

TO CAM 7/2/88

Intensified Reticon
Spectrograph ECHELLE
Log Sheet
Grating 3002
Observer JRC
Telescope 61" Wray Date July 2-3 1988 Disk 020 2190

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
					↓	60s	Sally H ₂ λ 6563 Å
	V Ch	13 17 17	45 47 22			13 ^M	Sally H ₂ Prof. Loc 6.5/1000
	TAR				↑	60s	
	TAR				↓	60s	λ 5187 Å
	13A507	14 12 14	33 46 50			6 ^M	ANGP 43 10.5
	TAR				↑	60s	
	TAR				↓	60s	
	132448	14 13 10	31 40 04			8 ^M	ANGP 43 11.2
	TAR				↑	60s	
	TAR				↓	60s	
	121629	14 11 57	20 51 25			8 ^M	ANGP 43 10.7
	TAR				↑	60s	
	TAR				↓	60s	
	11-1223	18 48 19	-06 18 30			10 ^M	M11 11.4
	TAR				↓	60s	
	11-926	18 49 02	-05 55 41			13 ^M	M11 11.1
	TAR				↑	60s	
	11-TAR	18 48 17	-06 16 27		↓	60s	M11
	W Ser	18 06 50	-15 33 36			16 ^M	40 FSTARS 9.0
	TAR				↑	60s	
	TAR				↓	60s	
	G24-25	20 37 42	00 22 42			13 ^M	15 HALOS 10.56/50
	TAR				↑	60s	
	TAR				↓	60s	
	Z Lac	22 38 53	56 34 05			4 ^M	36 Cepheids 8.9
	TAR				↑	60s	
	TAR				↓	60s	
	G18-28	22 03 14	12 08 18			5 ^M	15 HALOS 9.54/30
	TAR				↑	60s	clipped out 207
	TAR				↓	60s	
	G18-55	22:3520	10:09:00			2 ^M	K HALOS 9.35/15
	TAR				↑	60s	

7/3/88

Spectrograph ECHELLE Intensified Reticon TO CAMI
 Grating 3002 Log Sheet RAW RET
 Telescope 61" Wyeth Date 3-4 July 1988 Observer RPS
 Disk ORO 2193

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments
		1			↓	60s	
		2	GL5572	14:59:10	45:37:21		4m a.1/w Mstars
		3			↑	60s	
		4			↓	60s	
		5	GL699	17:55:23	04:33:18		10m 9.5 Nowby's Space Motion (Barnard's Star)
		6			↑	60s	
		7			↓	60s	
		8	V433Her	18:20:03	23:25:47		20m 10.5 Kenyon/Symbiotics
		9			↑	60s	
		10			↓	60s	
		11	GL5623	16:22:39	48:28:24		10m 10.3/20 Mstars
		12			↑	60s	
		13			↓	60s	
		14	1351φφ	15:09:49	48:52:44		14.5m 8.2/300 Fstars
		15			↑	60s	
		16			↓	60s	
		17	133φ7φ	14:59:01	51:00:07		20m 8.1/400 "
		18			↑↓	60s	
		19	133φ7φ	"	"		11m "
		20			↑	60s	
		21			↓	60s	
		22	H144284	16:00:57	58:41:59		2m 4.1/20 Mstars 1.0 ND
		23			↑	60s	
		24			↓	60s	
		25	GL5616.2	16:15:59	55:23:48		7m 10/20 "
		26			↑	60s	
		27			↓	60s	
		28	1E1848	18:48:10	33:05:30		11m 10.3/20 30 Marschall
		29			↑	60s	
		30	1E1848+	18:48:30	33:25:43		18m 10.3/35 "
		31			↑	60s	
		32	/				

7/4/88

Intensified Reticon TO CAM

Spectrograph ECHELLE Log Sheet RAW RET

Grating 3002 Observer RPS

Telescope 61" Wyeth Date 4-5 July 1988 Disk OR02195

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Th-Ar		↓	60s	S187A - a few thin clds-
		2	SKY-EVE	φ hrs. +30°		2m	
		3	Th-Ar		↑	60s	
		4	Th-Ar		↓	60s	
		5	SKY-EVE	4.5 hrs. W +30°		2m	
		6	Th-Ar		↑	60s	
		7	Th-Ar		↓	60s	
		8	H136202	15:16:45 01:57:12		2m	S.1 IAU standard
		9	Th-Ar		↑	60s	
		10	Th-Ar		↓	60s	
		11	H114762	13:09:55 17:46:55		3m	7.3 IAU standard
		12	Th-Ar		↑↓	60s	
		13	H114762	" "		3m	"
		14	Th-Ar		↑	60s	
		15	Th-Ar		↓	60s	
		16	GDS412A	11:02:43 43:47:39		4.5m	8.8/20 M stars
		17	Th-Ar		↑	60s	
		18	Th-Ar		↓	60s	
		19	Sφ43627	11:06:51 43:28:44		2m	6.0/20 "
		20	Th-Ar		↑	60s	
		21	Th-Ar		↓	60s	
		22	H100018	11:28:07 41:33:51		4m	7.0/20 "
		23	Th-Ar		↑	60s	
		24	Th-Ar		↓	60s	
		25	Sφ15472	11:16:06 62:27:22		2m	7.4/20 "
		26	Th-Ar		↑	60s	
		27	Th-Ar		↓	60s	
		28	Sφ83312	14:20:02 29:35:50		2.5m	8.7/20 "
		29	Th-Ar		↑	60s	
		30	Th-Ar		↓	60s	
		31	Srs 546	14:19:45 29:51:28		5m	8.5/20 " (M star catalog has wrong Dec OR0 cat. fixed.
		32	Th-Ar		↑	60s	

7/4/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 3002 Log Sheet RAW/RET
 Telescope 61" Wyeth Date 4-5 July 1988 Observer RPS
 Disk OR02196

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments	
		1	Th-Ar			↓	60s	
		2	GRS 562	14:44:03	16:42:30		8m	9.3/20 M stars
		3	Th-Ar			↑	60s	
		4	Th-Ar			↓	60s	
		5	S101299	14:54:51	16:35:19		2.5m	5.8/20 "
		6	Th-Ar			↑	60s	
		7	Th-Ar			↓	60s	
		8	S101750	15:47:12	12:42:35		3m	6.7/20 "
		9	Th-Ar			↑	60s	
		10	Th-Ar			↓	60s	
		11	W Ser	18:06:50	-15:33:36		20m	9.0/100's F stars/Eclipsing Binary
		12	Th-Ar			↑↓	60s	[can't get 100's cts @ 9.0 @ OR02196 -15!]
		13	W Ser	"	"		10m	"
		14	Th-Ar			↑	60s	
		15	Th-Ar			↓	60s	
		16	CI-Cyg	19:48:21	35:33:24		20m	11.0 Kanyon/Symbiotics
		17	Th-Ar			↑	60s	
		18	Th-Ar			↓	60s	
		19	GRS 763	19:32:10	04:28:16		7m	9.4/20 M stars
		20	Th-Ar			↑	60s	
		21	Th-Ar			↓	60s	
		22	S124835	19:33:44	05:53:45		2m	6.7/20 " (close companion)
		23	Th-Ar			↑	60s	
		24	Th-Ar			↓	60s	
		25	G217-8	23:24:15	60:21:06		20m	10.5/60 Halos
		26	Th-Ar			↑	60s	
		27	G217-8	"	"		10m	"
		28	Th-Ar			↑	60s	
		29	Th-Ar			↓	60s	
		30	200373	21:00:23	11:04:52		12m	7.9/300 F stars
		31	Th-Ar			↑	60s	
		32	/					

Spectrograph ECHELLE

Intensified Reticon

TO CAM 7/5/88

Grating 3002

Log Sheet

RAW/RETTelescope 61" WyethDate 4-5 July 1988Observer RPS & JRCDisk ORO 2198

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		Th-Ar			↓	60s	
	G18-30	22:03:59	01:36:30			2m	7.2/20 HALO (watch for sky)
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	SKY-DWN	4hrs. E	+10°			2m	16 SKY
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	SKY-DWN	φhrs.	+10°			2m	16 SKY
	Th-Ar				↑	60s	
	INCANS					120m	
	INCANS					120m	
	INCANS					120m	
	Th-Ar				↓	60s	
	SKYVIEW	0hrs	+20°			2m	16 SKY
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	SKYVIEW	4hrs West	+20°			2m	6 SKY
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	H115521	13 15 04	05 43 58			2m	17 JAN STD 4.8
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	GLS 380	10 08 13	19 42 10			3m	34 MSTARs 6.6
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	S043285	0 16 21	15 36 52			2m	34 MSTARs 6.1
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	S100592	13 26 44	11 04 36			2m	34 MSTARs 5.8
	Th-Ar				↑	60s	

5-6 July
1988

TO CAM 7/5/88

Spectrograph ECHELLE Intensified Reticon
 Grating 3000 Log Sheet
 Telescope 61" Wynth Date July 5/6 1988 Observer JRC
 Disk 020 2201

Change.... File ID 1950.0 RA Dec L/R Exposure Comments
 ↑/↓

Change....	File	ID	1950.0 RA	Dec	L/R	Exposure	Comments
					↑/↓		
		TMR			↓	60s	
	G23-15	19 51 43	01 48 54			3 ^M	15 HALOS 8.75/15
		TMR			↑	60s	
		TMR			↓	60s	
	G92-39	19 53 40	04 10 18			5 ^M	15 HALOS 9.43/15
		TMR			↑	60s	
		TMR			↓	60s	
	S105417	19 52 47	10 36 15			5 ^M	15 HALOS 9.52/30
		TMR			↑	60s	
		TMR			↓	60s	
	GLS 4B	00 03 05	45 32 00			6 ^M	34 MSTARs [S] 9.0/20
		TMR			↓	60s	
	GLS 4A	00 03 05	45 32 06			6 ^M	34 MSTARs [P] 8.9/20
		TMR			↑	60s	
		TMR			↓	60s	
	GLS 14	00 14 28	40 40 18			5 ^M	34 MSTARs 9.0/20
		TMR			↑	60s	
		TMR			↓	60s	
	G217-29	00 00 28	56 27 18			5 ^M	15 HALOS 9.74/15
		TMR			↑	60s	
		TMR			↓	60s	
	DL Class	00 27 11	59 56 12			3 ^M	38 Cepheids 10.61
		TMR			↑	60s	
		TMR			↓	60s	
	(2)					6 ^M	17 Asteroid 10.7
		TMR			↑	60s	
		TMR			↓	60s	
	2795	00 28 48	-11 24 58			14 ^M	40 FSTARS 8.19/100?
		TMR			↑	60s	
		TMR			↓	60s	
	H213014	22 25 45	17 00 28			3 ^M	17 IAN STPS 7.7
		TMR			↑	60s	

7/7/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 3002 Log Sheet RAW/RET
 Telescope 61" Wyeth Date July 5/6 1988 Observer JRC
 Disk ORD 2202

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	2.5187 Å
	G128-83	23 32 57	30 53 18			2m	15 HALOS 7.91/10
		3			↑	60s	
		4			↓	60s	
	SKYDWN	4hrs East	+20°			3m	16 SKY
		6			↑	60s	
		7			↓	60s	
	SKYDWN	0hrs	+20°			2m	16 SKY
		9			↑	60s	
	INCANDS					120m	
	INCANDS					120m	
	INCANDS					75m	
	DARK349					—	
July 6-7 1988 JMZ		14			↓	60s	2 = 5187 Å OVERCAST
	SKYEVEN	∅ hrs.	-15°			2m	16 SKY (RAINING)
		16			↑↓	60s	
	SKYEVEN	∅ hrs.	-15°			2m	16 SKY
		18			↑	60s	
		19			↓	60s	
	SKYDWN	4h East	+30°			3m	16 SKY (OVERCAST)
		21			↑	60s	
		22			↓	60s	
	SKYDWN	∅ hrs	+30°			2m	16 SKY
	24			↑	60s	1	
	INCANDS				120m		
	INCANDS				120m		
	INCANDS				75m		
July 7-8 1988 JMZ		28			↓	60s	2 = 5187 Å cloudy
	SKYEVEN	∅ hrs.	+30°			2m	16 SKY
		30			↑	60s	
	/	31			/	/	SKYEVEN ON 0202203
	/	32			/	/	

7/7/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Log Sheet RAW/RET
 Grating 300 Observer JMZ
 Telescope 61" WYETH Date July 7-8 1988 Disk ORO 2203

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments
		ThAr			↓	60s	2 = 5187 Å cloudy
	SKY/COFE	4h West	+30°			2M	16 sky
		ThAr			↑	60s	
		ThAr			↓	60s	
	H146051	16:11:43	-03:34:01			2M	2.7 IAU Standard
		ThAr			↑	60s	
		ThAr			↓	60s	
	S101758	15:47:12	12:42:35			2m	67/20 M stars
		ThAr			↑	60s	
		ThAr			↓	60s	
	G23600	15:49:45	11:01:26			7M	9.4/20 "
		ThAr			↑	60s	
		ThAr			↓	60s	
	H093723	16:31:13	9:12:42			10m	9.27/30 HALOS (1097)
		ThAr			↑	60s	
		ThAr			↓	60s	
	G17-22	16:30:22	3:21:12			8m	8.84/15 HALOS (1096)
		ThAr			↑	60s	↳ Through clouds
		ThAr			↓	60s	
	W5E12	18:06:50	15:33:36			20m	9.0/100's 1-5 STARS (1099)
		ThAr			↑↓	60s	↳ clouds
	W5E12	"	"			15m	" "
		ThAr			↑	60s	↳ cut short by clouds
		ThAr				60s	* PAUSE FOR clouds
	IE1848	18:48:10	33:05:30			20m	10.3/30 LARRY #4
		ThAr				60s	↳ marginal - too cloudy
		ThAr				60s	↓
	IE1037	19:37:05	30:22:52			12m	9.5/20 LARRY #7
		ThAr				60s	* PAUSE FOR clouds
		/					SKY TOO POOR TO CONT
		/					

7/9/88

TO CAM

Spectrograph ECHELLE

Intensified Reticon

Grating 300f

Log Sheet

RAW/RET

Telescope 61" WYETH

Observer JMZ

Date JULY 7-8 1988 Disk 0120 2204

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
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1		ThA			↓	60s	λ = 5187A overcast
2	SKYDANCE		4h East	+30°		2M	16 sky
3		ThA			↑	60s	
4		ThA			↓	60s	
5	SKYDANCE		0 hrs	+30°		2M	16 sky
6		ThA			↑	60s	
7		INCAUDS				120m	
8		INCAUDS				120m	
9		INCAUDS				75m	
10							END JUNE-JULY ECHELLE RUN
11							
12							
13							
14							
15							
16							
17							
18							
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29							
30							
31							
32							

7/18/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 3002 Log Sheet RAW/RET
 Telescope 61" Wyeth Date 18-19 July 1988 Observer RPS
 Disk ORO 2205

Change.... File ID 1950.0 RA Dec L/R Exposure Comments Start July-August
Echelle Run

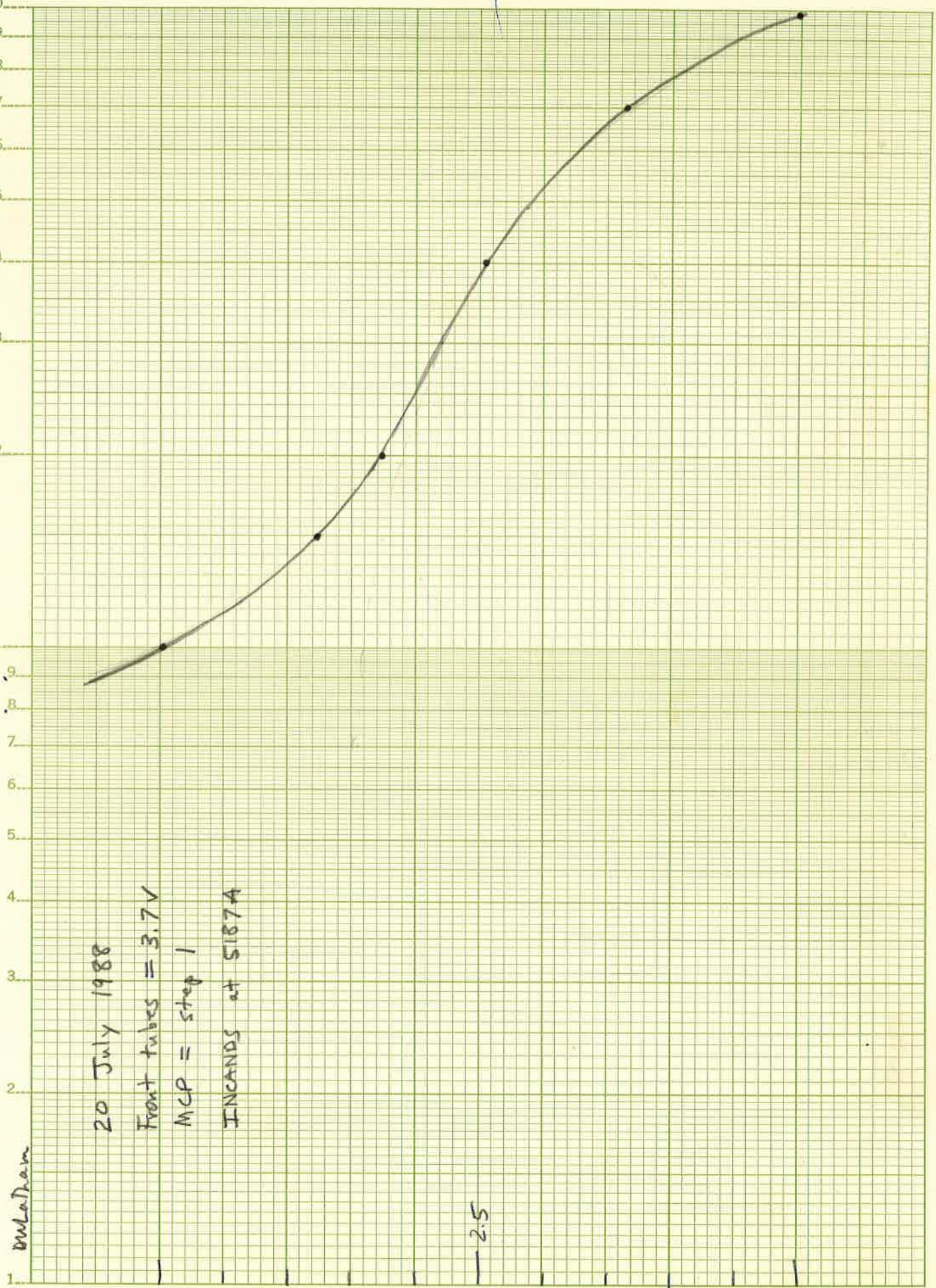
Change....	File	ID	1950.0	RA	Dec	L/R	Exposure	Comments
		LH0.978						-5187Å - - scat. clds -
		RH0.978						L-R = +0.20 σ = 10
		LH0.978						
		RH0.978						L-R = φ. φ σ = 2
		Th-Ar				↓	60s	
		SKY-EVE	φ hrs.	+30°			2m	
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		SKY-EVE	4½ hrs.W	+30°			2m	
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		H115521	13:15:04	05:43:58			2m	4.8 IAU standard
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		H114762	13:09:55	17:46:55			4m	7.3 IAU standard
		Th-Ar				↑	60s	
		H114762	"	"			4m	
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	-clouds-
		140612	15:41:01	45:35:03			14.5m	SW Dome Gear Drive Coupling Separated.
		Th-Ar				↑	60s	F stars
		Th-Ar				↓	60s	
		169245	18:20:41	26:11:55			3¼m	8.7 Moving Group/Mathieu
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		1E1037	19:37:05	30:27:58			9m	9.5/30 X-ray/Marschall
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		(2)	20:24:24	17:33:33			12m	10.0 ASTEROIDS
		Th-Ar				↑	60s	
		/					/	
		/					/	

7/20/98

Spectrograph ECHELLE Intensified Reticon TO CAM1
 Log Sheet RAW RET
 Grating 300l Observer JMZ
 Telescope 61" WYETH Date 7/18-19/88 Disk ORO 2206

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments
		TLA			↓	60s	2 = 5187A SCAT. clouds
	H182572	19:22:35	11:50:10			2M	5.2 IAU STANDARDS
	TLA				↑	60s	clouding up
	TLA				↓	60s	
	G1.735	18:53:03	8:20:19			18M	10.1 M STARS (70)
	TLA				↑	60s	through clouds low cnts
	TLA				↓	60s	poor spectra
	184768	19:33:27	00:00:55			5M	7.6 MOV-GRP (28)
	TLA				↑	60s	
	TLA				↓	60s	
	184700	19:33:11	00:20:51			10M	8.8 MOV-GRP (27)
	TLA				↑	60s	
	TLA				↓	60s	
	G1.763	19:32:10	4:28:16			7M	9.4/20 M STARS (71)
	TLA				↑	60s	
	TLA				↓	60s	
	5124835	19:33:44	5:53:45			2.5M	6.7/20 M STARS (??)
	TLA				↑	60s	- overcast -
	TLA				↓	60s	
	H44128	00:41:05	18:15:39			2M	2.0/7 IAU STANDARD
	TLA				↑	60s	
	TLA				↓	60s	
	SKYDWN	4 hrs East	+30°			2M	16 sky
	TLA				↑	60s	
	TLA				↓	60s	
	SKYDWN	0 hrs	+30°			2M	16 sky
	TLA				↑	60s	
	INCANDS					120m	
	INCANDS					120m	
	INCANDS					120m	
	/					/	
	/					/	

Discriminator Voltage



20 July 1988

Front tubes = 3.7V

MCP = step 1

INCANDS at 5187A

Wulfram

2.5

log cts/px/100 sec

3.0

2.0

TO CAM 1/25/88

Intensified Reticon

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 3002

Observer RPS



Telescope 61" Lyoth

Date 23-24 July 1988

Disk ORO 2208

Change.... File ID 1950.0 RA Dec L/R Exposure Comments

July 24/25
1988

Change....	File	ID	1950.0	RA	Dec	L/R	Exposure	Comments
		Th-Ar				↓	60s	
		SKY-EVE	4.5hrs W		+30°		2m	
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	Clearing 2.5187A
		SKYEVE M	0hrs		+20°		2 ^M	16 SKY
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		SKYEVE W	4hrs West		+20°		2 ^M	16 SKY
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		H146051	16 11 43	03 34 01			2 ^M	17 IAN STARS (clded out) 2.7
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		S151758	15 47 12	12 42 35			2 ^M	34 M STARS 6.7/20
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		G17-22	16 30 22	03 21 12			2 ^M	15 HALOS 8.84/15
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		156-48V	22 45 14	-04 29 30			2 ^M	15 HALOS  6.66/15
		Th-Ar				↓	60s	
		156-48E	22 45 15	-04 29 30			2 ^M	15 HALOS  MATH DIMMER 6.66/15
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		H213014	22 25 45	17 00 28			2 ^M	17 IAN STD 7.7/
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		G18-55	22 30 20	10 09 00			3 ^M	15 HALOS 9.35/15
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
		G18-28	22 03 14	12 08 18			4.5 ^M	15 HALOS (clded out) 9.54/330
		Th-Ar				↑	60s	

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 3002 Log Sheet RAW/RET
 Telescope 61" Wyeth Date July 25/26 1988 Observer JRL
 Disk ORT 2209

Change....	File	ID	RA	1950.0 Dec	L/R ↑/↓	Exposure	Comments
							5-11
		1			↓	60s	(high dk. cts) 2.5/157R
		2		+20°		2M	16 SKY
		3			↑	60s	
		4			↓	60s	
		5		+20°		2M	16 SKY
		6			↑	60s	
		7			↓	60s	
		8	114762	13 09 54	174655	2M	17 IAM STDS 7.3
		9			↑	60s	
		10			↓	60s	
		11	6165-22	13 35 51	392600	2M	15 HALOS 7.78/15
		12			↑	60s	← Readjusted INCAUD/Th-Ar Lamp holder.
		13			↓	60s	
		14	6177-23	13 06 30	512006	6M	15 HALOS 10.23/30
		15			↑	60s	
		16			↓	60s	
		17	S101758	15 47 12	124235	2M	54 HSTARS 6.7/20
		18			↑	60s	
		19			↓	60s	
		20	681 Wser	18 06 50	-153336	18M	40 FSTARS 10%sky 9.0/100
		21			↑	60s	
		22			↓	60s	
		23	4JE1848	18 48 10	330530	10M	42 W UMA 10.3/30
		24			↑	60s	
		25			↓	60s	
		26	G21-20	18 35 15	-065030	2M	15 HALOS 8.34/15
		27			↑	60s	
		28			↓	60s	
		29	G22-7	18 53 13	-054824	2M	15 HALOS 7.46/15
		30			↑	60s	
		31					
		32					

TO CAM 7/25/88

Spectrograph ECHELLE Intensified Reticon
 Grating 700L Log Sheet
 Telescope 61" Wynth Date July 25/26 1988 Observer JRC
 Disk 020 2211

Change....	File	ID	RA	Dec	1950.0 L/R +/+	Exposure	Comments
		1			↓	60s	2.51878
	GLS 830	21 27 19	-12 43 46			7 ^M	34 MSTAR2 9.1
		3			↕	60s	
	S164461	21 29 39	-12 29 21			2 ^M	34 MSTAR2 6.9
		5			↑	60s	
		6			↓	60s	
	S127114	21 48 59	00 32 09			2 ^M	34 MSTAR2 6.9
		8			↕	60s	
	GLS 846	21 59 38	01 09 30			3 ^M	34 MSTAR2 9.2
		10			↑	60s	
		11			↓	60s	
	Z14-18B	22 13 09	39 31 36			2 ^M	15 HALOS 7.57/15
		13			↑	60s	
		14			↓	60s	
	G127-33	22 25 40	24 41 00			3 ^M	15 HALOS 9.99/15
		16			↑	60s	
		17			↓	60s	
	G156-75	22 59 16	-04 07 00			2 ^M	15 HALOS 7.43/15
		19			↑	60s	
		20			↓	60s	
	G157-21	23 06 29	-02 49 18			3 ^M	15 HALOS 9.27/20
		22			↑	60s	
		23			↓	60s	
	S165532	23 07 48	-13 34 54			7.5 ^M	15 HALOS 8.41/100
		25			↑	60s	
		26			↓	60s	
	157-41W	23 15 02	-01 47 36			2 ^M	15 HALOS (CONF W/157-41E) 9.0/15
		28			↑	60s	
		29			↓	60s	
	G157-47	23 17 18	-00 44 12			5 ^M	15 HALOS 10.3/15
		31			↑	60s	
		32					

7/26/88

TO CAM

Spectrograph ECHELLE Intensified Reticon
 Grating 300x Log Sheet
 Telescope 61" Wyeth Date July 25/26 1988 Observer JRC
 Disk 020 2212

Change....	File	ID	RA	Dec	1950.0	L/R	Exposure	Comments
						↑/↓		
		THR				↓	60s	λ5187 Å
	G29-26	23 19 49	00 41 12				2M	15 HALOS 8.58/15
	THR					↑	60s	
	THR					↓	60s	
	G69-1	00 29 55	27 55 18				5M	15 HALOS 8.72/100
	THR					↑	60s	
	THR					↓	60s	
	G133-57	01 54 31	41 50 06				2M	15 HALOS 9.01/15
	THR					↑	60s	
	THR					↓	60s	
	H213014	22 25 45	17 00 28				2M	17 FAN STDS 7.7
	THR					↑	60s	
	THR					↓	60s	
	222456	23 35 08	-00 39 26				5M	40 FSTARS 8.2/100
	THR					↑	60s	
	THR					↓	60s	
	224771	23 57 56	25 33 51				8.5M	40 FSTARS 8.1/300
	THR					↑	60s	
	THR					↓	60s	
	222995	23 43 04	11 52 28				8M	40 FSTARS 7.19/506
	THR					↑	60s	
	THR					↓	60s	
	SKYDWN E	4hrs East	+20°				3M	18 SKY
	THR					↑	60s	
	THR					↓	60s	
	SKYDWN M	0hrs	+20°				3M	16 SKY
	THR					↑	60s	
	INCANDS						120M	
	INCANDS						120M	
	INCANDS						120M	
	/							
	/							

7/27

Intensified Reticon TO CAMI
 Spectrograph ECHELLE Log Sheet RAW/RET
 Grating 3002 Observer RPS, JC, JME
 Telescope 61"wyeth Date 26-27 July 1988 Disk OR02213

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		Th-Ar			↓	60s	5187Å - cloudy -
	H156014		17:12:22	14:26:46		7m	3.1 IAU standard
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	λ6562Å
	H163770		17:54:32	37:15:22		20m	3.9/500 Dupree/Hx
		Th-Ar			↑	60s	while guiding on *; telescope
27-28 July JME λ=5187 HAZY		Th-Ar			↓	60s	started moving in S-set; could not stop! Clouded out before we could check things out.
	SKYEVIEW	φhrs.	+25°			2m	
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	SKYEVIEW	4h West	+25°			2m	(MCP on separate UPS)
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	H136202		15:16:45	1:57:12		2m	5.1 IAU STANDARDS
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	S101758		15:47:12	12:42:35		2m	6.7/20 M STARS (58)
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	G1s 600		15:49:45	11:01:26		6m	9.4/20 M STARS (59)
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	H114762		13:09:55	17:46:55		3.3m	7.3 IAU STANDARDS
		Th-Ar			↑↓	60s	
	H114762	"	"	"		3m	7.3 IAU STANDARDS
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	H1144515		16:03:32	18:49:32		4m	8.5/20 M STARS (61)
		Th-Ar			↑	60s	
	/					/	
	/					/	
	/					/	

7/27/88

Spectrograph ECHELLE Intensified Reticon TO CAM1
 Log Sheet RAW/RET
 Grating 300f Observer JM2
 Telescope 61" WYETH Date 27-28 JULY 88 Disk ORO 2214

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		ThAr			↓	60s	λ = 5187 Å HAZY
	S101299		14:54:51	16:35:19		2M	5.8/20 M STARS (55)
		ThAr			↑	60s	
		ThAr			↓	60s	
	G15562		14:44:03	16:42:20		10M	9.3/20 M STARS (52)
		ThAr			↑	60s	watch for high sky
		ThAr			↓	60s	
	S083312		14:20:02	29:35:50		3.5m	6.5/20 M STARS (51)
		ThAr			↑	60s	
		ThAr			↓	60s	
	G15546		14:19:45	29:51:28		5m	8.5/20 M STARS (50)
		ThAr			↑	60s	
		ThAr			↓	60s	
	G66-65		15:05:22	9:04:18		5m	8.28/15 HALOS (1022)
		ThAr			↑	60s	
		ThAr			↓	60s	
	G154-38		17:50:16	7:54:24		2.5m	7.6/15 HALOS (1166)
		ThAr			↑	60s	
		ThAr			↓	60s	
	G141-9		10:23:59	8:35:24		2.5m	8.25/15 HALOS (1204)
		ThAr			↑	60s	very HAZY
		ThAr			↓	60s	
	169245		18:20:11	26:11:55		3m	8.7 MOV-GRP (24)
		ThAr			↑	60s	
		ThAr			↓	60s	
	155714		17:10:34	7:48:22		20m	6.82/150 F STARS (454)
		ThAr			↑	60s	
	155714		"	"		20m	" "
		ThAr			↑	60s	
		/					
		/					
		/					

TO CAM 7/29/88

Spectrograph ECHELLE Intensified Reticon
 Grating 300 Log Sheet
 Telescope 61" WYETH Date 27-28 July 88

Observer JM 2
 Disk 0120 2215

Change....	File	ID	RA	1950.0 Dec	L/R +/-	Exposure	Comments
		1	THA			60s	$\lambda = 5187\text{\AA}$ V. HAZY
		2	183752	19:27:42	36:10:56	10M	6.61/300 FSTARS (516)
		3	THA			60s	
		4	THA			60s	
		5	202880	21:15:38	38:59:59	20M	6.93/250 FSTARS (589)
		6	THA			60s	stopped due to
		7	THA			60s	heavy HAZE only 50 counts
		8	SKYDOME	4h East	+25°	2M	16 sky - clouded out -
		9	THA			60s	
		10	THA			60s	
		11	SKYDOME	0 hrs.	+25°	2M	16 sky
		12	THA			60s	
		13	INCANDS			120M	
		14	INCANDS			120M	
29/30 July 1988		15	THA			60s	clear 76°F λ 5187A
		16	SKYVIEW	0 hrs	+20°	2M	16 SKY
		17	THA			60s	
		18	THA			60s	
		19	SKYVIEW	4 hrs West	+20°	2M	16 SKY
		20	THA			60s	
		21	THA			60s	
		22	H136202	15 16 45	01 57 11	2M	17 IAN STD S.I
		23	THA			60s	
		24	THA			60s	
		25	S101758	15 47 12	12 42 35	2M	34 M STARS 6.7
		26	THA			60s	
		27	GLS 600	15 41 45	11 01 26	4M	34 M STARS 9.2
		28	THA			60s	
		29	THA			60s	
		30	GLS 644A	16 52 46	-08 15 17	6M	34 M STARS 9.1
		31	THA			60s	
		32					

7/30/88

TO CAM

Spectrograph ECHELLE Intensified Reticon
 Grating 300L Log Sheet
 Telescope 61" Wyeth Date July 29/30 1988 Observer JRC
 Disk ORO 2218

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments
		ThAr			↓	60s	2.5/67A
	G158-14	23 59 59	-09 55 30			2M	15 HALOS 7.83/15
		ThAr			↑	60s	
		ThAr			↓	60s	
	G7856	00475593	-05 35 03			10M	40 FSTARS 7.19/15 obs
		ThAr			↑	60s	
		ThAr			↓	60s	
	H8779	01 23 53	-00 39 29			2M	17 FAL STDS 6.4
		ThAr			↑	60s	
		ThAr			↓	60s	
	8302	01 19 47	04 59 21			5M	40 FSTARS 8.10/15 obs
		ThAr			↑	60s	
		ThAr			↓	60s	
	7660	01 14 01	02 28 17			5M	40 FSTARS STRONG LINES! 7.89/15 obs
		ThAr			↑	60s	
		ThAr			↓	60s	
	G73-57	02 23 23	05 33 12			2M	15 HALOS 10% sky 7.95/15
		ThAr			↑	60s	
		ThAr			↓	60s	
	SKYDNE	4 hrs East	+20°			3M	16 SKY
		ThAr			↑	60s	
		ThAr			↓	60s	
	SKYDWN	Meridian	+20°			2M	16 SKY
		ThAr			↑	60s	
	INCAUS					120m	
	INCAUS					120m	
	INCAUS					51m	
30-31 July 1988		Th-Ar			↓	60s	Very high dark ≈ 10; dark
	SKY-EVE	φ hrs	+20°			2m	variable with occasional
		Th-Ar			↑	60s	720-30 counts; L dark > R
		/					Persistence very strange.
		/					Disc. = 3, φ. Ld ≈ 4 Rd

Problem appears to be water and/or bad solder connection in MCP cable, D-connector at Reticon.

TO CAM 7/31/88

Intensified Reticon

Spectrograph ECHELLE Log Sheet

Grating 3002 Observer RPS

Telescope 61" Wyeth Date 30-31 July 1988 Disk ORO 2220

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Th-Ar		↓	60s	Disc. = 2.5 - clouds-
		2	H201891	21:09:40	17:32:04	3m	7.4/30 HALOS
		3	Th-Ar		↑	60s	
		4	Th-Ar		↓	60s	
		5	178615	19:05:46	43:14:07	4m	7.3/60 Fstars
		6	Th-Ar		↑	60s	
		7	Th-Ar		↓	60s	
		8	176409	18:58:00	56:40:46	20m	7.0/400 Fstars (Faint companion to the SE; 6")
		9	Th-Ar		↑↓	60s	
		10	176409	"	"	6m	"
		11	Th-Ar		↑	60s	
		12	Th-Ar		↓	60s	
		13	G 229-34	19:30:43	50:04:12	4.5m	8.1/15 HALOS
		14	Th-Ar		↑	60s	
		15	Th-Ar		↓	60s	λ 6563 Å
		16	H211388	22:13:47	37:29:58	3m	4.1/7500 Hα/DUPREE
		17	Th-Ar		↑	60s	
		18	Th-Ar		↓	60s	
		19	H213179	22:26:49	26:30:26	20m	5.8/7500 "
		20	Th-Ar		↑	60s	
		21	Th-Ar		↓	60s	Shut down for by
July 31-Aug 1 1988		22	H213179	22:44:08	23:18:07	60s	4.0/7500 " λ 5187 Å
		23	SKYEVEM	0hrs	+20°	2m	16 SKY Temp 75° HAZY
		24	Th-Ar		↑	60s	
		25	Th-Ar		↓	60s	
		26	SKYEVEM	4hrs West	+20°	2m	16 SKY
		27	Th-Ar		↑	60s	
		28	Th-Ar		↓	60s	
		29	HIS6014	17 12 22	14 26 46	2m	17 IAM STD 1.0 NO P. 2hr 3.1
		30	Th-Ar		↑	60s	
		31					
		32					

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 3002 Log Sheet RAW/RET
 Telescope 61" Wyeth Date 31 July - 1 Aug. 1988 Observer RDS
 Disk OR02222

Change....	File	ID	RA	1950.0 Dec	L/R +/-	Exposure	Comments
							5187A
		1	Th-Ar		↓	60s	
		2	SKY-DWN	4 1/2 hrs. E	+30°	2m	L.R.-sides very different; translation of Reticon Relative to Image Tubes?
		3	Th-Ar		↑	60s	Appears to have started 30-31 July
		4	Th-Ar		↓	60s	when we had the wet MCP connect.
		5	SKY-DWN	∅ hrs.	+30°	2m	
		6	Th-Ar		↑	60s	
		7	INCAUDS			120 min	
		8	INCAND			120 min	
		9	INCAND			60 min	↑ Use Incands for preceding observations.
8-1/2 1988		10	INCAND			60 min	↓ Use following Incands, Adjusted Reticon Positioning;
		11	Th-Ar		↓	60s	Incands better but not great!
		12	SKYEVEW	0 hrs	+20°	2m	16 SKY
		13	Th-Ar		↑	60s	Cross Disp = 1.494
		14	Th-Ar		↓	60s	
		15	SKYEVEW	4 hrs W. ST	+20°	2m	16 SKY
		16	Th-Ar		↑	60s	
		17	Th-Ar		↓	60s	
		18	H156214	17 12 22	15 26 46	2m	17 FAU STD 1.0 ND Filter 3.1
		19	Th-Ar		↑	60s	
		20	Th-Ar		↓	60s	
		21	S101758	15 47 12	12 42 35	2m	34 MSTARs 6.7/20
		22	Th-Ar		↑	60s	
		23	Th-Ar		↓	60s	
		24	W Ser	18 06 50	15 33 36	15m	40 FSTARs 9.0/100
		25	Th-Ar		↑	60s	
		26	Th-Ar		↓	60s	
		27	169245	18 20 41	26 11 55	3m	48 MOV-6-RP 8.7/
		28	Th-Ar		↑	60s	
		29	Th-Ar		↓	60s	
		30	174585C	18 47 54	32 45 14	14m	π LINDR005 10.5
		31	Th-Ar		↑	60s	
		32					