 ^s
526	HD 180163 ^{7 Lyr}	19 ^h 10 21	38° 58' 26	00:21:50	00:51:45				
527	Comp			00:53:00				Th Ar	20 ^s
528	Comp			00:55:33				Th Ar	20 ^s
529	HD 184171 ^{8 Cyg}	19 ^h 28 03	34° 14' 25	00:59:00	01:35:15	01 ^h 53 W			
530	Comp			01:36:10				Th Ar	20 ^s
531	Comp			01:39:35				Th Ar	20 ^s
532	HD 218376 ^{1 Can}	23 02 23	58 52 45	01:41:40	02:23:35	00 ^h 53 E			

p4 185

Date 1990 July 23/24 Observers Fels/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	Exp.
533	Comp			02:27:34				ThAr	20 ^s
534	Comp			02:32:15				ThAr	20 ^s
535	HD 22928 ^{8 Per}	03 ^h 35 ^m 48 ^s	+47° 27' 04"	02:37:20	02:55:36	4 ^h 57 E			2000
536	Comp			02:57:30				ThAr	20 ^s
537	Comp			03:01:00				ThAr	20 ^s
538	HD 218376 ^{1 Cas}	23 02 23	58 52 45	03:03:20	03:38:25	00 ^h 21 W			1100
539	Comp			03:39:35				ThAr	20 ^s
540	Comp			03:48:08				ThAr	20 ^s
541	HD 24760 ^{ε Per}	03 ^h 51 ^m 08 ^s	39° 43' 16"	03:51:20	04:05:00	04 ^h 03 E			1500
542	Comp			04:06:05				ThAr	20 ^s
543-547	Comp 5 × flat	0 ^{hr}	+45°						90s
548-552	5 × flat	0 ^{hr}	+25°						90s
553	bias (4)								
554	dark 15 ^m								
555	bias (4)								
556	dark 15 ^m								

187

Tue/Wed

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

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.
^{api} CE00 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 ^h 33 ^m 33	+38°41'	21:14:45	21:28:03	01 ^h 16 E			
567	Comp			21:29:45	21:29:45			Th-Ar	20 ^s
568	BIAS (4x)			22:00:45					
569	DARK			22:12:00					15 ^m
570	BIAS (4x)			22:17:00					
571	DARK			22:19:00					15 ^m

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

1500

189

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

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.
572	Comp			23:29:00				ThAr	20 ^s
573	HD 160762 ^{in Her}	17 36 38	46° 04	23:32:11	23:58:56				
574	Comp			00:00:14				ThAr	20 ^s
575	Comp			00:03:22				ThAr	20 ^s
576	HD 166182 ^{102 Men}	18 04 29	20 47 55	00:05:26	00:41:18				
577	comp			00:43:40				ThAr	20 ^s
578	comp			00:46:12				ThAr	20 ^s
579	HD 180163 ^{7 Lyn}	19 10 21	38 58 26	00:48:00	01:23:40				
580	comp			01:25:30				ThAr	20 ^s
581	comp.			01:27:31				ThAr	20 ^s
582	HD 184171 ^{8 Cyg}	19 28 03	34 14 25	01:25:52	02:04:54				
583	comp			02:06:45				ThAr	20 ^s
584	bias (4)			02:08:32					
585	comp			02:25:51				ThAr	20 ^s
586	HD 218376 ^{1 CAS}	23 02 23	58° 52 45	02:28:10	03:18:16				
587	comp			03:19:42				ThAr	20 ^s

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

Focus

Spectr. Temp. Dome Temp./Hum.

Exp.	Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emission w. grating	S/L P.H. width	Program	Remarks	Quality
1500	3-4	3.80	B3IV		2nd order/ CCD	18.60	0.277 60μ	0.4555	600μ	Fols prgm prgm std		
1300		4.36	B2IV									
1200		4.39	B3IV									
1000		4.74	B3IV									
											top up 02:10	
	3-4	4.95	B2IV								Cloud for 10 min	

193
P1

Wed - Thurs

SAS

Emulsion Batches:

Date 1.9.90 JULY 25/26.

Observers Fds. f. Tm. / SHORT... Also presents (Needler)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
o p i f clear 608	BIAS (4x)			18:34:42					
609	DARK			18:36:20					15 ^m
610	BIAS (4x)			18:51:40					
611	DARK			18:53:20					15 ^m
612	BIAS (4x)			19:12:20					
613	DARK			19:14:00					15 ^m
614	BIAS (4x)			19:29:00					
615	DARK			19:32:20					15 ^m
616-620	5 Flats		+45°	19:51:47		0 ^h		tung	110 ^s
621-625	5 Flats		+25°	20:12:30		0 ^h		tung	110 ^s
626	Comp			20:47:44				ThAr	20 ^s
627	HD 124897 ^{Arcturus}	14 ^h 11 ^m 06	+19° 42	20: ⁵⁰ 20	^N 20:53:00	02 ^h 34 ^m W			
628	Comp			20:54:45				ThAr	20 ^s
629	Comp			20:57:47				ThAr	20 ^s
630	HD 160762 ^{ε Her}	17 ^h 36 ^m 38	46° 04	21:00:15	21:10:58				

Spectr. Temp. Dome Temp./Hum. $+23^{\circ}\text{C}$ 51% Transparency Conditions Clear 194

Focus

Spectr. Temp. Dome Temp./Hum.

go again
00 256 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ph. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion & Grating	slit Ht. height	Program	Remarks	Quality
				Echelle/ CCD	18.60	0.277 60 μ	0.4555	0.205 600 μ	Fds prgm	Topped up 18:10	
							*Note - Slit width for this night actually was 0.282, not 0.277. changed to 0.282 for this night				
								0.185 800 μ 0.185 800 μ 0.205 600 μ		Top up 20:40	
8000		0.06	K2IV						Std Vel		
1500		3.80	B3IV						Program Standard		

P2 195

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

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.
631	Comp			21:12:10				Th Ar	20 ^s
632	Comp			21:15:32				Th Ar	20 ^s
633	HD 166182 ^{102 Her}	18 ^h 04 ^m 29	+20° 47' 55"	21:17:25	21:45:30				
634	Comp			21:46:47				Th Ar	20 ^s
635	Comp			21:49:30				Th Ar	20 ^s
636	HD 180163 ^{η Lyr}	19 ^h 10 ^m 21 ^s	+38° 58' 26"	21:51:10	22:22:25	0 ^h 53 E			
637	Comp			22:24:08				Th Ar	20 ^s
638	Comp			22:26:10				Th Ar	20 ^s
639	HD 184171 ^{8 Cyg}	19 ^h 28 03	34° 14 25	22:28:02	23:03:15	0 ^h 31 E			
640	Comp			23:05:04	23:05:04			Th Ar	20 ^s
641	Comp			23:09:10				Th Ar	20 ^s
642	HD 218376 ^{1 Cas}	23 ^h 02 23	58 52 45	23:13:00	23:56:05	03 ^h 13 ^m 30 E			
643	Comp			23:58:10				Th Ar	20 ^s
644	Comp			00:01:26				Th Ar	20 ^s
645	HD 160762 ^{i Her}	17 ^h 36 38	46° 04	00:03:14	00:15:50	02 ^h 33 W			

Spectr. Ten

Focus.....

Spectr. Ten

Exp. Mtr.

1300

1208

1100

1000

1400

Spectr. Temp. Dome Temp./Hum. *22°/53%* ..Transparency Conditions *A. few scattered clouds P6*

Focus

some haze

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Mag. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emission x factor	Dist. Ht. height	Program	Remarks	Quality
				Echelle/ CCD	18.60	0.277 60µ	0.4555	0.205 200µ	Fols Pigm		
1300	1"-2	4.36	B2W							File lost ???	
1208	1"-2	4.39	B3W								
1100	2"-3	4.74	B3W								
1000	1"-3	4.85	B0W							hazy	
400	2"	3.80	B3W						program std		

P3 197

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

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mir.
646	Comp			00:17:34				In Ar	20 ^s	
647	Comp			00:20:18				Th Ar	20 ^s	
648	HD 166182 ^{102 Her}	18 ^h 04 29	20° 47' 55"	00:21:57	00 46 00	02 35 W	+20 50 27			1200
649	Comp			00:47:00				Th Ar	20s	
650	BIAS (4)			00:50:10						
651	COMP			01:02:40	01:38			Th Ar	20s	
652	HD 180163 ^{74r}	19 ^h 10 21	38 58 26	01:06:50	01:27:38	2 11 W				1200
653	comp			01:29:04				Th Ar	20s	
654	comp			01:31:17				Th Ar	20s	
655	HD 18171 ^{8 Cys}	19 28 03	+34 14 25	01:32:50	02 03 37	02 30 W		Th Ar	20s	1200
656	Comp			02 05 05				Th Ar	20s	
657	Comp		Approx	02 08 05				Th Ar	20s	
658	HD 218 376 ^{1 Cas}	23 02 23	+58 52 45	02 10 44	02:43:30	25 32 E				1000
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					5000
662	comp			02:51:43						
663	COMP			02:53:11						

#1
201

Thurs - Fri

Date 1990 JUL 26/27 Observers Fds - Jn

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.
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					
678	DARK 15m			18 08 00					
680	BIAS (4)			18 23 20					
680	DARK 15m			18 25 00	18 40 06				
682	BIAS 15m			18 49 00					
682	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°		1005
691-695	5 FLATS			20 05 46		00	+45°		1005
696	Comp			20 36 24					

203 #2

Date 1990 JULY 26/27. Observers Fds-Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
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 43 E			
701	Comp			20 56 07				T/A	20s
702	HD 166182			20 58 18				"	20s
703	HD 166182 ^{102 Her}	18 04 29	+20 47 55	21 00 02	21 16 00	00 52 E			
704	Comp			21 17 18				THA	20s
705	Comp			21 19 35				"	20s
706	HD 180163 ^{n Lyr}	19 10 21	+38 58 26	21 20 15	21 37 01	01 29 E			
707	Comp			21 40 00				THA	20s
708	Comp			21 41 38				"	20s
709	HD 184171 ^{8 Cyg}	19 28 03	+34 42 5	21 43 14	22 03 55	01 27 E			
710	Comp								20s
711	Comp								20s

Spectr. T.

Focus...

Spectr. T.

Exp. Mtr.

500s

1600

1500

1500

Spectr. Temp. Dome Temp./Hum. $+24^{\circ}\text{C}$ 48% Transparency Conditions ... S. / Hazy 209.

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion x Grating	S/T P.H. Height	Program	Remarks	Quality
5000		006	K2IV	Echelle CCD	18.60	.277 60x	.4555	.205 60x	std vel	Central order @ 9481 Å	
1600		380	B3IV						Fds-pgm		
1500		436	B2IV						Fds-pgm		
1500		439	B3IV						Fds-pgm	⊥	
		474	B3IV						Fds-pgm	⊥	

208

#3

Emulsion Batches:

Date 1990 JULY 26/27 Observers Fds-Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
712	HD 172167 Vega HD 248376	18 33 33	+38 41	22 08 50	22 10 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 11 2	04 16 E			
716	Comp			22 50 47				ThA	20s
717	Comp			22 54 03				"	20s
718	HD 160762 ^{6 Min}	17 38 18	+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 Ma}	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-Lyr}	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 ^{8 Gyr}	19 28 03	34 14 25	00 04 44 23 51 10	00 26 46 23 51 10	00 57 W			

Spectr. Temp. Dome Temp./Hum. 123°C 51% Transparency Conditions V.V.S.I. hazy - Fine 206

Focus

Spectr. Temp. Dome Temp./Hum.

Exp.	Exp. Mtr.	Seeing	✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	5000		0.09	A0V						Fds pgn		
			0.09	A0V								
	1129		4.85	B0IV						Fds pgn	L	
	1500		3.80	B3IV						Fds pgn		
	1400		4.36	B2IV						Fds pgn		
	1440		4.35	B3IV						Fds pgn		
	1100		4.24	B3IV						Fds pgn		

207 #4

Date .1990 July 26/27 Observers ... F. S. - T. ...

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
728	Comp			00:27:45				T/Ar	20sec
729	Bias (4)			00:31:11				"	"
730	Comp			00:47:33					
731	HD 218376	23 0223	+58 52 45	00 50 10	01 22 50	01 42 E			
732	Comp			01 24 30	01 24 30			T/Ar	20s
733	Comp			01 28 00	01 28 00				20
734	HD 160762	17 36 38	+46 04	01 29 25	01 46 19	04 09 W			
735	Comp			01 47 22					20s
736	Comp			01 49 39					20s
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				T/Ar	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					20s
743	HD 218376	23 0223	+58 52 45	02 56 40	03 25 10	00 20 W			
744	Comp			03 26 20					20sec
745	Comp			03 31 48					20

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.

1200

1400

1000

1400

Spectr. Temp. Dome Temp./Hum. $+21^{\circ}\text{C}$ 55% Transparency Conditions 5/14/29 208

Focus

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

Exp.	Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion Reading	P.H.	Program	Remarks	Quality
					Echelle CCD	1860	.277 60 μ	.4555	1205 60 μ			
	1200		4.85	B0 IV						Fds psm	✓	
											Temp @ 00:30	
	1400		3.80	B3 IV								
	1000		4.36	B2 IV								
	1400		4.39	B3 IV							✓	
			OK 4.85	B0 IV						Fds psm	✓	

Date 1990 JULY 26/27 Observers Fds - Tg

Emulsion Batches:

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[illegible]

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions . . . *Five* 210[illegible]

211 #1

Fri Sat

Date 1990.10.14.27/28 Observers Fds.-Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
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 57 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 160 762 ^{open}	17 36 38	+46 04	21 20 40	21 36 10	0 04W			

Spectr. Te

Focus....

Spectr. Te

Exp. Mr.

500

Spectr. Temp.

Transparency Conditions

Part. Cloudy

212

Focus

Spectr. Temp.

Dome Temp./Hum.

[illegible]

#2
213

Date 1940 JULY 27/28 Observers Fds. + Tg.....

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.
776	Comp			21 37 12				Th Ar	20s
777	Comp			21 39 25				"	"
778	HD 166 182 ^{102 Hm}	18 04 29	+20 47 55	21 41 10	22 03 50	00 01 W			
779	Comp			22 05 00				Th Ar	20s
780	Comp			22 07 15				"	20s
781	HD 180 163 ^{m 41 r}	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 184 171 ^{84 s}	19 28 03	+34 14 25	22 32 40	23 02 32	00 23 E			
785	Comp			23 03 40				Th Ar	20s
786	Comp			23 06 14				"	"
787	HD 192 176 ^{vegg}	18 33 33	+38 41	23:08:05	23:08:56				
788	Comp			23:10:22				Th Ar	20s
789	Comp			23:18:32	23:58:32			"	20s
790	HD 218 376 ^{1 CAS}	23 02 23	+58 52 45	23:20:56	23 58 32	03 13 E			
791	Comp							Th Ar	20s

Spectr. Ter

Focus....

Spectr. Ter

Exp. Nr.

1440

1720

500

5000

500

Spectr. Temp. Dome Temp./Hum. $+23^{\circ}\text{C} . 57\%$ Transparency Conditions *Clearing* 214

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	M Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	S114 P.H. 4.205 600	Program	Remarks	Quality
				Echelle CCD	1860	600	14555				
1460	436		B2IV						Fds psm		
1200	437		B3IV						Fds psm		
1500	474		B3IV						Fds psm		
5000	000		A0I						Fds psm		
1200	4.85		B0IV						Fds psm		

215

#3

Emulsion Batches:

Date 1980 JULY 27/28 Observers Fds-Jm.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
792	Comp			00:04:30				ThAr	20s
793	HD 160762 ^{chen}	17 36 38	+46 09 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 ^{102 Ha}	18 04 29	+20 47 55	00:24:40	00:45:39	2 42 W			
797	Comp			00:46:50				ThAr	20s
798	HD 166182 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 12 W			
801	Comp			01 36 12				ThAr	20s
802	Comp			01 38 18				"	20s
803	HD 184171 ^{8Cys}	19 28 03	+34 14 25	01 39 40	02 08 15	02 42 W			
804	Comp			02 10 51					20s
805	Comp			02 15 32					20s
806	HD 218316 ^{104s}	23 02 23	+58 52 45	02 46 30	02 46 07	00 15 E			
807	Comp			02 47 05				ThAr	20s

Spectr. Temp. Dome Temp./Hum. 22°C 61%

Dome Temp./Hum. 22°C... 61%

Transparency Conditions *Part Cloudy*.....216

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Secing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion X Grating	S.I. + P.H. Micro	Program	Remarks	Quality
23				Echelle RED	18.60	60x	14555	0.205 600x			
	1500	380	B3 IV						Fds-pgm		
	1400	438	B2 IV						Fds-pgm		
										Topsy @ 0100 EST	
	1400	439	B3 IV						Fds-pgm		
	1450	474	B3 IV						Fds pgm		
	1400	485	B0 IV						Fds-pgm		

Spectr. Temp. Dome Temp./Hum. $+21^{\circ}\text{C}$ 60% Transparency Conditions S_1 H429 218.

Dome Temp./Hum. *71° 60%*

Transparency Conditions . . . 51. Hazy 218.

Exp. Mtr.	Seeing	Flt. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle CCD	18.60	60u	14555	600u			
4000		7.01	B05V						Fds pgr		
1450		4.85	B0IV						Fds pgr		

Pg #1
289

SAT SUN

Date 1990 JULY 28/29...

Observers

Tn... (Omar) L72

Note

Emulsion Batches:
Camera.. Controller... turned off,
then.. on... to.. un. Hang. system
Fds.. advised.. this..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
Ce00859 PF									
001	Comp ✓			23 23 40				THAR	20s
860	HD 170000 ✓	18 22 11	+71 17 05	23 27 30	23 50 10	01 39 W			
861	Comp ✓			23 52 27				THAR	20s
862 865	DARK 4m ✓			23 55 30					
863 806	BIAS ✓			00 06 00					
864 007	HD 170000 ✓	18 22 11	+71 17 05	00 07 28	00 30 18	02 18 W			
865 008	Comp ✓			00 31 42				THAR	20s
866 009	DARK 4m ✓			00 34 34					
867 010	DARK 2m ✓			00 39 55					
868 011	BIAS ✓			00 44 10					
869 012	Comp ✓			00 46 00				THAR	20s
870 013	HD 201601 ✓	21 05 28	+9 43 43	00 48 45	01 31 10	0 31 E			
871 014	Comp ✓			01 32 50				THAR	20s
872 015	BIAS (4) ✓			01 34 50					
873 016	HD 201601 ✓	21 05 29	+9 43 43	01 39 27	02 12 00	01 12 W			
874 017	Comp ✓			02 14 00				THAR	20

Spectr. Temp. Dome Temp./Hum. 22°C 65% Transparency Conditions $S1$ Hazy 220
 Focus CCD 1st Top up 20:55
 Spectr. Temp. Dome Temp./Hum. 21.90 102°C by
 Good Auroora after TOUR
 TOUR looked at Ring Nebula

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion X Grating	Slit P.H. H	Program	Remarks	Quality
				Echelle CCD	18.60	60u	0.4555	600u		Should be setup same as previous night.	
1300		4.12	Mpsi						L22 pgm		
				Note file # 004 is probably same as 002							
$\approx$ 1300?		4.12	Mpsi								
										Mean ADU 164.716	164.716
1300		4.95	Fop						L22 pgm	4 ci	
960		4.95	Fop				CCD warming up.			Mean ADU 162.877 1 ci $T = -90^{\circ}\text{C}$ and 2 ci	

224

Emulsion Batches:

Spectr. T.
Focus...
Spectr. T.
Exp. Mtr.

Spectr. Temp.

Transparency Conditions .. *PART Check* 222

Focus

Spectr. Temp.

Super Aurora still by 03 EST

Exp.	Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	5277 P.H. H	Program	Remarks	Quality
					Edeffe CCD	18'60	60μ	.4555 Mean		ADU = 191.009	Top 4 p.e 02 20, T = -90°C T = -80°C	
										Mean ADU = 162.646	T = -102°C	
								.185 as 100μ		(Long slit for Fkts only)		
											Mean = 164.287 ADU	

#1
223

Sun Mon

Date 19.90 JULY 29/30 Observers SHOAT - Th

Emulsion Batches:

written to PERSEUS... PCS. essent.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
818	Bias (4)	BIAS.BAK		19 15					
819	dark (15m)								
820	bias (4)								
821	dark (15m)								
822	Comp			20 40 18				Th Ar	20s
823	HD 172167	18 33 33	+38 41	20 43 45	20 52 50	01 31 E			
824	Comp			20 55 08				Th Ar	20s
825-829	FLATS (5)	(while still on Vega)		21 06 53	21 19	01 05 E	+38 45	TUNG	90s
830	Comp			21 30 48				Th Ar	20s
831	HD 210745	22 07 23	+57 42 30	21 33 47	22 20 19	03 37 E			
832	Comp			22 29 27				Th Ar	20s
833	Comp			22 52 05				Th Ar	20s
834	HD 204867	21 26 18	-6 00 40	22 55 20	23 26 27	01 52 E			
835	Comp			23 28 00				Th Ar	20s
836	Comp			23 33 48				n	20s

Spectr. Te

Focus...

Spectr. Te

Exp. Mr.

5000

1100

2500

Spectr. Temp. Dome Temp./Hum. .. 42.5°C .. 72% Transparency Conditions ... *PART cloudy* ... 22.4

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion x Extension	5177 P.H. It	Program	Remarks	Quality
				Echelle CCD						5175 ⁰ Control set before 1st cap	
										ORDER 109, 1.971 Å/min	
				Echelle CCD 19.10	19.10	0.277 60u	0.3962	0.205 60u			
5000		004	A0V					"	SHORT STD	Cloud at first	
								"			
								0.185 800u	FOR FLATS ONLY	Cloudy now	
								0.205 60u			
1100		335	K0I						SHORT pgn	Long cloud stretch @ 22.5 EST PART cloudy	
2500		291 291	G0I						SHORT pgn	CCD T = -104.6 Topup @ 22.35	

225^{#2}

Date 1990 JULY 29/30 Observers SHORT-Tn

Emulsion Batches:

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.....9

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
837	HD 210745	22 07 23	45 42 30	23 36 30	00 02 00	01 56 E			
838	Comp			00 03 50				ThA	20sec
839-843	Flats (5)			00 17 04				TUNGSTEN	90sec
844	Comp			01 34				ThA	20sec
845	HD 204867	21 26 18	-6 00 40	01 39 40	02 19 33	01 02 W			
846	Comp			02 21 45				ThA	20sec
847	Comp			02 47 01					
848	HD 204857	21 26 18	-6 00 40	02 48 46	03 11 12	01 54 W			
849	Comp			03 12 43				ThA	20sec
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				204 15				
ce00859	→ 886 done July 28/29	- Tu 1/22 a few pages ago.							

Focus

Spectr. Temp. Dome Temp./Hum.

[illegible]

22^{#1} Tues Wed

Date 1990 JULY 31 -

Observers SHORT - T.H.

AUBOI

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.
887	Biss			22 20 10					
888	DARK 15m								
889	Biss								
890	DARK 15m								
891	Comp			21 33 05				THAR	12s
892	HD 172 167	18 33 33	+38 41 00	21 46 44	21 49 00	00 27 E			
893	Comp			21 50 33				THAR	12s
894	Comp			22 08 18				THAR	12s
895	HD 210 745	22 07 23	+57 42 30	22 11 27	22 41 00	03 10 E			
896	Comp			22 42 50				THA	12 sec
897	Comp			22 57 24				"	12s
898	HD 204 867	21 26 18	-06 00 40	22 49 59	23 20 16	01 49 E			
899	Comp			23 32 54		E -05 40 06			12s
900	903 Flats (A)	To get intensity = 8K		23 35	03 44	E -05 40 06			4 sec
904	907 n	n	n	23 48 00	23 53	02 00 E +49 0			4 sec
908	Comp			00 05 00					10s

Spectr. Te

Focus

Spectr.

Exp. Mtr.

5000

2500

2000

229 #2

Emulsion Batches:

Date 1990 July 31 Aug. 1... Observers Short - T_h.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Nr.
909	HD 210745	22 0723	+57 4230	00 0747	00 3648	1 14E				3000
910	Comp			00 4800				ThA	10 _{se}	
911	Comp			01 2153				ThA	10 _{se}	
912	HD 204867	21 2618	-06 0040	01 2358	01 4500	W				3100
913	Comp			01 4733				ThA	10 _{se}	
914-917	Flats 4			01 5932		W	-5 40	Tung	10 _{se}	
918-921	Flats 4			02 0920		W	+38 44	Tung	10 _{se}	
922	Comp			02 1548				ThA	10 _{se}	
923	HD 172167	18 3333	+38 41	02 1815	02 1951	04 04W				3000
924	Comp			02 2128				ThA	10 _{se}	
925	Comp			02 2420				ThA	20 _{se}	
926	HD 172167	18 3333	+38 41	02 2602	02 2742	04 12W				3000
927	Comp			02 2920				ThA	20 _{se}	
928	Comp			02 3220				ThA	20 _{se}	
929	HD 210745	22 0723	+57 4230	02 3543	03 1935	01 38W				5000

Spectr. Temp. Dome Temp./Hum. 7.5°C / 79.3 Transparency Conditions Fire 230

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion & grain	Slit P.H. Height	Program	Remarks	Quality
3000		B= 4.95	KOI	Echelle CCD	19.10	.277 60μ	.3962	600μ	Short pjm	5175Å	
3100		B= 3.73	GOT						Short pjm	(0058 Topup started) 4ci	
3000								.185 800μ			
								800μ			
								.205 600			
3000				Echelle CCD	19.20	.277 60μ	.5000	.205 600		centered for 3969 & 3939Å	
3000		✓ 0.64	AOV								
5000		B 4.95	KOI								

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

232

Specs. Temp.

Specif. Temp.

Dome Temp./Humid.

[illegible]

233

Wed - Thurs

Date

1990 Aug 1/2

Observers

KK DIF Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE011	Hartmann test			20 00	20 05	T = +	20.4 C		
CE012									
CE0939	Blax 4X								
940	Comparison				20:49			ThA	10 ^s
941	HD 137909 ^{B Cor Bor}	15 23.7	+29° 27'	20:24:15	21 19 00				
942	Comp				21:22			ThA	10 ^s
943-946	Plats 4			21 25			+29°	ThA	20 ^s
947	Comp							ThA	10 ^s
948	HD 137909 ^{F.C.R.B.}	15 23.7	+29° 27'	21:34:20	22:07:00	0 ^h 58 ^m W			
949	Comparison			22:07:50				ThA	10 ^s
950	Comparison			22:10:30				ThA	10
951	HD 147547 ^{δ Her}	16 17.5	+19° 23'	22 14 10	22 36 30	00 33 W			
952	Comparison			22:28:00				ThA	10 ^s
953	Comparison			22:44:00				ThA	10 ^s
954	HD 183912 ^{B Cor A}	19 26.7 19 22.9	+27 45 +27 55	22 47 10	23 00 37				

Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

3000

2000

2000

Spectr. Temp. Dome Temp./Hum. $+20^{\circ}\text{C} / 64.7\%$, Transparency Conditions *very clear* 234

Focus

Spectr. Temp. Dome Temp./Hum.

[illegible]

235 #2

Date 1990 Aug 1/2 Observers KK/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	Exp.
955.	Comp			23 03				ThA	10s
956	Comp			23 07				ThA	10s
957	HD 186791 ^{2V STD}	19 ^h 41 ^m 30 ^s	+10° 22'	23:11:22	23:21:25	0 ^h 1 ^m E			
958	Comparison			23:23:08				ThA	10s
959	Comparison.			23:26:00				ThA	10s.
960	HD 196524	20 ^h 32 ^m 54 ^s	+14° 15'	23:29:30	00:00	0 ^h 12 ^m E			
961	Comp				00:01			ThA	10s
962	Comparison				00:07			ThA	10s
963	HD 192577 ^{31 CV9}	20 ^h 10 ^m 30 ^s	+46° 26'	00:09:40	00:42:00				
964	Comparison.			00:43:40				ThA	10s.
965	Comp after topup on HD 209790			01:02				"	10s
966	HD 209790	22 00 9	+64° 08'	01:11:20	01:46:10	0 ^h 28 ^m E	64° 35'		
967	Comp			01 48					10s
968 971	Flats 4			01 51			64° 35'		8s
972	Comp			02 04				ThA	10s

Spectr. Temp. Dome Temp./Hum. *+5°C 68.8* Transparency Conditions *sl. Hazy* *236*
 Focus
 Spectr. Temp. Dome Temp./Hum.

Exp.	Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	<i>511</i> P.H. <i>H1961</i>	Program	Remarks	Fit	<i>MAX ADU</i> <i>Quality</i>
												✓	
												✓	
	1900	<i>1.5</i> -2.0	<i>N₂</i> 2.72	<i>K3 III</i>	<i>eclille CCD</i> 18.80	600 4088	50 μ	5010A		<i>std vel</i>		✓	
												✓	
												✓	
	<i>2030</i> <i>5000</i>	<i>1.5</i> -2.0	<i>V</i> =3.78	<i>FST II</i>	<i>eclille CCD</i> 18.80	600 4088	50 μ	5010A		<i>Asm Sp. Hk</i>	<i>1ci</i>	✓	4560
												✓	
												✓	
	2200	<i>1.5</i> -2.0	<i>B</i> =5.07	<i>K2 II</i> <i>*B3V</i>	<i>eclille CCD</i> 18.80	600 4088	50 μ	5010A		<i>Asm Sp. Hk</i>		✓	<i>ADU</i> <i>MAX</i> 4933
												✓	
											<i>Top up started</i>	✓	
	1435	<i>1.5</i> -2.0	<i>F</i> 4.63	<i>A3 III</i>	<i>eclille CCD</i> 18.80	600 4088	50 μ	5010A	<i>1.215</i> <i>500u</i>	<i>Asm. Sp. KK</i>		✓	
					"	"	"	"	"			✓	
					18.80	4088	50 μ		<i>.205</i> <i>600</i>			✓	<i>3927</i>

237 #3

Date 1990 Aug 1/2 Observers DIF/Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
973	Comparison			02:20:30				Th-A	10s
972	Comparison			02:20:30				Th-A	10s
973	HD 209790	22 ^h 00 ^m 56 ^s	+64° 08'	02:26:53	02:59	01 22 W	+64 35		
974	Comp			0300				Th-A	10s
975	Comp			03:06				Th-A	10s
976	HD 192577 ^{31 Cyg}	20 ^h 10 ^m 5	+46° 26'	03:08	03:37	03 49 W	Th-A		
977	Comp			03:38				Th-A	10s
978	Comp			03:42			+46 44	Th-A	10s
979	HD 3712 ^{RV sub.}	00 ^h 34 ^m 48 ^s	+55° 51' 00"	03:43:45	03:54:25	+0 28 ^m E			
980	Comp			03:57:00				Th-A	10s
981	Flat x 4						56° 30'	Th-A	8s
-84 985	Bias			04 09	4:45				
986	DARK	DARK BAK							
987	Bias								
988	DARK								

Spectr. T.
Focus...
Spectr. I.

Exp. Mtr.

1940

2200

239

Date 1990 Aug 2/3

Thu/Fri

Observers S.A.S./D.F.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce 989	BIAS (4x)			20:14					
990-93	Flats			20:14		0 ^h	+30°		20 ^s
994	Comp			20:37:27				Ph Ar	10 ^s
995	HD 137909 ⁷ Car Bor	15 23.7	+29° 27'	20:42:35	21:01:52	02 ^h 02 W			
996	Comp			21:03:20				Th Ar	10 ^s
997	Comp			21:06:05				Th-Ar	10 ^s
998	HD 147547 ⁸ Her	16 ^h 17 ^m 30 ^s	+19° 23'	21:08:00	21:33:34	01 ^h 40 W			
999	Comp			21:35:00				Th-Ar	10 ^s
1000	Comp			21:46:00				Th-Ar	10 ^s
ce 1001	HD 103912 ^B Crs A	19 ^h 26.7	+27° 45'	21:55:35	22:04:43	0 ^h 57 ^m 30 ^s E			
1002	Comp			22:07:07	22:10:17			Th Ar	10 ^s
1003	Comp			22:10:17				Th Ar	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				Th Ar	10 ^s
1006	Comp			22:29:30				Th Ar	10 ^s

Spectr. Te

Focus...

Spectr. Te

Exp. Mr.

1000

2000

2200

2200

p2 241

Date 1990... Aug. 2/3..... Observers JAS/DiF.....

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.
1007	HD 147547 ^{8 Her}	16 ^h 17 ^m 30	+19° 23	22:31:00	22:54:03	3 ^h 1 ^m W			
1008	Comp			22:55:50				Th-Ar	10 ^s
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 ^{p 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 ^{8 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 01:00:00					
1021	Comp			01:07:00				Th-Ar	10 ^s
1022	HD 183912 ^{p 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. Te

Focus...

Spectr. Te

Exp. Mtr.

2000

2000

1850

2000

P3-243

Date 1990 Aug. 2/3 Observers SAS/DiF

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.
1025	HD 186791	19 ^h 41 ^m 30 ^s	+10° 22'	01:23:30	01:34:58	02 ^h 18 ^m W			
1026	Comp			01:36:24				Th Ar	10 ^s
1027	Comp			01:41:30				Th Ar	10 ^s
1028	HD 196524 ^{p Del}	20 ^h 32.9	+14° 15'	01:43:50	02:04:25	1 ^h 56 ^m W			
1029	Comp			02:05:40				Th Ar	10 ^s
1030	Comp			02:08:50				Th Ar	10 ^s
1031	HD 192577 ^{31 Cyg}	20 ^h 10.5	+14° 26'	02:11:47	02:32:58	2 ^h 33.5 ^m W			
1032	Comp			02:39:53				Th Ar	10 ^s
1033	Comp			02:46:02	02:46:02			Th Ar	10 ^s
1034	HD 201790	22 ^h 00 ^m 59 ^s	+64° 08'	02:53:05	03:20:40	01 ^h 46 ^m W			
1035	Comp			03:22:00				Th Ar	10 ^s
1036	Comp			03:27:00				Th Ar	10 ^s
1037	HD 3712	00 ^h 34 ^m 48 ^s	+55° 59'	03:29:00	03:34:13	00 ^h 36 ^m E			
1038	Comp			03:35:19				Th Ar	10 ^s
1039	Comp			03:42:16				Th Ar	10 ^s

Spectr. Ter
Focus....
Spectr. Ter

Exp. Mir.

2200

2000

2000

2010

2500

Spectr. Temp. Dome Temp./Hum. 20/67% ... Transparency Conditions ... Clear ... 246

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	FT	Quality
2500		V 2.00	K2D2b	Echelle/ CDS	18.00	0.281 50μ	x 300 0.4095	0.215	Sol Vel		✓	
											✓	
											✓	
2500	2-3"	V 2.53	M1.5 III	"	"	"	"	"	Sol Vel		✓	
											✓	
								0.205			✓✓	max 13000
								0.205			✓✓✓	max 10000
										(Dark. bak)	✓	
											✓	
											✓	
											✓	
Note: Transition at the end of the night the Echelle Tilt had shifted to 18.02. I guess it got hit sometime during the second half. - SAS											✓ BACKED UP to Exabyte	

247 1990 Fri/Sat

Date ... Aug. 3/4 Observers ... D.F./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	Exp.
ce01057	Bias (4x)			20:12:00					
1058	Dark			21:00:00 20:15:00					5 min
1059	Bias (4x)			21:20:30					
1060	DARK			21:48:15					15 m
1061	Bias (4x)			~22:10					
1062	Comp			23 22 :59:50				Th Ar	10 ^s
1063	HD 3712	00 ^h 34 ^m 48	+55° 69	00:05:25	00:21:23	03 ^h 46 E			2500
1064	Comp			00:24:07				Th Ar	10 ^s
1065	Comp			00:29:52				Th Ar	10 ^s
1066	HD 183912	10 ^h 26 ^m 42	27°45'	00:32:09	01:12:42	02 ^h 15 W			2600
1067	Comp			01:14:06				Th Ar	10 ^s
1068	Comp			~ 01:17:28				Th Ar	10 ^s
1069	HD 186761	19 ^h 41 ^m 30 ^s	+10° 22	01:19:13	01:44:51	02 ^h 32 W			3000
1070	Comp			01:47:04				Th Ar	10 ^s
1071	Bias (4x)			01:48:20					

P2 249

Emulsion Batches:

Date 1990. Aug. 3/4..... Observers SAS/DiF.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	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	01:30:00			
1074	Comp			02:29:00				Th Ar	10 ^s
1075	Comp			02:38:38				Th Ar	10 ^s
1076	HD 215182 7 ^{Per}	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 8 ^{Per}	2 ^h 47.2 47.0	+52° 21'	03:28:20	04:24:42	01 ^h 56 E			
1080	Comp			04:26:30				Th Ar	10 ^s
1081-1084	Flats		+52°	04:30		2 ^h E		Tung	90 ^s
1085-1088	Flats		+30°	04:45		0 ^h		Tung	90 ^s
1091	Dark B195 (4x)			05:04:40					
1090	DARK			05:07					15 ^m
Aug 6/7	1091 BIAS 4x			20:20					
	1092 DARK 15 ^m								
	1093 BIAS (4x)								
	1094 DARK 15 ^m								

Spectr. Te

Focus....

Spectr. Te

Exp. Mir.

2500

2550

1800

251

Tue/Wed

Date 1990 Aug 7/8 Observers FOS/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	Exp.
1095	BIAS (4x)			17:43:15					
1096	DARK 45 ^m								15 ^m
1097	BIAS (4x)								
1098	DARK								15 ^m
1099	BIAS (4x)			18:30:36					
1100	DARK								15 ^m
1101	BIAS (4x)								
1102	DARK								15 ^m
1103	BIAS (4x7)			19:16:00					
1104	DARK								15 ^m
1105	BIAS (4x)								
1106	DARK								15 ^m
1107-1111	Flats		+45°	20:04:20		0 ^h		Tung	55 ^s
1112-1116	Flats		+25°	20:20:00		0 ^h		Tung	55 ^s
1117-1121	Flats		-05°	20:30:00		0 ^h		Tung	55 ^s

Spectr. T.

Focus...

Spectr.

Exp. Mtr.

Transparency Conditions 252

Focus

Dome Temp./Hum.

90 Cga m

00 256 1024 4 1 CUDFMT

[illegible]

P2 253

Date 1990 Aug. 7/8... 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	Exp.
1122	Comp			21:14:00				Th Ar	7 ^s
1123	HD 124897 ^{Arcturus}	14 ^h 11 ^m 06	+19° 42'	21:17:20		03 ^h 53 ^m W			180 ^s
1124	Comp			21:21:30				Th Ar	7 ^s
1125	Comp			21:25:19				Th Ar	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 ^m E			
1127	Comp			22:18:25				Th Ar	7 ^s
1128	Comp			22:21:23				Th Ar	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				Th Ar	7 ^s
1131	Comp			22:30:12				Th Ar	7 ^s
1132	HD 184915 ^{K Aql}	19 ^h 31 ^m 30	-07° 15'	22:32:10	23:02:17	0 ^h 14 ^m W			
1133	Comp			23:03:30				Th Ar	7 ^s
1134	Comp			23:08:15				Th Ar	7 ^s
1135	HD 184930 ^{2 Aql}	19 ^h 31 ^m 32	-01° 30' 33"	23:06:21	23:26:21	0 ^h 38 ^m W			
1136	Comp			23:27:28				Th Ar	7 ^s

P3-255

Emulsion Batches:

Date 1990 Aug. 7/8..... Observers Fds/SAS.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
1137	Comp			23:29:35				Th Ar	7 ^s
1138	HD 190993 ^{17 Vol}	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 Vol}	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 ^{5 Cas}			00:58:52				Th Ar	7 ^s
1145	HD 224572	23 ^h 53 ^m 56 ^s	+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 Vol}	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 (A)			02:32:20					
1151	dark 15 ^m			02:34:00					
1152	bias (4)			02:49:20					
1153	dark 15 ^m			02:57:00					

257

Emulsion Batches:

Date 1990 Aug. 8/9... Observers Jwn... FJs/SAS

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	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° cw to place slit E-W								
1177	BIAS (4x)			17:50:20					
1178	DARK			17:52:20					15 ^m
1179	BIAS (4x)			18:07:20					
1180	DARK			18:09:00					15 ^m
1181	BIAS (4x)			18:28:20					
1182	DARK			18:30:00					15 ^m
1183	BIAS (4x)			18:45:20					
1184	DARK			18:47:00					15 ^m
1185-1189	Flats		+45°	19:23:00		0 ^h		Tung	45 ^s
1190-1194	Flats		+25°	19:34:20		0 ^h		Tung	45 ^s
1195-1199	Flats		-05°	19:45		0 ^h		Tung	45 ^s

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Date 1990 Aug. 8/9 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	Exp.
1200	Comp			20:12:15				Th Ar	7 ^s
1201	HD 124897 ^{Archus}	14 ^h 11 ^m 06 ^s	+19° 42'	20:14:00	20:15:30				
1202	Comp			20:18:20				Th Ar	7 ^s
1203	Comp			20:21:40				Th Ar	7 ^s
1204	HD 182568 ^{2 Cyg}	19 ^h 20 ^m 10 ^s	+29° 25' 32"	20:24:56	20:36:26	01 ^h 56 E			
1205	Comp			20:37:38				Th Ar	7 ^s
1206	Comp			20:40:18				Th Ar	6 ^s
1207	HD 184915 ^{K Aql}	19 ^h 31 ^m 30 ^s	-07° 15'	20:42:42	21:05:47	01 ^h 39 E			
1208	Comp			21:07:05				Th Ar	6 ^s
1209	Comp			21:08:26				Th Ar	6 ^s
1210	HD 184930 ^{i Aql}	19 ^h 31 ^m 32 ^s	-01° 30' 33"	21:09:45	21:20:11	01 ^h 24 E			
1211	Comp			21:21:28				Th Ar	6 ^s
1212	Comp			21:23:18				Th Ar	6 ^s
1213	HD 190993 ^{17 Vul}	20 ^h 02 ^m 35 ^s	+23° 19' 34"	21:25:00	21:40:34	01 ^h 35 E			
1214	Comp			21:41:40				Th Ar	6 ^s

Spectr. Temp. Dome Temp./Hum. ... 21°/58%.

Transparency Conditions ... Clear 260

Focus

Spectr. Temp. Dome Temp./Hum.

90 again T = -102.9
00 256 1024 41 ccd/m²

Exp. Mtr.	Seeing	✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	Seal P.H.	Program	Remarks	Quality
				Echelle/ CDS	18.30	0.255 15 μ	0.4530 λ = 4481	0.205	Fals. prism.	Top up ~20 ^h start	
7000											
1500	1.5-2	4.92	B3 IV								
1463	1.2	4.95	B0.5 III								
1500	1.5-2	4.36	B5 III								
1500	1-2	5.07	B3 I								

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Date 1990 Aug 8/9

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	Exp
1215	Comp			21:43:30				Th-Ar	6 ^s
1216	HD 196740 ^{28 vol}	20 ^h 34 ^m 10	23° 45' 54"	21:45:10	22:00:19	01 ^h 46 E			
1217	Comp			22:01:37				Th-Ar	6 ^s
1218	Comp			22:03:49				Th-Ar	6 ^s
1219	HD 182568 ^{2 cgs}	19 ^h 20 ^m 10	29° 25' 32"	22:05:00	22:17:42	0 ^h 14 E			
1220	Comp			22:19:00				Th-Ar	6 ^s
1221	Comp			22:21:09				Th-Ar	6 ^s
1222	HD 184915 ^{K Agr}	19 ^h 31 ^m 30	-07° 15	22:22:42	22:48:18	0 ^h 3 W			
1223	Comp			22:49:30				Th-Ar	6 ^s
1224	Comp			22:50:40				Th-Ar	6 ^s
1225	HD 184930 ^{i Agr}	19 ^h 31 ^m 32	-01° 30' 33"	22:52:10	23:00:31	0 ^h 22 W			
1226	Comp			23:07:41				Th-Ar	6 ^s
1227	Comp			23:09:56				Th-Ar	6 ^s
1228	HD 190993 ^{17 vol}	20 02 35	23 19 34	23:11:04	23:27:49	0 ^h 13 W			
1229	Comp			23:29:04				Th-Ar	6 ^s

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 width	Emulsion	Sec. e P.H. Wavelength	Program	Remarks	Quality
				Echelle/ CCD	18.50	0.255 115 μ	x h.i.c. 0.4530	0205	Fds prgm		
1500	1"-2	5.04	B5IV								
1500	1"-2	4.97	B3IV								
1500		4.95	B0.5II								
1500	1"-2	4.36	B5III								
1500	1"-2	5.07	B3I								

84 263

Emulsion Batches:

Date 1920 Aug. 8/9..... Observers Fols/SAS.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
1230	Comp			23:31:04				ThAr	6 ^s
1231	HD 196740 ^{28 Vol}	20 ^h 34 ^m 10	23° 45' 54"	23:32:17	23:50:22	0 ^h 04 W			
1232	Comp			23:51:40				ThAr	6 ^s
1233	Comp			23:54:48				ThAr	6 ^s
1234	HD 224572 ^{σ Cas}	23 ^h 53 ^m 56	+55° 11' 54"	23:58:00	00:13:04	02 ^h 53 E			
1235	Comp			00:14:40				ThAr	6 ^s
1236	Bias			00:15:47					
1237	Comp			00:34:38				ThAr	6 ^s
1238	HD 184515 ^{K Aql}	19 ^h 31 ^m 30	-07° 15'	00:36:56	01:03:30	02 ^h 19 W			
1239	Comp			01:04:50				ThAr	6 ^s
1240	Comp			01:06:05				ThAr	6 ^s
1241	HD 184930 ^{κ Aql}	19 ^h 31 ^m 32	-01° 30' 33"	01:07:40	01:24:11	02 ^h 41 W			
1242	Comp			01:25:36				ThAr	6 ^s
1243	Comp			01:29:53				ThAr	6 ^s
1244	HD 182568 ^{2 Cyg}	19 ^h 20 ^m 10 ^s	+29° 25' 32"	01:31:50	01:48:30	03 ^h 17 W			

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

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Gratings/ Tilt	Slit width	Emulsion X base	Slit P.H. height	Program	Remarks	Quality
				<i>Echelle/ CCD</i>	<i>18.50</i>	<i>0.255 115µ</i>	<i>04530 Je-4481</i>	<i>0.205</i>	<i>Fels prgm</i>		
<i>1500</i>	<i>1"-2</i>	<i>5.04</i>	<i>B5IV</i>								
<i>1300</i>	<i>1"-2</i>	<i>4.88</i>	<i>B1V</i>								
										<i>Top up 00:30</i>	
<i>1400</i>		<i>4.95</i>	<i>B0.5M</i>								
<i>1600</i>	<i>2"-3</i>	<i>4.36</i>	<i>B5III</i>								
<i>1700</i>	<i>2"-3</i>	<i>4.97</i>	<i>B3IV</i>								

p5 265

Date 1990 Aug. 8/9 Observers F.J.S./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	Exp.
1245	Comp			01:49:50				Th Ar	6 ^s
1246	Comp			01:51:47				Th Ar	6 ^s
1247	HD 190993 17 Vul	20 ^h 02 ^m 35	23° 19' 34"	01:53:05	02:13:00	02:55 W			1700
1248	Comp			02:14:08				Th Ar	6 ^s
1249	Comp			02:15:48				Th Ar	6 ^s
1250	HD 196740 28 Vul			02:17:36	02:38:40	02 ^h 53 W			1720
1251	Comp			02:40:09				Th Ar	6 ^s
1252	Comp			02:43:07				Th Ar	6 ^s
1253	HD 224572 5 Cas	23 ^h 53 ^m 56	55° 11' 54"	02:44:24	03:01:05	0 ^h 04 E			1500
1254	Comp			03:02:26				Th Ar	6 ^s
1255	Comp			03:05:53				Th Ar	6 ^s
1256	HD 22928 8 Per	03 35 48	47° 28' 04	03:08:20	03:15:56	03 ^h 33 E			1050
1257	Comp			03:17:25				Th Ar	6 ^s
1258	Comp			03:20:45				Th Ar	6 ^s
1259	HD 224572 5 Cas	23 ^h 53 ^m 56	55° 11' 14"	03:22:11					

Spectr. Temp. Dome Temp./Hum. ... 18°/74%.

Transparency Conditions ... Clear 766

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit Width	Emulsion x 700	Slit P.H. Height	Program	Remarks	Quality
				Echelle/ CLD	18.50	0.255 115µ	0.4530 72-4481	0.205	Eds prism		
1700	2"	5.07	B3V								
1720	2"										
1500		4.88	B1V								
4030		3.01	B5III								
		4.88	B1V								

Py #1 269 Thu/Fri
 Date 1990 Aug 9/10 Observers Fds/SAS/Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
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				Th Ar	6 ^s
1295	124897 ^{Arcturus}	14 ^h 11 06	19° 42'	20:12:15	20:13:15				
1296	Comp			20:15:55				Th Ar	6 ^s
1297	Comp			20:18:48				Th Ar	6 ^s

Spectr. Te

Focus....

Spectr. Te

Exp. Mir.

2000

Focus

Dome Temp./Hum.

Transparency Conditions *Clear* 270

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width x height	Emulsion	Program	Remarks	Quality
					Echelle/ CCD	18.50	0.255 115μ	PC-44B1 04530	fol's program		<164.0> <165.4> <164.4> <165.7> <164.3> <165.3> <164.3> <165.4>
								0185			
								0185			
								0185			
								0205		Top up end 19:58	
	7000							↓		Top up end 19:58	

82 271

Date 1990 Aug 9/10... Observers F.D.S./S.A.S./T.N.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
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	20:05:56	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 37 ^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 ^{21 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	-01° 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. Tel

Focus....

Spectr. Tel

Exp. Mtr.

500

500

1500

500

1285

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

[illegible]

pg #3 273

Date 1990 Aug 9/10 Observers Fds./SAS/Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
Ce O 1313	HD 182568 ^{2 Cyg}	19 ^h 20 ^m 10 ^s	+29° 25' 32"	22:33:49	23:13:52	0 ^h 46 W			
1314	Comp.			23:14:44				Th Ar	6 ^s
1315	Comp			23:16:40				Th Ar	6 ^s
1316	HD 172167 ^{Vega}	18 ^h 33 ^m 33 ^s	+38° 41'	23:22:15	23:23:18	01 ^h 42 W			
1317	Comp			23:23:57				Th Ar	6 ^s
1318	Comp			23:29:50				Th Ar	6 ^s
1319	HD 224572 ^{5 Cas}	23 ^h 53 ^m 56 ^s	55° 11' 14"	23:34:44	23:56:04	03 ^h 07 E			
1320	Comp			23:57:00				Th Ar	6 ^s
1321	Camelias (4)			00:02:00					
1322	Comp			00:17:05				Th Ar	6s
1323	HD 196740 ^{28 Uul}	20 ^h 34 ^m 10 ^s	23° 45' 54"	00 18 41	00 44 46	01 02 W			
1324	Comp			00 45 18				Th Ar	6s
1325	Comp			00 46 56				Th Ar	6s
1326	HD 190993 ^{17 Vul}	20 02 35	+23 19 35	00 48 12	01:14:42	02 ^h 04 W			
1327	Comp			01:15:20				Th Ar	6s

Spectr. Tel

Focus

Spectr. Tel

Exp. Mtr.

043

5000

1500

500

1500

Spectr. Temp. Dome Temp./Hum. .. 20°/95% ...

Transparency Conditions ... Cloud! ... thin fog ... 274

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Gratings/ Tilt	Slit width	Emulsion X dist	S/L P.H. height	Program	Remarks	Quality
1043		4.97	B3IV	Echelle/ CCD	18.50	0.255 16 μ	0.4530 $\lambda_c = 4481$	0.205	Fds prgm	Cloud	
5000		D.04	A9V						Fds prgm		
1500	2"	4.88	B1V							Clearing	
1500		5.04	B5IV							CCD T: -103.5° Tepup 0 00 00	
1500	<2"	5.07	B3IV								

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

Transparency Conditions ... *Cloud* 276

Focus

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

Spectr. Temp.

[illegible]

#1 277

Date 1990 Aug. 10/11 Observers Fds/SAS/Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce 1335	BIAS (4x)			17:31:52					
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
1356	Comp			19:59:20				ThAr	6 ^s
1359	HD124897 ^{α Boo}	14 11 06	+19 42	20 02 05	20:04:18	02 ^h 48 W			
1360	Comp			20:04:49				ThAr	6 ^s
1361	Comp			20:07:43				ThAr	6 ^s

P2 279

Date 1990 Aug 10/11 Observers Fels/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	Exp.
1362	HD 182 568 ^{2 Cyg}	19 ^h 20 ^m 10	+29° 25' 32"	20:09:20	20:36:10				
1363	Comp			20:36:52				Th Ar	6 ^s
1364	Comp			20:38:40				Th Ar	6 ^s
1365	HD 190993 ^{17 Vol}	20 ^h 02 ^m 35	23° 19' 34"	20:40:30	21:16:21	01 ^h 50 E			
1366	Comp			21:17:02				Th Ar	6 ^s
1367	Comp			21:19:39				Th Ar	6 ^s
1368	HD 196740 ^{28 Vol}	20 ^h 34 ^m 10	23° 45' 54"	21:20:38	21:59:19	01 39 E			
1369	Comp			22:00:00				Th Ar	6 ^s
1370	Comp			22 04 00				Th Ar	6 ^s
1371	HD 172967 ^{Vega}	18 ^h 33 33	+38° 41'	22 04 45	22:06:13	0 ^h 29 W			
1372	Comp			22:07:10				Th Ar	6 ^s
1373	Comp			22:09:12				Th Ar	6 ^s
1374	HD 184915 ^{R Aql}	19 ^h 31' 30	-07° 15'	22:10:22	22:50:22	0 ^h 14 W			
1375	Comp			22:51:00				Th Ar	6 ^s
1376	Comp			23:11:03				Th Ar	6 ^s

Spectr. Temp. Dome Temp./Hum. ... 21°/73%.

Transparency Conditions . haze & low cloud . 280

Focus

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ex. Mag.	Sp.	Inst.	Grating/ Tilt	Slit width	Emulsion x focal	Slit P.M. height	Program	Remarks	Quality
1500	2"	4.97	B3IV	Echelle/ CCD	18.50	0.255 115µ	0.4590 λc = 4481 Å	0.205	Fds prgm		
1500	2"	5.07	B3IV								
500	2"	5.04	B5IV								
6000		0.04	A0IV								
605	2"	4.95	B0.5 III B5 III							Cloud	

pg#3 281

Emulsion Batches:

Date 1990 Aug 10/11..... Observers FLS-SAS-Tn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
1372	HD 184930 ^{i Agl}	19 61 32	-01 30 33	23:42:45	/				
1377	bias (4)			23:52					
1378	dark 15 ^m			2354					
1379	Th-Ar.			00:14:37				Th-Ar	6s
1380	HD 184930 ^{i Agl}	19 31 32	-01 30 33	00 15 48	01:02:58	02 ^h 27 W			
1381	Comp			01:03:53				Th-Ar	6s
1382	Th-Ar			01:08:06				Th-Ar	6 ^s
1383	HD 224572 ^{8 Cas}	23 53 56	55° 11' 14"	01:09:50	01:46:40	01 ^h 11 E			
1384	Comp			01:47:30				Th-Ar	6 ^s
1385	BIAS (4x)			01:56:50					
1386	DARK 15			01:58:00					15 ^m
1387	BIAS (4x)			02:13:20					
1388	DARK			02:15:00					15 ^m

Spectr. Temp. Dome Temp./Hum. $+20^{\circ}\text{C}$ 88.76

Transparency Conditions Part cloudy 284

Focus

 $T = -101^{\circ}$ Spectr. Temp. Dome Temp./Hum. $+18^{\circ}\text{C}$ 92.756³ 0 5 1024 6 1 CCDFMT

Approx. Max

ADCU

Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5					Fiber fed CCD	1800/ 52.7	250 μ	5720A				5400 10000
					"	"	"					5400
8												12000
	2100	400R	7.62	G8V	Fiber fed CCD	1800/ 52.7	250 μ	5720A		Asm Sp-HK	Cloudy at end	1100
												12000
					Fiber Fed	1800/52.7	250 μ	5120A				2700

pg 41 285

Date 1490 Aug 14/15 Observers D.F./Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
400 371	Comparison			20:17:30			f/18 stop in place	Fe No Clear	60s
372	HD 123782 (13 Boo)	14 ^h 04 ^m 38 ^s	49° 36' 00"	20:26:38	20:33:17	3 ^h 40 ^m 30 ^s W			
373	Comparison			20:34:20			f/18 stop in place	Fe No Clear	60s
374	HD 144287	16 ^h 00 ^m 00 ^s	25° 30'	20:41:07	20:57:55	2 ^h 9 ^m 54 ^s W			
375	Comparison			20:58:40			f/18 stop in place	Fe No Clear	60s
376	Bias 4x (Load bias. BAK)			21:00:20					
377	Flat			21:02			f/18 stop in place	TUNG H=1/2	20s
378	HD 147379	16 ^h 16 ^m 36 ^s	67° 28'	21:13:02	21:42	02 48 W	f/18 stop in place		
379	Comp			21:43			f/18 stop in place	Fe No Clear	60s
380	HD 158633	17 ^h 25 ^m 3	+67° 24'	21:46:30	22:00:00 22:59:40	2 ^h 49 ^m 50 ^s W	f/18 stop in place		
381	Comparison			22:01:40			f/18 stop in place	Fe No Clear	60s
382	HD 173740	^{1950.0} 18 ^h 42 ^m 13 ^s	^{1950.0} +59° 33' 3	22:09:50	23:04	01 36 W			
383	Comp			23:05			F18 stop	Fe No Clear	60s
384	HD 173739	18 ^h 41 ^m 5	59° 29'	23:09	00:00:00	02:30 W			
385	Comparison			00:01			f/18 stop	Fe No Clear	60

Spectr. Temp. Dome Temp./Hum. 19.2°/61.6% Transparency Conditions ... clear w/ high clouds.
 Focus 286
 Spectr. Temp. Dome Temp./Hum. 17.1°/75.8%
 563 0 5 1024 61 CCD ^{mean} FITCU

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
7000	O.K.	^V _{5.25}	M21ab	red fiberopt	1800/52.7	250 _μ	5120A		KK/Fall '90	-Radial Velocity standard	2000
3500	O.K.	^{Vmag} _{7.62}	68V	red fiberopt	1800/52.2	250 _μ	5120A		KK/Fall '90	-first priority star.	
Note: Full 7 Range = 5020 → 5220 Å center = 5120 Å actually											5000
1500	O.K.	^{Vmag} _{10.1}	M0V	red fiberopt	1800/52.7	250 _μ	5120A		KK/Fall '90	-second priority star.	500
5025	O.K.	^V _{6.43}	^{df} _{69V}	red fiberopt	1800/52.7	250 _μ	5120A		KK/Fall '90	-first priority star.	1900
1500	^{22"} O.K.	^V _{9.67}	dM5	red fiberopt	1800/52.7	250 _μ	5120A	sci	KK/Fall '90	-first priority star. 1600 counts 15A. (1400 counts 55 sec @ 5 HD 173739)	3400
2100	O.K.	^V _{8.90}	dM4	red fiberopt	1800/52.7	250 _μ	5120A	sci	Asn Sp KK	North one of pair	500

Pg 42 287

Date 1990 Aug 14/15 Observers D.I./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	18 ^h 41. ^m 8	59° 29'	00:06:00	00:52:00	3 ^h 25 ^m W			
387	Comp			00:53:20			f/18 stop in place	Felle clear	60s
388	Flat			00:56:10			"	Tung 1/2 clear	20s
389	Bias 4x			01:00					
390	Flat			01:30			f/18 stop	Tung 1/2	30s
391	Comparison			01:34:30			"	Fe No. clear	60s
392	HD 1326 A	0 ^h 12.7	+43° 27'	01:38:00	02 22	0 38 E			
393	Comp						f/18 stop	Fe No 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	Comparison			03:42:40			f/18 stop	Fe No clear	60s
399	HD 8890 A	01 22.6	+88 46	03 59	04 01	01 12 E			
400	HD 8890 B	01 22.6	+88 46	04 04	04 29:30	00 44 E			

Spectr. Temp. Dome Temp./Hum. $\pm 16.9^\circ / \pm 75.8\%$ Transparency Conditions $\pm 1.6 \pm 1.6 \pm 1.6 \pm 1.6$ 2.88
 Focus
 Spectr. Temp. Dome Temp./Hum. $\pm 15.8^\circ / \pm 87.9\%$ $[563/015/1024/6/1 \text{ ccd full}]$ Mean ADCU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
820	2-4 0.6 - poor	V=9.09	MS	ccd fibre fed	1800/52.7	250 μ	5120A		KK/Tall '90	- another attempt to support (top) previous observation tonight (ie. and this and of 00382 together)	300
										!	5000
										- top up of CCD down at 1.03 Flat after top up complete	8000
											8000
2500	poor	V=8.07	MS	ccd fibre fed	1800/52.7	250 μ	5120A		KK/Tall '90	some thin cloud	600
2700	2-3'	V=8.07	MS	ccd fibre fed	1800/52.7	250 μ	5120A		Asm Sp KK	HD1326 B too faint for tonight anyway	700
524	* poor	B 8.6	F	ccd fibre fed	1800/52.7	250 μ	5120A		Asm Sp-KK	Fiber head Fld drum	360
									* much scintillation of image		
5000	V poor	B 8.2	A	ccd fibre fed	1800/52.7	250 μ	5120A		Asm Sp KK		2000
500	5050	B 8.6	F	"	"	"	"		"	Repeat of 397	440

pg #3 289

Date 1990 AUG 14/15 Observers DI F/TJ

Emulsion Batches:

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[illegible]

Pg #1 291

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	Exp.
400412	Bias 4x	20 ^h		20 ^h :07:40					
413	Flat			20:10:35			f/18 stop	Tung clear	155
414	Comparison			20:13:10			"	FeNe clear	60
415	HD 147282	16 ^h 00 ^m 00 ^s	+25°30'	20:18	20:42	2 ^h 11 ^m W			
416	Comparison			20:44:			f/18 stop	FeNe clear	60
417	HD 147379	16 ^h 16 ^m .6	+67°28'	20 ^h 35	21 38	2 44 W			
418	Comp			21 39				FeNe clear	60s
419	HD 158633	17 253	+67 24	21 43	21 53	1 51 W			
420	Comp			21 58				FeNe clear	60s
Fm 000268	HD 173739 seeing test	18 41.8	+59 29	22 03		0 40 W	+59 34	N ⁺ made x4	3-31 p1
421	HD 173740	18 ^h 41.8 ^m	+59 29	22 06	23 08	1 49 W			1450
422	Comp			23 10			f/18 stop	FeNe clear	60s
423	HD 173739	18 41.8	+59 29	23 12	00 12	2 53 W			1950
424	Comp				00 19		f/18 stop	FeNe clear	60s
425	Flat			00 16			"	Tung clear	155

PS#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	Exp.
200 426	Bias 4X.			00:19					
FM 000 269.17n	Seeing Test HD 207754	21 46.2	+32 500	00 27		0 0	+43 48'	"N" made 2 1/2	
270.17n	"	"	"	00 30		0 4 W	"	"	"
427	Comparison			00 52.			f/18 stop.	FEN CLEAR	60s
428	Flat.			00 55.			"	Tung CLEAR	15s
429	HD 201156 B	21 ^h 02.7	+33° 44'	00 59	01 51	2 ^h 8 ^m W			
430	Comp				01:53.		f/18 stop	FEN CLEAR	60s
431	HD 201156 A	21 ^h 02.7	+33° 44'	01 55	02 42	3 00 W			
432	Comp			02:44.			f/18 stop	FEN CLEAR	60s
433	Bias 4x.			02:46					
434	HD 8890 B	01 22.6	+88 46	03 00	04:02	1 04 E			
435	Comp			04:04.			f/18 stop	FEN CLEAR	60s
436	HD 8890	01 22.6	+88 46	04 07	04 09	0 58 E			
437	Comparison			04:11			f/18 stop	FEN CLEAR	60s
438	Flat			04:13			"	Tung CLEAR	15s

Spectr. Temp. Dome Temp./Hum. 40.5°/83% Transparency Conditions 5/1 Hazy 294

Focus

Spectr. Temp. Dome Temp./Hum. [562 0 5 1024 6 1 red part] Mean ADCU

[illegible]

295 pg#3

Date ... 1990 Aug 16/17 Observers ... D.F./T.N.

Emulsion Batches:

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[illegible]

297
#1

Fri - Sat

Date 1990 Aug 17/18 Observers KK/Tn

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison	
								Type/Filter	Exp.
CF 446	Flat							Tung clear	10 ^s
447	Comparison							FeNe clear	60 ^s
448	HD 182 ⁵⁷ 52	19 20.2	+11 44	20:23	20:29	01 28 E			
449	Comp							FeNe clear	60 ^s
450	BD +88° 2			20 46	21 05	207 E			
451	'bias 4x			20 46					
452	BD +88° 5								
452	Comparison							FeNe clear	60 ^s
453	HD 171391	18 29.5	-11 03	21 37	21 54	00 47 W			
454	Comparison								60 ^s
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 08 W	278 ^s		
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	60 ^s

301
pg#1

Sun Mon

Date 1990 AUG 19/20.... Observers ... Tm.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
Fm 0027Tm	HD 163075	17 49.2	+46 40	20 20		00 02W	+46 41	"N" made FeNe Clear	Int x4 60s
C00468FTS	Comp			20 51			f18 stop		
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	81s
Fm 272Tm	HD 176844	18 57.0	+40 33	21 22		00 05E	+40 40	"N" made FeNe Clear	Int x4 60s
473FTS	Comp			21 41			f18 stop		
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. Bar]			22 48					
479	Flat						f18 stop	TUNG Clear	105
480 Comp									
481	HD 182917	19 21.9	+50 02	23 04	23 31	01 41 W		FeNe H=1/4	15 sec
482	Comp						f18 stop		

Spectr. Temp. Dome Temp./Hum. $\pm 1.7^{\circ} \dots 69\%$ Transparency Conditions *Hazy to cloudy* ... 302

Focus

Format

56105 10246 1 CCD FMT

Spectr. Temp.

Dome Temp./Hum.

Cooled from Room Temp at 20:00

mean

HRC4

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
31x31/plate		V 6.46	K0111	Funson & Dome apert @ 20EST		Fiber Hord	4frames		light N wind	Dome WNW Cirrus	3.1
				Fiber CCD	1800/527	250	5170A	1st	Topup @ 20EST	CCD T = -103°C	
5000	peak	B 3.93	K2111	Fiber CCD	1800/527	250	5170A		still vel	1/4 cloud	1600
8.5 sec											2500
31x31		V 6.65	M2111	4 frames					seeing test	Dome WSW Light N breeze	3.0
				Fiber CCD	1800/527	250	5170A				
2650	4"	8.4	Mb				n		CHC ppm		500
2500		8.4	Mb						CHC ppm		500
600	3"	8.4	Mb	Fiber CCD	1800/620	250	5170A Hx		CHC ppm	Centration ~ 500 Hx peak 2800 Angle may not be quite Right	500
1st Comp	80 sec	FENE	A=1/4								

305 Mon/TUES

Date 1990 AUG 20/21 Observers Tn.....

PTS = Photon Timing Spectrograph

Emulsion Batches:

[illegible]

307 Tues wed

Date 1990 AUG 21/22

Observers

M.K.I.-T₄

Photon Time Tag Spectrograph

Emulsion Batches:

[illegible]

Dome Temp./Hum. *+19°C 78%*

Dome Temp./Hum. $+16^{\circ}$... 85.8

Transparency Conditions FINE - Cloudy 308

Donegan & Furs on by 1940 EST

AST TIME 10^3 slow

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2000 7/25	ND	2.0		FIBER PTS	1800/628	BS	6600A			Signal/way down from last night.	
31x31 pixels	6.46	KO		[Done WNW]		FIBER Head	(S/ East breeze)		seeing test Then adj. mode to p.p. plates	signal/much higher	
90/5	1			FIBER PTS	1800/628	BS	6600A				
2500/30	2"	6.59	DK5	"	"	"	"		std vel	[Known to vary Hunt A1 1990]	
90/5				"	"	"	"				
450/20	~2"	9.74	BQ16	"	"	"	"		mti pyn	cloud at end	
2050/30	NO = 20			"	"	"	"				
										Fits backed up to end of	

300
pg#1 T WURS Fri

Date 1990 AUG 23/24. Observers Mki-Ta.....

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
FIT00357.MKI	F14t no header			19 19	20 ² 13		Diffuser in	TUNG A=1/8	
274.14	HD171232	18 28.5	+25 25	20 30		00 11 E	+25 36	'N' male	Int x4
358.	Comp					f18 stop not used	Fe AR Clear	NO ND	~130.
359	Comp			20 23			Fe AR Clear	f18 stop NOO.1	200
360.MKI	HD171232	18 28.5	+25 25	20 31	20 47	00 06 W			
361.MKI	Comp			20 50			Fe AR Clear	f18 NOO.1	200
362	HD234677	18 31 35	+51 38	21 01	22 02	01 19 W			
363	Comp						Fe AR Clear	f18 NOO.1	200
364	HD197433	20 38.8	+75 14	22 19	00 19	01 32 W			
365	Comp						Fe AR Clear	f18 NOO.1	200
366	P4 VUL	20 16.8	+21 15	00 31 31	00 45	02 16 W			800s
367	"	"	"	00 47 30	00 56	02 27 W			500
368	BM Cass	00 48.6	+63 33	01 04	01 45	01 17 E			
369	Comp						Fe AR Clear	f18 NOO.1	200
370	HD 6314	00 59.0	+39 27	01 56	02 31	00 41 E			

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

Focus.....

Dome opened @ 19:30

Spectr. Temp. Dome Temp./Hum.

Fans on by 19:10

Exp. Mtr	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8/1B 1700/25 HD 22		ND 22		Fiber Fed PTS	1800/62.8	BS	6600A				
31x31 p.s.	OK	✓ 7.73	G8II			Fiber head			Seeing test	Dome SSW, Light fast breeze	
15/10										Counts too high.	
70/5											
1900/25	<2"	✓ 7.73	G8III						std vel	cuts to 2500/sec	
100/8											
900/15	2"	✓ 8.6	K6ve						Mk. pgun	Fld drawn	
70/5											
130/20	2"	✓ 8.8	G5 +K0V						Mk. pgun	cuts to 1800	
70/5											
600/10	2"	✓ 8.10	NEB						Mk. pgun		
200/5	2"	✓ 8.8	"						IL	ND 0.6 in beam	
600/10		8.8- 9.13								ND removed	
1700/20	3"	✓ 6.57	POV _h						Teluric std	Brighter of PAIR some cloud. Westone of wide pair	

311pg#2

Date 1990 Aug 23/24... Observers MKJ/TB.....

Emulsion Batches:

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[illegible]

313 pg 1. Fri Sat

Date 1990 AUG 24/25. Observers mki-Tn

Emulsion Batches:

Difuser 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	Exp.
374.mki	FLAT 3hrs			16 45	19 45		ND=2.0	TUNG A=1/8	315
FM 00 276Tn	HD 171232	18 28.5	+25 25		19 51	00 45E	f18 stop No ND	"n" made FEAR Clear	Int x4 200
375.mki	Comp			19 54					
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 1974.33	20 38.8	+75 14	20 22	22 22	00 20E			2 hrs
379.mki	Comp			22 24			f18 stop No ND	FEAR Clear	200
380.mki	HD 1974.33	20 38.8	+75 14	22 31	23 42	00 58W			430
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		n	n	660
383.mki	Comp			00 36			f18 stop only	FEAR Clear	200
384.mki	HD 1974.33	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	n	n			00		"n" made Int x4	315

Spectr. Temp. Dome Temp./Hum. ... 121°C ... 77.8 Transparency Conditions . Fine 314

Focus

Dome open by 1930

Spectr. Temp. Dome Temp./Hum.

Funs on by 1915

Exp. Min.	Seeing	Fig. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2400/50				Filer Fed PTS	1800/628	BS	6600A	CH A			
31x31	OK	V 7.73	G8III						4 frame seeing test	Dome SSW light breeze (East)	
85/5		V									
2000/20		V 7.73	G8III						std vel		
600/20		V 8.0	G5 + KOV						MKI pgm	Time TAG 1800-3600 pixel/Hs	
45/6		V								oscillation in CHA noted	
700/20		V 8.8	G5 + KOV						MFI	TIME TAG 1800-3600 pixel/Hs	
2500/30								CH/A	obvious 16 pixel/oscillation seen again		
50/2500								CHB	CHB looks OK	ie the alarm sent off	
20/85										Well's Furgie called about a power glitch @ 200 EST	
2500/2500	2.3"	V 8.8	G5 + KOV							Time tag 1800-3600 pixel/Hs	
20/90											
50/2800	2"	V 6.57	FOVh						Teluric std	cat's to 3300/sec	
31x31 pgs	4.2"	V	"				4 frames		seeing test	Dome facing W. very light west breeze	

Spectr. Temp.

Dome Temp./Hum. $71.85^{\circ} \dots 91\%$

316.

[illegible]

317

Wed/Thu

Date Aug. 29/30. 1990

Observers SAS / Mki

Emulsion Batches:

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[illegible]

3/9 #1

Thu/Fri

Date 1990 Aug. 30/31 Observers SAS/Tn./MK

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.
406	Flal		plat form				ND 2.0	Tung FeA = 1/8	3 ^h
407	Comp			19:38:20			ND 0.3	FeA A=1/2	200 ^s
FeA 408	HD 171232 *	18 ^h 28.5	+25° 25	19 45 59	19 50 59	00 21 E	ND 0.2 *		300 ^s
FeA 409	HD 171232	18 28.5	+25 25	19 52		00 19 E	no ND	"N" make	Int x4
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	01:52:16	4 ^h 47 W			4026 ^s
416	Comp			01:53:04			ND 0.3	FeA A=1/2	200 ^s
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 ^s
419	BM Cass	00 48.6	+63 33.6	03 11 37	03 32	W	no ND		1200

Spectr. Temp. Dome Temp./Hum. 20/54%...

Transparency Conditions Clear 370

Focus

Spectr. Temp. Dome Temp./Hum.

Exp.	Exp. Mu	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1	2000				PTS Fibre Fed	1800/50.8	BS	4820 Å	CHB		AST clock correct	
2	10/140										Signal in CHB without ND was a 4500 c/s, sat?	
3	10/350	12"	V 7.73	GS II	* sample away star?						-35.910.5 * Std Vel in stellar beam to cut signal	
4	31x31x6	"	"	"	ND filter removal		Fiber Hard	4 frames		seeing test	Dome facing SSE	
5	10/140											
6	10/1100	7.2"	Var 8.40	M	PTS F. box exp	1800/50.8	BS	4820 Å			12.6 meg to Drive 'N'	
7	10/750	3.2"	"	"	"	"	"	"			10 meg to Drive 'N'	
8	10/750	3"	"	"	"	"	"	"			10 meg	
9	5/800	"	"	"	"	"	"	"				
10	5/110	"	"	"	"	"	"	"				
11	10/200	2.4"	Var 8.40	M	"	"	"	"				
12	10/150				"	"	"	"				
13	15/2800	7.2"	V 6.65	B8 V		"	"	"		Telluric std	cuts to 3200/sec some cloud	
14	7/110				"	"	"	"				
15	30/1100		V 8.30	"	"	"	"	"				

321 #2 THURS - FRI

Date 1990 AUG 30/31... Observers S.A.S./T.H.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
420	Comp			03 32 18					200
421	HD 17029	01 ^h 53.0	+28°54	03:40:34	03:45:34	0 ^h 6 W	No N.D.		300 ^s
422	Comp			03:46:17			ND 0.3	Fe A V2	200 ^s
423	HD 14386 ^{MIRA}	02 14 18	-3 26	03 56	04 56	0 58 W	ND 1.2		3600 ^s
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	2 hrs
426	Flat	AUG 31/Sept 1		16 06	18 06		ND 2.0	TUNG A=1/8	2 hrs
427	Flat	Sept 1/2		19 35	22 35 36		ND 2.0	TUNG A=1/8	3 hrs
428	FEAR Comp (test)				22 56		ND 0.3	FEAR A=1/2	200

mk: initiated, but night turned out cloudy

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	Exp	Ex
429	Flat	not the	3 hr intended	19 42			ND 2.3	TUNG H=1/4	1150	40/200
430	Comp			20 54			ND 0.3	FeAR A=1/2	200	10/100
431	HD 182917	19 21.9	+50 02	20 54	21 35	00 41 W	no ND		2400	15/400
432	Comp			21 36			ND 0.3	FeAR A=1/2	200	5/105
433	Comp			22 07			"	"	200	10/120
434	HD 182917	19 21.9	+50 02	22 13	23 19	2 26 W	no ND		4000	40/400
435	Comp			23 21			ND 0.3	FeAR A=1/2	200	10/100
436	BM Cass	00 48.6	+63 33	23 28	00 06	2 18 E	no ND		2224	15/400
437	Comp						ND 0.3	FeAR H=1/2	200	
438	HD 221491	23 27.5	+34 24	00 14	00 41	0 20 E	ND 0.2		1570	70/1500
439	Comp						ND 0.3	FeAR A=1/2	200	
440	Flat on timer			00 55			ND 20.3	TUNG A=1/4	3 hrs	13000

Focus

Spectr. Temp.

[illegible]

325

Mon - Tues

Date .. 1990.. Sep 2/4... Observers Mki-Th.....

Emulsion Batches:

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..... D. H. Huser, Jr. 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	Exp
441 Mki	Flat			18 32	19 59	0 0	pl/4mm	TUNG H=1/4	5/60
442	Comp					F18 stop is IN	ND 0.3	FeAR A=1/2	200
443	HD 182917	19 21.9	+50 02	20 15	21 21 50	00 32W			
444	Comp						ND 0.3	FeAR A=1/2	200
445	HD 182917	19 21.9	+50 02	21 29	22 35 48	01 46W			4005
446	HD 182917	19 21.9	+50 02	22 44 10	23 51	03 01W			
447	Comp			23 55			ND 0.3	FeAR A=1/2	200
448	HD 182917	19 21.9	+50 02	23 59	01 06	04 17W			
449	"	"	"	01 06	01 58	05 09W			
450	Comp						ND 0.3	FeAR A=1/2	200
451	BM Cass	00 48.6	+63 33	02 13	02 53	00 34W			
452	Comp						ND 0.3	FeAR A=1/2	200
453	HD 221491	23 27.5	+34 24	03 01	03 27	02 10W	ND 0.2		1600
454	Comp			03 28			ND 0.3	FeAR A=1/2	200
455	Flat			03 44			ND 2.3	TUNG A=1/4	3hr
456	Flat Wed Sept 5/6			18 52			"	"	3hrs

Transparency Conditions... *FINE* 326

Focus

Dome Temp./Hum. $+13^{\circ}$... 79%

increasing cirrus cloud

Exp. No.	Exp. Dir.	Seeing	W. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1	A B											
2	50/2000	NO	2.3		Fibre Fab PTS	1800/50.8	BS	4820A	CHB			
3	5/110											
4	15/650	3"	VPR 8.4V	M							6.7 mag to N: 500-3600 p/sec 1st Time key	
5	5/110											
6	20/650	2-3"	VOR 8.4	M							7.4 mag to N: V thin cloud	
7	20/800	2"	VOR 8.4V	M							Counts briefly to 1000/sec	
8	5/100											
9	20/500	2-4"	VPR 8.4V	M							6.9 mag on D: Cloud at start	
10	20/400	11	8.4	M							(cnts to 100) cnt rate dramatically higher by 01 30:51	
11	500	4"	VOR 8.8- 9.3								cloud By 01 50 again cnts to 900 in clear	
12	4/100											
13	40/2500	4"	V 6.65	B8V							some cloud -telarc std Some cnts to 1500	
14	10/100											
15	50/2800											
16	60/2400											
NO OBS This night.												

327

Fri-SAT

Date 1990 Sep 7/8 Observers Jn mki, p. l. n. i. n

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
457	Flat 3 Hrs			16 04	19 04		ND-23	FUNG A=1/4	
458	Comp					F18 stop out	No ND	Fe A A=1/4	
459	HD 182917 ^{CHCYG}	19 21.9	+50 02	19 54 40	20 36	00 00 W	+50 22		2400
Fm 281th	Not on Reg List HD 182917 Seery test	"	"	20 37		00 01 W	4 Frames	Real Time error	Int x 0
460	HD 182917	"	"	20 39	21 46 32	01 19 W			
461	Comp			21 48			No ND	Fe A A=1/4	200
462	HD 182917	19 21.9	+50 02	22 04 20	22 44 30	02 10 W			2400
463	Comp			22 46			No ND	Fe A A=1/4	200
464	HD 3765	00 35.3	+39 40	22 56 17	23 13	02 37 E	No ND		
465	Comp						No ND	Fe A A=1/4	200
Fm 282th	HD 3765	00 35.3	+39 40	23 15		02 35 E	+40 07	Real Time error	Int x 0
466	Bm CASS	00 48.6	+63 33	23 22	00 18	00 46 E			3351
467	Comp			00 18			No ND	Fe A A=1/4	3 HAS
468	FLAT on timer			00 54		0 0	plot beam	FUNG A=1/4	10800 3/1

329

SAT/SUN

T_h Hdy Rgn 2 Large ~~Emulsion~~ Emulsion Batches:Date 1990 Sep 8/9 Observers T_n mki phone in Tours 2.5 hrs
Ring Nebula Obs. / 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	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			F18IX 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 171IN	HD 222368 Drive Test n		n	00 37	00 40 30	0 05 E		"N" MADE FeA A=1/4	Int x4 2005
OT000 172IN	HD 222368	23 34.8	+5 05	00 48	00 53 16	00 08 W		"N" mki x4	2005
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. ... $+12^{\circ}$ 80%

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	W L Emulsion	P.H.	Program	Remarks	Quality
5/15				Fiber Fed PTS	1800/50°	BS	4820R	CHB		Hard To say where on Ring	
5/65											
5/350	2-3	var -8V	M						CHCg ppm	Not Timed yet this time	
8/65											
10/200	2-3	VAR 8.8 -9.3V								cloudy - (some so + end)	
5/70											
10/200	3	B 4.6A	F7U						stall vel	* some cuts to 1000/sec in 2 out of cloud	
39x39 pich		" "		200 frames		Fiber Head	no wind Dome South	"		cloudy Int x 4 = 1/155 Integrator	
5/75											
39x39				300 frames		Fiber Head	Dome SSW			cloudy	

33/

Tues/Wed

Date .. Sept. 11/12.. 1990.. Observers .. Fds. [Tn] ..

Eckelle Reticon

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.
0	Promptel flat			19:19				FLAT	60s
2	Th-Ar								10s
3	HD124897 ^{Arcturus}	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 195556	19 27 30	7 15 0		Too low, too faint ...				
6	Th-Ar			19 41 00					10
7	HD 195556 ^{decy}	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	HD 213420 ^{G LAC}	22 26 10	42 36 39	20:51:01	21:42:52	01 40E			
11	Th-Ar			21:43:28					10s
12,13,14,15,16,17	6 flats @ 22s	512, 512, 519, 516, 517, 518							

Spectr. Temp. Dome Temp./Hum. ... 17°C ... 66%

Transparency Conditions *Part.. cloudy.. mostly cloudy*

Focus

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

[illegible]

Dome Temp./Hum.

334

[illegible]

335

Date Sept. 13/14... 1990. Observers ... Fols. (Sasse by onphone)

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.
	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				100s
	Th-Ar			19:02					10s
	Th-Ar								10s
	MD 195556								
	MD 195556	20 26 58	48 36 55	19:09:33	19:59:24				10s
	Th-Ar			20:00:00					10
	Th-Ar			20:05:08					10
	MD 2134 20	22 26 10	42 36 39	20:08:47	20:24:03				10s
	Th-Ar			20:26					10
	Th-Ar			20:34:02					10
	MD 172167	18 33 33	38 41	20:34:02	20:38:13				10s
	Th-Ar			20:39:18					10
	MD 172167	18 33 33	38 41	20:40:14	20:44:04				10s
	Th-Ar			20:45					10

Spectr. Temp. Dome Temp./Hum. ... 23° / 67°

Transparency Conditions .. Light cloud / haze

Focus

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

[illegible]

337

Date .. Sept. 16. 1917..... Observers ... Fels. (Sussobay on phone)

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.
	Prompted fli								90s
	Flect								90s
	Th-Ar								20s
	^{Arcinus} MD 124597	14 11 06	19 42	19 04 09	19 06 42				
	Th-Ar								20
	Th-Ar								
	^{Ugei} MD 172167	18 33 33	+38 41	19 12 53	19 15 09				
	Th-Ar								10s
	Th-Ar								10
	^{GLAC} MD 213420	22 26 10	42 36 39	19 27 36	20 17 58				
	Th-Ar								20
	Th-Ar								20
	^{Ugei} MD 172167	18 33 33	38 41	20 28 28	20 30 46				
	Th-Ar								20
	Th-Ar								20
	^{GLAC} MD 213420	22 26 10	42 36 39	20 44 07	21 34 03				

Spectr. Temp. Dome Temp./Hum. 12.5/59.6

Transparency Conditions ... Clear

Focus

338

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion Substrate	P.H. λ	Program X.S.	Remarks	Quality
					17.94	105μ -255	100μ -225	456.5 (62)	-4939		3732
											3748
											7894
10000		0.00	K2 III								793
											7205
											7161
		0.00	AC IV								1497
											3828
											4121
4000		4.51	B2 IV							Fluor 4pt Substrate function heater	772
											6535
											6332
10100		0.00	AC IV								1623
											7660
											607
3170		4.51	B2 IV							Fluor 4pt. ↓ ↓	

339

Emulsion Batches:

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

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
	Th Ar								20
	Th Ar								20
	MD172167 ^{vega}	18 33 33	38 41	21:51:42	21:56:09				20
	Th-Ar.								20
	4 flats @ 20s	715, 702, 669, 700							
	4 flats @ 45s	1552, 1538, 1547, 1542.							
	Th-Ar								20
	MD22928 ^{5 Per}	03 35 48	47 28 04	22:53:24	23:03:19 23:01:19				20
	Th-Ar.								20
	MD22928 ^{5 Per}	03 35 48	47 28 04	23:07:45	23:37:44				20
	Th-Ar								20
	MD22928 ^{5 Per}	03 35 48	47 28 04	23:40:44	00:10:45				20
	Th-Ar								20
	MD22928 ^{5 Per}	03 35 48	47 28 04	00:13:23	00:53:40				20
	Th-Ar								20
	MD22928 ^{5 Per}	03 35 48	47 28 04	00:56:24	01:36:27				20

Spectr. Temp. Dome Temp./Hum. ... 6.5 / .64.6.

Transparency Conditions .. Clear ... / ... 360

Focus

Spectr. Temp.

Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											5655
											5483
10000		00	A2V								1757
											6962
										Top up @ 22:19	
				new gear Tilt 0	18.68	1524 -241	400 -225	4481	X8 -5016	4PT on comp!	3877
? 10min	3.00		BSIII						exposure under back	Huge 4pt.	428
											2908
? 30min	3.00		BSIII								1299
											2950
? 30min	3.00		BSIII							PT - clowd. (thin virus)	875
											1458
	3.00		BSIII							PT - clowd.	1396
											1532
	3.00		BSIII								1403

343

Date Sept. 17/18...1950. Observers ... Fels... (M.K.I. backup)

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
	Prompted Field								60
	Th-Ar								20
	veg								
HD 172167		18 33 33	38 41	22 16 40	22 20 11				
	Th-Ar								20
	veg.								
HD 172167		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 30				

Spectr. Temp.

Dome Temp./Hum. 60.9°/66%

Transparency Conditions ... Clear

Focus

Spectr. Temp.

Dome Temp./Hum.

200

344

Exp. Mtr.	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion Slit Number	P.M. λ	Program	Remarks	Quality
				Echelle - 12th	1868	1500 -241	400 -225	4481	X Static -5016		1952
											3363
10000		004	AOI								1838
											3923
10000		004	AOI								1771
											3394
											4513
6000		300	BSIII							4pt	1227
											2797
6000		300	BSIII								1218
											2726
6000		300	BSIII								1170
											3145
8000		300	BSIII								1548
											3460
400		300	BSIII								1564

250

346

346

[illegible]

347

Thurs - Fri

Emulsion Batches:

Date 1.9.90. Sep 20/21. Observers F.d.S. - T.g.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
	Prompted flat								30s
	Th-Ar								20s
	^{Vega}								
	MD 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}								
	MD 213420	22 26 10	42 36 37	20 12 41	20 33 36	02 16E			
	Th-Ar			20 34 32				Th AR	20s
	4 flats @ 10s	325, 322, 321,	318						
	4 flats @	1688, 1644, 1644,	1637						
	Th AR			20 58					20s
	^{6 LAC}								
	MD 213420	22 26 10	42 36 39	21 00 13	21 24 50	01 25E			
	Th-Ar			21 26 23					20

02 00E $\approx 0^\circ$ Same RA as 6 LAC DRIVE ON

Spectr. Ter

Focus....

Spectr. Ter

Exp. Mr.

10 000

2027

2134

25

Transparency Conditions... Clearing... by 19.40 EST

348

Dome Temp./Hum. +12°C 78%

[illegible]

349

mon - TUES

~~Photon II Sheet tonight instead of Echelle Reticon~~

Emulsion Batches:

Date 1990 Sep 24/25 Observers ... Tn ... (mki 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	Exp.
478	Comp			19 52 46			F18 stop no ND	FeAR H=1/2	200s
479	HD 182917 ^{CHCy9}	19 21.9	+50 02	19 58 06	20 43 00	01 15 W			
480	Comp			20 44			F18 stop no ND	FeAR A=1/2	200s
481	HD 182917 ^{CHCy9}	19 21.9	+50 02	20 50 31	21 31	02 03 W			
482	Comp						F18 stop no ND	FeAR H=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				23 07	01 35 E	F18 stop no ND	FeAR H=1/2	200s
284 Tn	HD 3765	00 35.3	+39 40		23 06	01 35 E			Int x4
Tag 487	HD 14386	02 14.3	-3 26	23 21	23 39	02 41 E			
488	Comp				23 45			FeAR H=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	TUNG A=1/4	

Spectr. Temp. Dome Temp./Hum. $+13^{\circ}$... 68%

Transparency Conditions ... *SI Hazy - cloudy* ...

Focus

Focus
Spectr. Temp. Dome Temp./Hum. *111°C 73%*

good SW wind
(increasing strength)

350

Exp. Mtr.	Seeing	Pgr. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
A/B				FiberFed PTS	1800/508	BS	4820A	CHB			
10 130	5"	2nd	Mb							Cuts to 600/sec by end	
10 350	poor	8								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"	Vur 8.9- 9.3								Cloud by 22:15	
8 140											
20 600		v 7.36	d/KS						std vel	mostly cloudy cuts to 1300/sec	
10 180										Renamed to 486 Tn	
(39x39) 150				Fiber Had view	(mod South Wind)				seeing test.	cloudy, Dome ESE	
/ 300-3000	v MAX		M		(guided off to avoid plate saturation) Occasional bright cuts of 7000/sec				MIRH pgn	Cnts 300 - 3000/sec In & out of Cloud	
6 / 60										Time Tag to E	
40 / 3600										most in uniform cloud till exp ends (thick cloud)	
8 / 60										1.5 mag to "E"	
50 / 2300										Complete cloud at End	

#1351

Wed-Thurs

Emulsion Batches:

Date ..1990. Sep 26/27. Observers ..Tn...Fds.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison		Exp. Mtr.
								Type/Filter	Exp.	
	Flat Prompted (on Vega)			1922				Tung	10s	7496
	Comp			1923				Th AR	20s	1742
	HD 172167	18 33.6	+38 41	1925	19 31	00 59 W				23500
	Comp			1932				Th AR		
	Flat							Tung	20s	
	comp							Th AR	20	
	HD 23420	22 26 10	42 36 39	19 51 45	20:48:49	01 38 E				3045
	comp			20:49:38				Th AR	20	
	HD 213420	22 26 10	42 36 39	20:50:38	21:42:01	00 45 E				3002
	comp			21:42:44				Th AR	20	
	4 flats @ 18s	713, 688, 698, 699						TUNGSEN		
	comp			22 02 08				Th A	20s	
	HD 14386 ^{mic}	02 14.3	-3 26	22 05 53	23 23 38	02 48 E				6000
	Comp			23 25 38				Th A	20s	
	4 flats @ 10s	717, 698, 727, 696								
	comp							Th AR	20s	

750

Spectr. Temp. Dome Temp./Hum. $+14^{\circ}$ 80% Transparency Conditions *sl. hazy*
 Focus 352
 Spectr. Temp. Dome Temp./Hum. *Best Cuss Focus at start = 2191 T = +13^{\circ}*

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
7496				Echelle Asticon	17.70	150 μ	-4706	48428			842
1762											3586
225000	OK	V 40.04	AOV								4669
											3537
											1668
					17.91	105 -259	-4949	4567		Topup @ 19:40 during λ change T = +10.36	9343
3005	3"	4.51	B2 II								021
											7856
3002		4.51	B2 IV								674
											8386
											3099
					17.70	1850 -241	-4711	48428	MIRA pgm		
60000	5"	VAR 4.3	M						MIRA pgm	neuR mix?	764
											2776
					18.68	150 μ	15019	4481		Topup 23 30 during λ change	3228

#2353

Wed-Thurs

Date 1990 Sep 26/27. Observers F. d. s. - J. n.

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
	<i>span.</i>								
	HD 22928	03 35 48	47 28 04	23 44 16	00 09 47	3 27 E			1000
	<i>Comp</i>				00 11 28			Th AR	20s
	<i>span</i>								
	HD 22928	03 35 48	47 28 04	00 12 42	00 33 27	3 04 E			10600
	<i>comp</i>				00 34 24				20s
	<i>span</i>								
	HD 22928	03 35 48	47 28 04	00 38 01	01 03 35	2 33 E			12000
	<i>comp</i>			01 04 30					20s
	<i>comp</i>			01 07 27					20s
	HD 29139	04 30 11	+16 18	01 10 22	01 16 17	3 13 E			10000
	<i>comp</i>			01 17 38				Th AR	20s
	<i>comp</i>			01 21				Th AR	20s
	<i>span</i>								1097
	HD 22928	03 35 48	47 28 04	01 22 59	01 51 46	7 44 E			1200
	<i>comp</i>							Th A	20s
	<i>span</i>								
	HD 22928	03 35 48	47 28 04	01 54 38	02 22 46	1 13 E			12000
	<i>comp</i>			02 23 37				Th A	20s
	<i>span</i>								
	HD 22928	03 35 48	47 28 04	02 24 32	02 52 26	0 43 E			12000
	<i>comp</i>				02 53 12			Th A	20s

Spectr. Temp. Dome Temp./Hum... 41.2°C ... 90% Transparency Conditions ... 51.4% ... 750

Focus

Spectr. Temp. Dome Temp./Hum. 71.1°F ... 93% 354

Some Fog

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10000	2"	3.00	BS III	Echelle Reflex	Echelle 18-68	150 μ .241	X-5019	461A		Devon T = +0.057	2207
											3500
10600		3.00	BS III								2151
											3842
12000		3.00	BS III								2528
											5682
											3709
10000		0.85	KS III								1069
											3066
1097											3023
1200		3.00	BS III								2382
											3028
12000		3.00	BS III								2597
12000		3.00	BS III							T = +0.063	2465
4 Flats @ 65s 2484, 2466, 2455, 2448.										Top up @ 03	3490

355

Emulsion Batches:

Date Observers

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[illegible]

252

356



