

2/4/88

Spectrograph ECHELLE Intensified Reticon TO CAM  
 Grating 300f Log Sheet RAWRET  
 Telescope 6" WYETH Date 1/21<sup>2/1</sup> / 88 Observer JAL  
 Disk 0120 1973

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

Change....	File	ID	RA	Dec	1950.0	L/R	Exposure	Comments
		1	Th-Ar			↓	60s	cloudy
		2	H87449	10:17:01	19:43:31		5m	4.8 IAU standard (stop 50)
		3	Th-Ar			↑	60s	
		4	th-Ar			↓	60s	2 S187A
		5	SKYEVEW	Meridian	+20°		2m	16 SKY Very cloudy
		6	thAr			↑	60s	
		7	thAr			↓	60s	
		8	SKYEVEW	4 hrs West	+20°		2m	16 SKY
		9	thAr			↑	60s	
		10	thAr			↓	60s	
		11	H26162	7:06:14	19:28:43		4m	IAU STD 17 (through clds) 5.5
		12	thAr			↑	60s	
		13	thAr			↓	60s	
		14	11886	1:54:42	31:31:36		7m	FSTARS 8.47/100
		15	thAr			↑	60s	
		16	thAr			↓	60s	
		17	19666	3:07:40	5:48:00		5m	FSTARS 7.9/100
		18	thAr			↑	60s	
		19	thAr			↓	60s	
		20	18508	2:56:19	4:47:25		10m	FSTARS 8.0/145
		21	thAr			↑	60s	
		22	thAr			↓	60s	clouded out seeing 7" with 25
		23	SKYEVEW	Meridian	+20°		2m	16 SKY Cloudy 2 S187A
		24	thAr			↑	60s	
		25	thAr			↓	60s	
		26	SKYEVEW	4 hrs West	+20°		4m	16 SKY
		27	thAr			↑	60s	
		28	thAr			↓	60s	PTLY cldy
		29	H66141	7:59:39	2:28:23		2m	17 IAU STD
		30	thAr			↑	60s	
		31	/				/	
		32	/				/	

Janst-Feb 1, 1985

Feb 1/2 - 1988

Feb 4/5 - 1988

3 Feb. 1988 Echelle off - Thomsen Bay Easting

















TO CAM 2-6-88

Spectrograph ECHELLE Intensified Reticon  
 Grating 300L Log Sheet  
 Telescope 61" Wyeth Date Feb 6-7 1988 Observer JRC  
 Disk ORO 1979

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	
		2	43705	6:15:21	9:20:24	15 <sup>m</sup>	FSTARS 8.1/500
		3			↕	60 <sup>s</sup>	
		4	43705	6:15:21	9:20:24	15 <sup>m</sup>	FSTARS 8.1/500
		5			↑	60 <sup>s</sup>	
		6			↓	60 <sup>s</sup>	
		7	6L273	7:24:43	5:22:42	10 <sup>m</sup>	MSTARS 9.821
		8			↑	60 <sup>s</sup>	
		9			↓	60 <sup>s</sup>	
		10	GLS 301	8:10:50	-13:45:48	13 <sup>m</sup>	MSTARS 9.41
		11			↑	60 <sup>s</sup>	
		12			↓	60 <sup>s</sup>	
		13	G103-48	6:36:55	30:04:54	16 <sup>m</sup>	HALOFIN 10.87/30
		14			↑	60 <sup>s</sup>	
		15			↓	60 <sup>s</sup>	
		16	G87-20	6:59:40	38:13:12	3 <sup>m</sup>	HALOFIN 9.45/15
		17			↑	60 <sup>s</sup>	
		18			↓	60 <sup>s</sup>	
		19	G46-5	8:47:46	7:49:00	15 <sup>m</sup>	HALOFIN 11.29/15
		20			↑	60 <sup>s</sup>	
		21			↓	60 <sup>s</sup>	
		22	G9-72	8:57:54	21:39:12	2 <sup>m</sup>	HALOFIN 9.8/15
		23			↑	60 <sup>s</sup>	
		24			↓	60 <sup>s</sup>	
		25	G46-31	9:14:28	3:14:12	10 <sup>m</sup>	HALOFIN 10.85/15
		26			↑	60 <sup>s</sup>	
		27			↓	60 <sup>s</sup>	
		28	G41-34	9:20:06	11:29:06	4 <sup>m</sup>	NALOS 9.65/15
		29			↑	60 <sup>s</sup>	
		30			↓	60 <sup>s</sup>	
		31	H085217	9:47:54	4:34:42	3 <sup>m</sup>	MSTARS 6.2/200
		32			↑	60 <sup>s</sup>	

Intensified Reticon

TO CAM 27-88

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300Q

Observer JRC

Telescope 61" Wyeath

Date Feb 6-7 1988

Disk ORO 1980

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	clean 2.5157A
		2	G58-23	10/47/12	20/44/30		5.5 <sup>m</sup> HALOFIN 9.96/15
		3			↑	60 <sup>s</sup>	
		4			↓	60 <sup>s</sup>	
		5	H100018	11/28/07	11/33/50		3.5 <sup>m</sup> MSTAR5 7.0/200
		6			↑	60 <sup>s</sup>	
		7			↓	60 <sup>s</sup>	
		8	G42-34	10/00/27	20/05/12		9 <sup>m</sup> HALOFIN 10.7/15
		9			↑	60 <sup>s</sup>	
		10			↓	60 <sup>s</sup>	
		11	H92588	10:38:51	-1/25/41		2 <sup>m</sup> IDU STD 6.3
		12			↑	60 <sup>s</sup>	
		13			↓	60 <sup>s</sup>	
		14	GLs 508	13/17/36	18/00/24		5 <sup>m</sup> MSTAR5 9.0/
		15			↑	60 <sup>s</sup>	
		16			↓	60 <sup>s</sup>	
		17	GLs 499	13/03/49	20/59/12		9 <sup>m</sup> MSTAR5 (No chart) 9.4/20
		18			↑	60 <sup>s</sup>	
		19			↓	60 <sup>s</sup>	
		20	5082651	13/03/56	22/53/00		2 <sup>m</sup> MSTAR5 5.9/100
		21			↑	60 <sup>s</sup>	
		22			↓	60 <sup>s</sup>	
		23	G62-30	12/17/25	7/7/18		6 <sup>m</sup> HALOFIN 9.78/15
		24	TA		↑	60 <sup>s</sup>	
		25	TA		↓	60 <sup>s</sup>	
		26	G165-22	13/35/51	39/26/00		2 <sup>m</sup> HALOFIN 8.9/15
		27	TA		↑	60 <sup>s</sup>	
		28	TA		↓	60 <sup>s</sup>	
		29	G12-11	11/54/17	13/37/36		6 <sup>m</sup> HALOFIN 9.95/15
		30	TA		↑	60 <sup>s</sup>	
		31					
		32					





2/7

Spectrograph ECHELLE Intensified Reticon TO CAM1  
 Grating 300L Log Sheet RAW/RET  
 Telescope 61" Wyeath Date Feb 07 1988 Observer JRC  
 Disk 020 1982

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	66-22	14 40 51	06 02 24	11 <sup>m</sup>	HALOSIN 10% sky 10.47/15
		3			↑	60s	
		4			↓	60s	
		5	121648	13 53 51	26 09 43	6 <sup>m</sup>	FSTARS 6.68/300
		6			↑	60s	
		7			↓	60s	
		8	124346	14 10 12	28 57 01	16 <sup>m</sup>	FSTARS 7.56/300
		9			↑	60s	
		10			↓	60s	
		11	SKYDWE	4 <sup>hrs</sup> East	+20°	2 <sup>m</sup>	16 SKY
		12			↑	60s	
		13			↓	60s	
		14	SKYDWNM	Meridian	+20°	3 <sup>m</sup>	16 SKY
		15			↑	60s	
		16	INCANS			120m	} unbalanced
		17	INCAND			120m	
		18	INCAND			1h 17m	
7-8 Feb. 1988		19	Th-Ar		↓	60s	SIF7A -clear-
		20	SKY-EVE	6hrs	+20°	2m	(checked refraction etc)
		21	Th-Ar		↑	60s	
		22	Th-Ar		↓	60s	
		23	SKY-EVE	4hrs W	+20°	2m	
		24	Th-Ar		↑	60s	
		25	Th-Ar		↓	60s	
		26	H8779	01:23:54	-00:39:29	2m	6.4 IAU standard
		27	Th-Ar		↑	60s	
		28	Th-Ar		↓	60s	
		29	G130-29	23:56:16	33:27:54	2.5m	7.8/15 HALOS
		30	Th-Ar		↑	60s	
		31					
		32					





218/88

Spectrograph ECHELLE Intensified Reticon TO CAM  
 Grating 300R Log Sheet RAW/RET  
 Telescope 61" Wyeth Date 7-8 Feb 1988 Observer RPS  
 Disk ORO 1984

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	HD 33148	05:34:01	09:51:21		10m 8.5/20 Mathew/Lam Ori
		3			↑	60s	
		4			↓	60s	
		5	G88-5	07:03:12	18:42:54		7.5m 10.2/20 HALOS
		6			↑	60s	
		7			↓	60s	
		8	GL 273	07:24:43	05:22:42		14.5m 9.8 Mstars, Newby's Spire
		9			↑	60s	
		10			↓	60s	-overcast-
		11	(4)	07:58:10	25:01:11		3m 7.4 Asteroid
		12			↑	60s	
		13			↓	60s	
		14	H 66141	07:59:40	02:28:24		2m 4.4 IAU Standard
		15			↑	60s	- stopped by clouds -
		16	INCANDS			2h	
		17	INCANDS			2h	
		18	INCANDS			2h	
		19	INCANDS			2h	
8-9 FEB 1988		20			↓	60s	
		21	SKYVIEW	0 <sup>h</sup> HA	+30°	2m	1.6 SKY DIRTY CLOUD
		22			↑	60s	
		23			↓	60s	
		24	SKYVIEW	4 <sup>h</sup> W	+30°	2m	1.6 SKY
		25			↑	60s	
		26			↓	60s	
		27	H 8779	1:23:54	-0:39:29	2m	6.4 IAU STANDARD
		28			↑	60s	
		29			↓	60s	
		30	GC-70	03:34:10	25:49:46	6m	9.1/100 HALOFIN
		31			↑	60s	
		32	/			/	



2/9/88

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET

Grating 300L

Observer JMZ

Telescope 61" WYETH

Date FEB/8-9/88

Disk ORO 1985

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	5187A PLY CLDY
		2	G6-26	03:36:43	18:18:36	8m	9.0/50 HALOFIN (78)
		3			↑	60s	stopped by clouds
FEB/9-10/88		4			↓	60s	5187A v. cloudy
		5	SKYVIEW	0 <sup>h</sup> N.A	+30°	2m	16 SKY
		6			↑	60s	
		7			↓	60s	
		8	SKYVIEW	4 <sup>h</sup> N.A	+30°	3.5m	16 sky
		9			↑	60s	
		10			↓	60s	
		11	H2616Z	4:06:15	19:28:07	2 <sup>m</sup>	17/5.5 TAU STD.
		12			↑	60s	
		13			↓	60s	
		14	G130-29	23:56:16	33:27:54	7 <sup>m</sup>	HALOFIN 7.82/15
		15			↑	60s	
		16			↓	60s	
		17	G6-26	3:36:43	18:13:36	10 <sup>m</sup>	HALOFIN 9.0/50
		18			↑	60s	
		19			↓	60s	
		20	G133-57	1:54:31	41:50:06	4 <sup>m</sup>	HALOFIN 9.01/15
		21			↑	60s	
		22			↓	60s	
		23	G72-58	2:05:31	28:04:36	5 <sup>m</sup>	HALOFIN 9.99/15 STOPPED EXP. CONTS too low
		24			↑	60s	
		25			↓	60s	
		26	G37-10	2:49:54	35:26:6	12 <sup>m</sup>	HALOFIN 8.36/50
		27			↑	60s	
		28			↓	60s	
		29	T-MON	6:22:31	7:6:53	6 <sup>m</sup>	G.6 CENTER
		30			↑	60s	
		31					
		32					

2/9/88

Spectrograph ECHELLE Intensified Reticon TO CAM  
 Grating 300L Log Sheet RAW/RET  
 Telescope 61" WYETH Date FEB/9-10/88 Observer JMZ  
 Disk 0170 1786

Change....	File	ID	RA	Dec	1950.0	L/R	Exposure	Comments
						+/+		
		1	ThAr			↓	60s	6562 Å
		2	Alph Ori	5:52:28	7:23:58		15m	0.8 H-ALPHA profiles
		3	ThAr			↑	60s	
		4	ThAr			↓	60s	5187 Å
		5	G103-48	6:36:55	30:04:54		15 m	10.87/39? HALOFIN (162)
		6	ThAr			↑	60s	
		7	G ThAr			↓	60s	
		8	G87-20	6:59:40	38:13:12		4 m	9.45/15 HALOFIN (177)
		9	ThAr			↑	60s	
		10	ThAr			↓	60s	{passing clouds}
		11	G84-39	5:10:06	4:15:48		13 m	10.58/15 HALOFIN (117)
		12	ThAr			↑	60s	
		13	ThAr			↓	60s	
		14	HD49015	6:43:57	8:25:00		2 m	7.04 F-STARS (179)
		15	ThAr				60s	- STOPPED BY clouds
		16	ThAr				60s	- RESTART 5:20 A.M
		17	G63-51	13:41:10	14:37:00		2 m	6.94/20 HALOS (598)
		18	ThAr				60s	
		19	ThAr				60s	
		20	G65-13	13:51:42	10:29:48		2.5 m	7.02/15 HALOS (601)
		21	ThAr				60s	
		22	ThAr				60s	
		23	SB120153	13:51:01	2:56:24		7 m	9.36/20 HALOS (600)
		24	ThAr				60s	
		25	ThAr				60s	
		26	H126053	14:20:42	01:28:24		2 m	6.27/15 HALOS (621)
		27	ThAr				60s	
		28	ThAr				60s	
		29	H136200	15:16:45	01:57:12		2 m	5.1 IAU STD
		30	ThAr				60s	
		31	/				/	
		32	/				/	



2/10/88

Spectrograph ECHELLE Intensified Reticon TO CAM  
 Grating 300P Log Sheet RAW/RET  
 Telescope 61" WYETH Date FEB/9-10/88 Observer JMZ  
 Disk ORO 1987

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		ThAr			↓	60s	5187Å PTLY CLDY
	SKYDVIEW	4h E	+30°		↓	2m	16 SKY
		ThAr			↑	60s	
		ThAr			↓	60s	
	SKYDVIEW					2m	16 SKY
		ThAr			↑	60s	
	JAKANDS					120m	
	NCAND					120m	
		ThAr			↓	60s	5187Å CLEAR
	SKYVIEW	0h H.A.	+30°			2m	16 SKY
		ThAr			↑	60s	
		ThAr			↓	60s	
	SKYVIEW	4h H.A.	+30°			2m	16 SKY
		ThAr			↑	60s	
		ThAr			↓	60s	
	H2616Z	4:06:15	19:28:43			3m	5.5 IAU STD.
		ThAr			↑	60s	
		ThAr			↓	60s	
	G130-29	23:56:16	33:27:54			2M	7.82/15 HALOFIN (414)
		ThAr			↑	60s	
		ThAr			↓	60s	
	G6-20	3:34:10	75:49:48			2m	9.1/100 HALOFIN (76)
		ThAr			↑	60s	NOT COORD. with FLWD
		ThAr			↓	60s	
	G6-26	3:36:43	18:13:36			2m	9.0/50 HALOFIN (78)
		ThAr			↑	60s	
		ThAr			↓	60s	
	GL16GA	4:12:58	-7:43:48			2m	4.43 SPACE NEARBY (8)
		ThAr			↑	60s	
	GL16GA	4:12:58	-7:43:48			20m	11.17 SPACE NEARBY (9)
		ThAr			↑	60s	IDENTIFICATION ?
		/			↑	/	

FEB/10-11/88

2/10/88

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300l

Observer JMZ

Telescope 61" WYETI

Date FEB/10/88

Disk 01201988

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	ThAr		↓	60s	5187A CLEAR
→	G15206	2	5:29:30	9:47:18		20m	11.5 M STARS (18)
		3	ThAr		↓	60s	
→	G15206	4	5:29:30	9:47:18		15m	11.5 M STARS (18)
		5	ThAr		↑	60s	
		6	ThAr		↓	60s	
	G173-2	7	1:27:49	52:29:16		8m	10.05/15 HALOS (106)
	ThAr	8			↑	60s	
	ThAr	9			↓	60s	
	G172-49	10	1:17:59	51:43:24		2m	7.62/20 HALOS (97)
	ThAr	11			↑	60s	
	ThAr	12			↓	60s	
	G172-46	13	1:13:37	51:35:48		20m	11.15/20 HALOS (94)
	ThAr	14			↑	60s	25H west
	ThAr	15			↓	60s	
	G172-61	16	1:13:18	48:29:06		15m	11.0/20 HALOS (113)
	ThAr	17			↑	60s	
	ThAr	18			↓	60s	
→	GL234a	19	6:26:51	-2:46:12		20m	11.07/ NEARBY (10) M STARS
	ThAr	20			↓	60s	
→	GL234a	21	6:26:51	-2:46:12		12m	11.07 NEARBY M STARS
	ThAr	22			↑	60s	
	ThAr	23			↓	60s	
	G88-5	24	7:03:12	18:42:54		10m	10.21/20 HALOS (313)
	ThAr	25			↑	60s	
	ThAr	26			↓	60s	
	GL273	27	7:24:43	5:22:42		10m	9.82 M STARS, SPACE P NEARBY (12)
	ThAr	28			↑	60s	
	ThAr	29			↓	60s	
	G15301	30	8:10:50	-13:45:48		9m	9.4 M STARS (22)
	ThAr	31			↑	60s	
	/	32				/	



2/10/88

Intensified Reticon TO CAM  
 Spectrograph ECHELLE Log Sheet RAW/RET  
 Grating 300d Observer JMZ  
 Telescope 61" WYETH Date FEB/10-11/88 Disk ORO 1989

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	5187A CLEAR
		2	(29)	7:14:27	30:18:21		6m 9.9 ASTEROIDS
		3			↑	60s	
		4			↓	60s	
		5	H92588	10:28:52	-1:28:42		2m 6.3 IAU STANDARD
		6			↑	60s	
		7			↓	60s	
		8	G103-48	6:30:55	30:04:54		12m 10.87/39? HALOFIN (162)
		9			↑	60s	
		10			↓	60s	
		11	G87-20	6:59:40	38:13:12		3.5m 9.45/15 HALOFIN (177)
		12			↑	60s	
		13			↓	60s	
		14	G249-37	6:01:35	63:50:36		2m 9.2/15 HALOFIN (134)
		15			↑	60s	
		16			↓	60s	
		17	G250-23	6:45:49	60:59:18		2m 8.61/20 HALOS (30E)
		18			↑	60s	
		19			↓	60s	
		20	G111-33	7:45:13	46:44:12		2m 10.0/15 HALOFIN (200)
		21			↑	60s	
		22			↓	60s	
		23	G195-30	9:26:52	52:22:24		3m 9.8/15 HALOFIN (23C)
		24			↑	60s	
		25			↓	60s	
		26	H085217	9:47:54	4:34:42		2m 6.2 M STARS (28)
		27			↑	60s	
		28			↓	60s	
		29	G138E	10:16:54	20:07:18		4.5m 9.43 NEARBY (15)
		30			↑	60s	
		31					
		32					

2/10/88

Spectrograph ECHELLE Intensified Reticon TO CAM  
 Grating 300J Log Sheet RAW/RET  
 Telescope 61" WYETH Date FEB/10/88 Observer JMR  
 Disk ORO 1990

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	ThAr		↓	60s	5187Å PTLY CLDY
	GL380	2	10:08:19	49:42:30		2m	6.59 NEARBY (14) M STARS
		3	ThAr		↑	60s	
		4	ThAr		↓	60s	
	H100018	5	11:28:07	41:33:50		2m	7.0 M STARS (37)
		6	ThAr		↑	60s	
		7	- ThAr		↓	60s	
	+222411	8	11:48:59	22:23:36		13m	9.3/30 HALOS (485)
		9	ThAr		↑	60s	
		10	ThAr		↓	60s	POOR SEEING
	G41-34	11	9:20:06	11:29:06		7m	9.65/15 HALOS (374)
		12	ThAr		↑	60s	
		13	ThAr		↓	60s	
	H106516	14	12:12:36	-10:01:14		2m	6.11/20 HALOS (511)
		15	ThAr		↑	60s	
		16	ThAr		↓	60s	
	G61-24	17	12:55:04	18:57:48		15m	8.9/100 HALOS (544)
		18	ThAr		↓	60s	
	G61-23	19	12:55:03	18:57:48		5m	9.83/15 HALOS (543)
		20	ThAr		↑	60s	
		21	ThAr		↓	60s	
	GLS499	22	13:03:49	20:59:42		9.2m	9.4 M STARS (41)
		23	ThAr		↓	60s	
	<del>SD</del> 82651	24	13:03:56	22:53:00		2m	5.9 M STARS (40)
		25	ThAr		↑	60s	
		26	ThAr		↓	60s	
	G14-22	27	12:58:44	-08:10:18		10m	9.00/20 HALOS (548)
		28	ThAr		↓	60s	
	G14-23	29	12:58:53	-9:11:12		10m	9.25/20 HALOS (549)
		30	ThAr		↑	60s	↑ STOPPED BY HEAVY clouds only 10 counts
		31	/				
		32	/				





Intensified      Reticon  
TO CAM

Spectrograph ECHELLE      Log Sheet      RAW/RET

Grating 100K      Observer JRC

Telescope 6 1/2 inch      Date Feb 13-14 1988      Disk 020 1997

Change....	File	ID	RA	Dec	1950.0	L/R	Exposure	Comments
						↑/↓		
		tAr				↓	60s	cloudy 25/87A
	SK46VM	Meridian	+20°				2m	16 SK4
		tAr				↑	60s	
		tAr				↓	60s	
	SK46VM	4 hrs west	+20°				2m	16 SK4
		tAr				↑	60s	
		tAr				↓	60s	
	H26162	4:06:14	19:28:43				2m	17 ILM STD      5.5
		tAr				↑	60s	
		tAr				↓	60s	
	G-6-26	3:36:43	16:13:36				4.5m	HALOFIN      9.0/40
		tAr				↑	60s	
		tAr				↓	60s	
	G-64-39	5:10:06	4:15:48				5m	HALOFIN <sup>cut off</sup> <sub>cts 100 low</sub> 10.58/15 >109
		tAr				↑	60s	
		tAr				↓	60s	
	G-40-5	8:01:46	15:30:36				2m	HALOFIN      8.48/15
		tAr				↑	60s	
		tAr				↓	60s	
	G-40-8	8:05:55	24:46:36				1m	HALOFIN      9.65/15
		tAr				↑	60s	
		Th-Ar				↓	60s	
	G87-20	06:59:40	38:13:12				5m	4.5/15      HALO
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
	G44-30	10:37:43	11:27:24				16m	11.3/15      HALO
		Th-Ar				↑	60s	
		Th-Ar				↓	60s	
	G49-38	10:07:46	21:56:18				14.5m	11.5/15      "
		Th-Ar				↑	60s	
		/						
		/						



Intensified      Reticon  
TO CAM

Spectrograph ECHELLE      Log      Sheet

Grating 300R      Observer RPS

Telescope 61" Wexth      Date 13-14 Feb 1988      Disk ORO 1998

Change....	File	ID	RA	1950.0 Dec	L/R ↑/↓	Exposure	Comments
					↓	60s	
	G10-4		11:08:26	06:41:48		18m	11.1/15 HALOS
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	G58-39		11:00:48	18:24:36		14m	11.0/15 HALOS
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	G56-30		11:18:58	18:28:30		13m	11.0/15 "
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	G195-30		09:26:52	52:22:24		6m	9.8/15 "
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	G116-56		09:48:46	41:25:18		6m	11.1/15 "
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	G116-75		09:58:59	55:09:06		20m	11.9/15 "
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	G116-76		09:59:23	44:49:18		4m	10.8/15 "
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	G195-52		09:58:16	55:49:48		2m	9.2/15 "
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	G196-48		10:47:56	53:30:54		12m	11.3/15 "
	Th-Ar				↑	60s	
	Th-Ar				↓	60s	
	G66-30		14:47:35	01:02:54		20m	11.1/15 "
	Th-Ar				↑	60s	







2/22

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET



Grating 300L

Observer RDS

Telescope 61" Wyeth

Date 22-23 Feb 1988

Disk ORO1996

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		Th-Ar			↓	60s	
	G9-42		08:57:54	21:39:12		6m	8.8/15 HALOS
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	G195-30		09:26:52	52:22:24		9m	9.8/15 HALOS
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	-overcast-
	H100018		11:28:07	41:33:50		11m	7.0/20 Mstars
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	GL411		11:00:37	36:18:18		4.5m	7.5 Nearby & Space Motion
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	H102495		12:56:49	09:30:42		6.5m	9.7/30 HALOS
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	G61-24		12:55:04	18:57:48		12m	8.9/100 "  this *
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	GRS499		13:03:49	20:59:42		7m	9.4/20 M Stars
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	Scp82651		13:03:57	22:53:00		2m	5.9/100 "
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	G62-52		13:33:29	01:27:42		20m	10.9/30 HALOS
		Th-Ar			↓	60s	
	G62-52		"	"		11m	"
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	G165-22		13:35:51	39:26:00		2m	8.9/15 HALOS 
		Th-Ar					



Intensified Reticon

TO CAM 2-24/85-1988

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300L

Observer RPS

Telescope 61" Wyeth

Date 22-23 Feb 1988

Disk ORO 1997

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Th-Ar		↓	60s	
	G66-30	2	14:47:35	01:02:54		20m	11.1/15 HALOS
	Th-Ar	3			↑	60s	
	Th-Ar	4			↓	60s	
	GPs430	5	11:28:22	63:26:00		20m	9.0/40 11 stars
	Th-Ar	6			↑	60s	
	Th-Ar	7			↓	60s	
	G66-65	8	15:05:22	09:04:18		3m	8.3/15 HALOS
	Th-Ar	9			↑	60s	
	Th-Ar	10			↓	60s	
	G17-22	11	16:30:22	03:21:12		2.5m	8.8/15 "
	Th-Ar	12			↑	60s	
	Th-Ar	13			↓	60s	
	G25508	14	13:17:36	48:02:14		3m	9.0 M stars
	Th-Ar	15			↑	60s	
	Th-Ar	16			↓	60s	
	H136202	17	15:16:45	01:57:12		2m	5.1 IAU standard
	Th-Ar	18			↑	60s	
	Th-Ar	19			↓	60s	
	SKY-DWN	20	4.5 hrs E	+30°		2m	
	Th-Ar	21			↑	60s	
	Th-Ar	22			↓	60s	
	SKY-DWN	23	φ hrs.	+30°		2m	
	Th-Ar	24			↑	60s	
	INCANS	25				120 <sup>M</sup>	
	INCANS	26				120 <sup>M</sup>	
Feb 23-24 1988	Th-Ar	27			↓	60s	
	SKYEVEN	28	Meridian	-15°		2 <sup>M</sup>	16 sky obj 25187A
	Th-Ar	29			↑	60s	
		30					
		31					
		32					

Intensified Reticon

TO CAMI Feb 24/25 1988

Spectrograph ECHELLE

Log Sheet

RAWRET

Grating 300L

Observer JRC

Telescope 61" Wiyth

Date Feb 24-25 1988

Disk ORD 1998

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	clear λ 5187 Å
		2	SKYEVEW	Meridinn	+20°	2 <sup>m</sup>	14 SKY
		3			↑	60 <sup>s</sup>	
		4			↓	60 <sup>s</sup>	
		5	SKYEVEW	4 hrs West	+20°	2 <sup>m</sup>	16 SKY
		6			↑	60 <sup>s</sup>	
		7			↓	60 <sup>s</sup>	
		8	H26162	4:06:15	19:28:43	2 <sup>m</sup>	17 IAN STD S.S/
		9			↑	60 <sup>s</sup>	
		10			↓	60 <sup>s</sup>	
		11	G6-26	3:36:43	18:13:36	5 <sup>m</sup>	15 HALOFIN 9.0/50
		12			↑	60 <sup>s</sup>	
		13			↓	60 <sup>s</sup>	
		14	G37-10	2:49:54	35:26:06	6 <sup>m</sup>	15 HALOFIN 8.36/50
		15			↑	60 <sup>s</sup>	
		16			↓	60 <sup>s</sup>	
		17	G84-39	5:10:06	4:15:48	7 <sup>m</sup>	15 HALOFIN 10.58/15
		18			↑	60 <sup>s</sup>	
		19			↓	60 <sup>s</sup>	λ 6562 Å
		20	2 ORI	Si 52:28	7:23:58	10 <sup>m</sup>	H2 - SALLY 1.0 ND Filter 10.6/1000
		21			↑	60 <sup>s</sup>	
		22			↓	60 <sup>s</sup>	λ 5187 Å
		23	G88-11	7:07:39	20:31:36	3 <sup>m</sup>	15 HALOFIN 9.07/15
		24			↑	60 <sup>s</sup>	
		25			↓	60 <sup>s</sup>	
		26	GL273	7:24:43	4:27:42	9 <sup>m</sup>	34 MSTARs 7.52/15
		27			↑	60 <sup>s</sup>	
		28			↓	60 <sup>s</sup>	
		29	(29)	7:09:28	24:33:13	5 <sup>m</sup>	17 Asteroid
		30			↑	60 <sup>s</sup>	
		31					
		32					







Intensified Reticon

TO CAMI Feb 29/25 1988

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 3002

Observer JRC

Telescope 61" Wyeth

Date Feb 29/25 1988

Disk 020 2000

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		tAr			↓	60s	clean λ 5187 Å
	H085217		9:47:54	4:34:42		3 <sup>m</sup>	MSTARS 6.2/200
		tAr			↑	60s	
		tAr			↓	60s	
	H100018		11:28:07	41:33:50		3.5 <sup>m</sup>	MSTARS 7.0/200
		tAr			↑	60s	
		tAr			↓	60s	
	G58-23		10:47:12	20:45:30		7.5 <sup>m</sup>	HALOFIN 9.96/15
		tAr			↑	60s	
		tAr			↓	60s	
	+222411		11:48:49	22:23:36		5 <sup>m</sup>	HALOS 9.3/30
		tAr			↑	60s	
		tAr			↓	60s	
	96375		11:04:05	5:42:00		13 <sup>m</sup>	FSTARS 7.89/400
		tAr			↕	60s	
	96375		11:04:05	5:42:00		10 <sup>m</sup>	FSTARS 7.89/400
		tAr			↑	60s	
		tAr			↓	60s	
	97358		11:09:41	-9:12:42		5 <sup>m</sup>	FSTARS 7.55/120
		tAr			↕	60s	
	99507		11:24:20	-9:39:54		7 <sup>m</sup>	FSTARS 8.27/100
		tAr			↑	60s	
		tAr			↓	60s	
	109557		12:33:06	-16:32:56		13 <sup>m</sup>	FSTARS 6.61/500
		tAr			↑	60s	
		tAr			↓	60s	
	110823		12:42:24	-15:46:12		6 <sup>m</sup>	FSTARS 8.25/75
		tAr			↑	60s	
		tAr			↓	60s	
	115693		13:16:20	-12:23:07		14 <sup>m</sup>	FSTARS 7.18/500
		tAr			↑	60s	
		\					\



2/25/88

Spectrograph ECHELLE Intensified Reticon TO CAMI  
 Grating 300L Log Sheet RAW/RET  
 Telescope 61" Wyeth Date Feb 24/25 1988 Observer JRC  
 Disk ORO 2001

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		thAr			↓	60 <sup>s</sup>	den 2587A
	122800	thAr	14:01:31	-11:53:24		4 <sup>m</sup>	FSTARS G <sup>th</sup> 7.84/100 <sup>2</sup> New
		thAr			↑	60 <sup>s</sup>	
		thAr			↓	60 <sup>s</sup>	
	124988	thAr	14:14:11	-5:24:39		3 <sup>m</sup>	FSTARS 6.59/New 100
		thAr			↑	60 <sup>s</sup>	
		thAr			↓	60 <sup>s</sup>	
	139375	thAr	15:35:01	12:27:49		10 <sup>m</sup>	FSTARS 7.02/800
		thAr			↑	60 <sup>s</sup>	
		thAr			↓	60 <sup>s</sup>	
	H146051	thAr	16:11:43	-3:34:01		2 <sup>m</sup>	17 TH4 STD 2.7/1.0 ND Filter
		thAr			↑	60 <sup>s</sup>	
		thAr			↓	60 <sup>s</sup>	
	G62-30	thAr	13:17:25	17:07:18		6 <sup>m</sup>	15 HALOFIN 9.7/15
		thAr			↑	60 <sup>s</sup>	
		thAr			↓	60 <sup>s</sup>	
	G92-15	thAr	19:33:47	4:39:18		3 <sup>m</sup>	15 HALOFIN 9.2/15
		thAr			↑	60 <sup>s</sup>	
		thAr			↓	60 <sup>s</sup>	
	SKYDWN	thAr	this East	+20°		3 <sup>m</sup>	17 SKY
		thAr			↑	60 <sup>s</sup>	
		thAr			↓	60 <sup>s</sup>	
	SKYDWN	thAr	Meridian	+20°		3 <sup>m</sup>	17 SKY
		thAr			↑	60 <sup>s</sup>	
	INCANDS					120m	
	INCANDS					120m	
		thAr			↓	60 <sup>s</sup>	
	SKYVIEW	thAr	Meridian	+30°		2m	16 SKY
		thAr			↑	60 <sup>s</sup>	
		thAr			↓	60 <sup>s</sup>	
	SKYVIEW	thAr	4 <sup>h</sup> west	+30°		2m	16 SKY
		thAr			↑	60 <sup>s</sup>	

2/26/87

Intensified Reticon TO CAM  
 Spectrograph ECHELLE Log Sheet RAW/RET  
 Grating 300 L Observer JH2  
 Telescope 61" WYR Date FEB/25-26/88 Disk 0120 2002

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	2 5187A PTLY CLDY
		2	H26162	4:06:15	19:28:43	2M	17 IAU STD
		3			↑	60s	
		4			↓	60s	
		5	G6-26	3:36:43	18:13:36	3.5m	9.50 HALOFIN (78)
		6			↑	60s	
		7			↓	60s	
		8	G84-39	5:10:06	4:15:48	8M	10.58/15 HALOFIN (117)
		9			↑	60s	
		10			↓	60s	
		11	G81-15	4:17:22	45:42:18	3.5m	9.93/15 HALOFIN (93)
		12			↑	60s	
		13			↓	60s	
		14	H127523	4:19:06	43:19:54	4M	7.89/120 FSTARS (111)
		15			↑	60s	STOPPED - EQUIPMENT FAILURE
FEB/26-27/88		16			↓	60s	5187A MOSTLY CLEAR
		17	SKYEVEN	0 <sup>h</sup> H.A.	+30°	2M	16 sky
		18			↑	60s	
		19			↓	60s	
		20	SKYEVEN	4 <sup>h</sup> WEST	+30°	2M	16 sky
		21			↑	60s	
		22			↓	60s	
		23	H8779	1:23:54	-0:39:29	2M	17 IAU STANDARD
		24			↑	60s	
		25			↓	60s	
		26	G6-26	3:36:43	18:13:36	2M	9.0/50 HALOFIN (78)
		27			↑	60s	
		28	H123290	3:41:50	20:35:35	4M	8.1 FSTARS (97)
		29			↑	60s	
		30			↓	60s	
		31	G6-20	3:34:10	25:49:48	3.5m	9.1/100 HALOFIN (76)
		32			↑	60s	



2/26/88

Intensified Reticon

TO CAM1

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300

Observer JMZ

Telescope 61" WYETH

Date FEB 26-27/88

Disk G120 2003

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	25187A MOSTLY CLEAR
	G84-39	2	5:10:06	4:15:48		7m	10.58/15 HALOFIN (117)
		3			↑	60s	
		4			↓	60s	
	G102-20	5	5:37:21	12:09:12		4m	10.22/15 HALOS (267)
		6			↓	60s	
	HD37603B	7	5:37:27	15:19:18		6m	6.65/150 FSTARS (151)
		8			↑	60s	
		9			↓	60s	
	G195-30	10	9:26:52	52:22:24		2m	9.8/15 HALOFIN (236)
		11			↑	60s	
		12			↓	60s	
	G8-40	13	4:29:29	26:21:36		7m	10.70/15 HALOFIN (96)
		14			↑	60s	
		15			↓	60s	
	G83-34	16	4:45:46	18:37:36		3m	9.69/15 HALOFIN (106)
		17			↑	60s	- PAUSE FOR CLOUDS -
		18			↓	60s	
	HD29420	19	4:35:46	17:18:32		10M	7.69/300 FSTARS (122)
		20			↑	60s	
		21			↓	60s	
	HD29537	22	4:37:12	29:52:29		6.5M	6.92/400 FSTARS (123)
		23			↑	60s	
		24			↓	60s	
	HD29786	25	4:39:18	15:52:27		17.5m	7.8/200 FSTARS (125)
		26			↑	60s	
		27			↓	60s	
	HD34415	28	5:14:56	13:35:12		7m	7.8/100 FSTARS (137)
		29			↑	60s	
		30			↓	60s	
	34907	31	5:18:25	11:03:37		13.5M	7.46/120 FSTARS (140)
		32			↑	60s	

2/26/88

Spectrograph ECHELLE Intensified Reticon TO CAM  
 Grating 300f Log Sheet RAWRET  
 Telescope 61" WYETH Date FEB/26-27/88 Observer JMZ  
 Disk 0202004

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	2.51878 PARTLY cloudy
	H085217	2	9:47:54	4:34:42		11.5m	6.2/200 M STARS (28)
		3			↑	60s	↑ PASSING clouds
		4			↓	60s	
	H89449	5	10:17:01	19:43:31		2m	17 IAU STANDARD
		6			↑	60s	STOPPED BY clouds
		7			↓	60s	CLEARED
	121215	8	13:51:29	10:23:04		5m	8.1 F STARS (377)
		9			↑	60s	
		10			↓	60s	
	GL526	11	13:43:12	15:09:42		4m	8.5 NEARBY (23)
		12			↑	60s	
		13			↓	60s	
	121444	14	13:52:54	-9:16:57		5.5m	7.56 F STARS (378)
		15			↑	60s	
		16			↓	60s	
	H100018	17	11:28:07	41:33:50		3m	7.0/200 M STARS (37)
		18			↑	60s	
		19			↓	60s	
	GL572	20	14:59:10	45:37:21		4m	9.1/30 M STARS (54)
		21			↑	60s	
		22			↓	60s	
	LAM-VIR	23	14:16:24	-13:08:31		2m	4.6/700 M STARS (47)
		24			↑	60s	
	125324	25	14:16:21	-14:17:54		12m	8.1 F STARS (393)
		26			↑	60s	
		27			↓	60s	
	H106516	28	12:12:36	-10:01:19		2m	6.11/20 M STARS (511)
		29			↑	60s	
		30			↓	60s	
	131166	31	14:47:28	-13:18:03			8.1 F STARS (405)
		32			↑	60s	



TO CAMI Feb 27, 1988

Intensified      Reticon

Spectrograph ECHELLE      Log Sheet

Grating 300-f      Observer JMZ

Telescope 61" WYETH      Date FEB 26-27/88      Disk 0120 2005

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	2.51878 PTLY cloudy
		2	H136202	15:16:45	1:57:12	2M	17 IAU STANDARD
		3			↑	60s	
		4			↓	60s	
		5	SKYDOWN	4 <sup>h</sup> East	+30°	3M	16 sky
		6			↑	60s	
		7			↓	60s	
		8	SKYDOWN	Meridian	+30°	2M	16 sky
		9			↑	60s	
		10	INCANDS			120M	
		11	INCANDS			120M	
		12			↓	60s	pty cloudy 2.51878
		13	SKYEVIEW	Meridian	+20°	M	16 sky
		14			↑	60s	
		15			↓	60s	
		16	SKYEVIEW	4 <sup>hrs</sup> West	+20°	M	16 sky
		17			↑	60s	
		18			↓	60s	
		19	A26162	4:06:15	19:28:43	2M	17 IAU STD S.S
		20			↑	60s	
		21			↓	60s	
		22	G133-57	1:54:31	41:50:06	2M	15 HALOFIN 9.01/15
		23			↑	60s	
		24			↓	60s	
		25	66-26	3:36:43	18:13:36	3M	HALOFIN 9.0/50
		26			↑	60s	
		27			↓	60s	
		28	684-39	4:15:48	5:10:06	8M	HALOFIN 10.58/15
		29			↑	60s	
		30					
		31					
		32					

Feb-27-28  
1988

Intensified Reticon

TO CAM Feb 27, 1988

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 3002

Observer JRC

Telescope 61" Wyeth

Date Feb 27/28 1988

Disk ORO 2006

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
					↓	60 <sup>s</sup>	
						5 <sup>m</sup>	MSTARS
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
						5 <sup>m</sup>	FSTARS
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
						18 <sup>m</sup>	FSTARS
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
						9 <sup>m</sup>	FSTARS
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
						7 <sup>m</sup>	FSTARS
					↑	80 <sup>s</sup>	
					↓	60 <sup>s</sup>	
						5 <sup>m</sup>	FSTARS
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
						9 <sup>m</sup>	FSTARS
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
						2 <sup>m</sup>	Ceph 31
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
						6 <sup>m</sup>	FSTARS
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
						3 <sup>m</sup>	FSTARS
					↑	60 <sup>s</sup>	

gth. ddy 251878  
broke off - 11.5

8.5/100

8.2/500

8.1/300

8.0/250

7.13/250

8.1/150

6.6/

789/300

8.1/120



TO CAMI Feb 27, 1958

Spectrograph ECHELLE Intensified Reticon  
 Grating 300L Log Sheet  
 Telescope 61" Wyeth Date Feb 27/58 1958 Observer JRC  
 Disk ORO 2007

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		tAr			↓	60 <sup>s</sup>	251578
	71713		8:26:02	-13:23:12		6 <sup>m</sup>	FSTARS 8.0/100
		tAr			↑	60 <sup>s</sup>	
		tAr			↓	60 <sup>s</sup>	
	72746		8:31:45	-9:46:48		20 <sup>m</sup>	FSTARS 7.62/800
		tAr			↑	60 <sup>s</sup>	
		tAr			↓	60 <sup>s</sup>	
	75320		8:46:39	-6:49:18		9 <sup>m</sup>	FSTARS 8.24/75
		tAr			↑	60 <sup>s</sup>	
		tAr			↓	60 <sup>s</sup>	
	76318		8:53:12	26:33:08		4 <sup>m</sup>	FSTARS 8.19/100
		tAr			↕	60 <sup>s</sup>	
	76333		8:53:17	24:38:27		2 <sup>m</sup>	FSTARS 6.72/80
		tAr			↑	60 <sup>s</sup>	
		tAr			↓	60 <sup>s</sup>	
	(29)		7:9:16	29:21:43		3 <sup>m</sup>	17 Asteroid (Mr. MOON-1035h)
		tAr			↑	60 <sup>s</sup>	
		tAr			↓	60 <sup>s</sup>	
	77999		9:2:52	-23:59:18		8 <sup>m</sup>	FSTARS 8.38/90
		tAr			↕	60 <sup>s</sup>	
	78257		9:04:18	-23:57:18		18 <sup>m</sup>	FSTARS 8.12/500
		tAr			↕	60 <sup>s</sup>	
	78257		9:04:18	-23:57:18		18 <sup>m</sup>	FSTARS 8.12/500
		tAr			↕	60 <sup>s</sup>	
	80618		9:17:54	-23:16:00		10 <sup>m</sup>	FSTARS 7.76/150
		tAr			↑	60 <sup>s</sup>	
		tAr			↓	60 <sup>s</sup>	
	88162		10:7:36	21:11:28		2.3 <sup>m</sup>	FSTARS 7.27/120
		tAr			↑	60 <sup>s</sup>	
		tAr			↓	60 <sup>s</sup>	
	88832		10:12:10	-2:37:38		5 <sup>m</sup>	FSTARS 7.8/100
		tAr			↑	60 <sup>s</sup>	

only  
60<sup>s</sup>  
3000<sup>s</sup>





Intensified Reticon

TO CAMI Feb 27, 1988

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300L

Observer JRC

Telescope 61" Wyeth

Date Feb 27/28 1988

Disk OR0 2009

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
					↓	60 <sup>s</sup>	λ 5187 Å
	121698		13:53:52	26:09:43		3 <sup>m</sup>	FSTARS 6.65/300
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	122911		14:02:11	-6:18:49		5 <sup>m</sup>	FSTARS CLOSE BINARY 7.69/100
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	124245		14:09:55	-2:44:10		13 <sup>m</sup>	FSTARS 8.1/500
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	125488		14:17:08	6:07:33		12 <sup>m</sup>	FSTARS 7.92/—500
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	127457		14:29:16	-23:13:34		10 <sup>m</sup>	FSTARS 6.94/—
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	134193		15:06:12	-1:36:04		8½ <sup>m</sup>	FSTARS 7.89/250
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	136276		15:17:23	-13:00:34		9 <sup>m</sup>	FSTARS 8.1/200
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	141515		15:47:11	-17:59:27		6 <sup>m</sup>	FSTARS 7.69/150
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	145184		16:06:52	13:03:36		4 <sup>m</sup>	FSTARS 7.68/150
					↕	60 <sup>s</sup>	
	145228		16:07:06	11:52:37		3 <sup>m</sup>	FSTARS 6.93/150
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	147135		16:17:40	-12:47:31		2.5 <sup>m</sup>	FSTARS 6.55/150
					↑	60 <sup>s</sup>	

Intensified      Reticon  
TO CAM 2/28

Spectrograph ECHELLE      Log Sheet      RAW/RET

Grating 300L      Observer JRC

Telescope 61" Wyeth      Date Feb 27/28 1988      Disk ORO 2010

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		ThAr			↓	60 <sup>s</sup>	clear 25178
	156458	17:15:05	1:47:42			3 <sup>m</sup>	FSTARS 6.99/-20°
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
	159172	17:31:04	-17:48:06			8.5 <sup>m</sup>	FSTARS 7.91/15°
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
	SKYDWNNE	4 hrs East	+20°			3 <sup>m</sup>	16 SKY
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
	SKYDWNM	Meridian	+25°			3 <sup>m</sup>	16 SKY
		ThAr			↑	60 <sup>s</sup>	
	INCANS					120 <sup>m</sup>	
	INCANS					120 <sup>m</sup>	
2/28-29/88 RJD		ThAr			↓	60 <sup>s</sup>	clear 25187
	SKYEVEW					2 <sup>m</sup>	16 SKY 0 <sup>h</sup> +39°/3300
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
	SKYEVEW					2 <sup>m</sup>	16 SKY 4 <sup>h</sup> W+20°/3200
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
	H8779	01:23:52.6	-0:39:29			3 <sup>m</sup>	17 JAU 65/630
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
	G130-29	23:56:16	33:27:54			3 <sup>m</sup>	15 Halo fin 7.82/180
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
	G69-1	00:29:55	27:55:18			10 <sup>m</sup>	15 Halos 8.72/100
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
	G33-30	00:58:27	16:06:18			18 <sup>m</sup>	15 Halo fin 10.65/23
		ThAr			↑	60 <sup>s</sup>	



Intensified Reticon

TO CAM 2/28

Spectrograph ECHELLE

Log Sheet

RAW RET

Grating 300 L

Observer RJD

Telescope 61" Wyeth

Date 2/28-29/88

Disk ORO 2Φ11

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	Clear 25187
		2	Z LAC 22:38:53	56:34:05		5 <sup>m</sup> 38	Cepheid 8.9/65
		3			↑	60 <sup>s</sup>	
		4			↓	60 <sup>s</sup>	
		5	G171-58 00:22:26	47:46:12		2 <sup>m</sup> 15	Halos 7.52/300
		6			↑	60 <sup>s</sup>	
		7			↓	60 <sup>s</sup>	
		8	G72-58 02:05:31	28:04:36		5 <sup>m</sup> 15	Halofin 9.99/36
		9			↑↓	60 <sup>s</sup>	<del>10.55/15</del>
		10	G72-59 02:05:31	28:04:18		9 <sup>m</sup> 15	Halofin 10.55/15
		11			↑	60 <sup>s</sup>	
		12			↓	60 <sup>s</sup>	
		13	G77-56 03:26:43	01:48:24		8 <sup>m</sup> 15	Halofin 10.45/18
		14			↑	60 <sup>s</sup>	
		15			↓	60 <sup>s</sup>	
		16	G79-42 03:26:54	10:23:48		11 <sup>m</sup> 15	Halofin 10.78/20
		17			↑	60 <sup>s</sup>	
		18			↓	60 <sup>s</sup>	
		19	(4) 07:44:161	26:07:10		8 <sup>m</sup> 17	Asteroid 7.76/1100
		20			↑	60 <sup>s</sup>	
		21			↓	60 <sup>s</sup>	
		22	G173-2 01:27:49	52:29:18		8 <sup>m</sup> 15	Halos 10.05/22
		23			↑	60 <sup>s</sup>	
		24			↓	60 <sup>s</sup>	
		25	G6-26 03:36:43	18:13:36		4 <sup>m</sup> 5	Halofin 9.0/100
		26			↑	60 <sup>s</sup>	
		27			↓	60 <sup>s</sup>	
		28	G84-39 05:10:06	04:15:48		12 <sup>m</sup> 15	Halofin 10.58/15
		29			↑	60 <sup>s</sup>	
		30			↓	60 <sup>s</sup>	
		31	G103-48 06:36:55	30:04:51		22 <sup>m</sup> 15	Halofin 10.87/20
		32			↑	60 <sup>s</sup>	



Intensified      Reticon      TO CAM 2/28

Spectrograph ECHELLE      Log Sheet      RAW/RET

Grating 300L      Observer RJD

Telescope 61" Wyoth      Date 2/28-29/88      Disk ORO 2φ12

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments
		1			↓	60 <sup>s</sup>	Clear 25187
		2	G87-20	06:59:40	38:13:12	2 <sup>m</sup> 5	15 Halofin 9.45/65
		3			↑	60 <sup>s</sup>	
		4			↓	60 <sup>s</sup>	
		5	G175-15	04:03:08	54:03:12	3 <sup>m</sup> 5	15 Halofin 9.9/50
		6			↑	60 <sup>s</sup>	
		7			↓	60 <sup>s</sup>	
		8	G247-42	04:53:31	62:57:24	2 <sup>m</sup>	15 Halofin 8.1/240
		9			↑	60 <sup>s</sup>	
		10			↓	60 <sup>s</sup>	
		11	G191-55	05:53:04	58:40:24	14 <sup>m</sup>	15 Halos 10.47/33
		12			↑	60 <sup>s</sup>	
		13			↓	60 <sup>s</sup>	
		14	G111-33	07:45:13	46:44:12	2 <sup>m</sup>	15 Halofin 10.0/90
		15			↑	60 <sup>s</sup>	
		16			↓	60 <sup>s</sup>	
		17	G249-37	06:01:35	63:50:36	2 <sup>m</sup>	15 Halofin 9.2/135
		18			↑	60 <sup>s</sup>	
		19			↓	60 <sup>s</sup>	
		20	G88-5	07:03:12	18:42:54	7 <sup>m</sup>	15 Halos 10.21/30
		21			↑	60 <sup>s</sup>	
		22			↓	60 <sup>s</sup>	
		23	G40-5	08:01:46	15:30:36	2 <sup>m</sup>	15 Halofin 8.48/160
		24			↑	60 <sup>s</sup>	
		25			↓	60 <sup>s</sup>	
		26	G15301	08:10:50	-13:45:48	10 <sup>m</sup>	34 M-stars 9.4/30
		27			↑	60 <sup>s</sup>	
		28	G15301	"	"	8 <sup>m</sup>	" " " "
		29			↑	60 <sup>s</sup>	
		30			↓	60 <sup>s</sup>	
		31	G2273	07:24:43	05:22:42	12 <sup>m</sup>	34/36/45 9.82/20
		32			↑	60 <sup>s</sup>	





Intensified      Reticon  
TO CAM 2/28

Spectrograph ECHELLE      Log Sheet      RAW/RET

Grating 300l      Observer RJD

Telescope 61" Wye th      Date 2/28-29/88      Disk ORO 2φ14

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	Clear λ 6562
		2	VCVn	13:17:17	45:47:22	12 <sup>m</sup>	00 Sally Hox 7-9/1150
		3			↑	90 <sup>s</sup>	
		4			↓	60 <sup>s</sup>	25187
		5	Gls 508	13:17:36	48:02:24	4 <sup>m</sup>	34 Mstars 9.0/180
		6			↑	60 <sup>s</sup>	
		7			↓	60 <sup>s</sup>	
		8	G65-43	14:15:47	12:58:30	8 <sup>m</sup>	15 Halofin 10.57/26
		9			↑	60 <sup>s</sup>	
		10			↓	60 <sup>s</sup>	
		11	G227-37	18:34:48	15:39:18	2 <sup>m</sup>	15 Halos 8.07/300
		12			↑	60 <sup>s</sup>	
		13			↓	60 <sup>s</sup>	
		14	G66-30	14:47:35	01:02:54	8 <sup>m</sup>	15 Halofin 11.05/23
		15			↑	60 <sup>s</sup>	
		16			↓	60 <sup>s</sup>	
		17	G66-65	15:05:22	09:04:18	2 <sup>m</sup>	15 Halofin 8.28/360
		18			↑	60 <sup>s</sup>	
		19			↓	60 <sup>s</sup>	
		20	G17-22	16:30:22	03:21:12	2.5 <sup>m</sup>	15 Halofin 8.84/100
		21			↑	60 <sup>s</sup>	
		22			↓	60 <sup>s</sup>	
		23	V433 Her	18:20:03	23:25:47	16 <sup>m</sup>	45 Symbiotic 10.5/12
		24			↑	60 <sup>s</sup>	
		25			↓	60 <sup>s</sup>	
		26	CH Cyg	19:23:14	50:08:31	3 <sup>m</sup>	45 Symbiotic 7.00/90
		27			↑	60 <sup>s</sup>	
		28			↓	60 <sup>s</sup>	
		29	H146051	16:11:43	-3:34:01	2 <sup>m</sup>	17 IAU 1,OND 2.7/1500
		30			↑	60 <sup>s</sup>	
		31					
		32					



Intensified Reticon

TO CAM 2/29

Spectrograph ECHELLE

Log Sheet

RAW RET

Grating 300l

Observer

RJD

Telescope 61" Wyoth

Date 2/28-29/88

Disk ORO 2015

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		ThAr			↓	60 <sup>s</sup>	Clear 25187
		SKYDUNE				2.5 <sup>m</sup>	16 SKY /1600+
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
		SKYDUNM				2.5 <sup>m</sup>	16 SKY /2000+
		ThAr			↑	60 <sup>s</sup>	
		INCANDS				120 <sup>m</sup>	
		INCAND				35 <sup>s</sup>	
2/29-3/1/88		ThAr			↓	60 <sup>s</sup>	cloudy /4200-
		SKYEVIEW				2 <sup>m</sup>	16 SKY 25187
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
		SKYEVIEW				3 <sup>m</sup>	16 SKY /600-
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
		H66141	07:59:39.9	02:28:24		2 <sup>m</sup>	17 IAU 4.4/3300
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	90 <sup>s</sup>	Clearing 26562
		Alph Ori	05:52:28	07:23:58		8 <sup>m</sup>	00 Sally Hdx no 0.8/1200
		ThAr			↑	90 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	25187
		G6-26	03:36:43	18:13:36		9 <sup>m</sup>	15 Halofin 9.0/65
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
		(4)	07:43:56.1	26:08:53		2 <sup>m</sup>	17 Asteroid 7.78/500
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
		H085217	09:47:54	04:34:42		4 <sup>m</sup>	34 Mistais 6.2/1100
		ThAr			↑	60 <sup>s</sup>	
		ThAr			↓	60 <sup>s</sup>	
		G84-39	05:10:06	04:15:40		13 <sup>m</sup>	15 Halofin 10.58/15
		ThAr			↑	60 <sup>s</sup>	

Intensified Reticon

TO CAM 2/29

Spectrograph ECHELLE

Log Sheet

RAW RET

Grating 300L

Observer RJD

Telescope 61" Wyeth

Date 2/29-3/1/88

Disk 0 R0 20/16

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	Almost Clear 25/87
		2	05:18:33	32:27:48		14 <sup>m</sup>	45 Symbiotic 10.0/12
		3			↑↓	60 <sup>s</sup>	
		4	"	"		14 <sup>m</sup>	" "
		5			↑	60 <sup>s</sup>	
		6			↓	60 <sup>s</sup>	
		7	05:35:32.1	35:02:56		15 <sup>m</sup>	F Stars 40 8.17/230
		8			↑	60 <sup>s</sup>	
		9			↓	60 <sup>s</sup>	
		10	05:49:19.8	34:15:26		6.5 <sup>m</sup>	40 F Stars 8.00/500
		11			↑	60 <sup>s</sup>	Under exposed - clouds
		12			↓	60 <sup>s</sup>	45 <sup>m</sup> wait for clouds
		13	"	"		20 <sup>m</sup>	40 F Stars 8.00/500
		14			↑	60 <sup>s</sup>	
		15			↓	60 <sup>s</sup>	clear!
		16	09:44:38.1	-10:17:21		14 <sup>m</sup>	40 F Stars 7.06/650
		17			↑	60 <sup>s</sup>	
		18			↓	60 <sup>s</sup>	
		19	09:48:11.9	-7:08:47		15 <sup>m</sup>	40 F Stars 7.03/650
		20			↑	60 <sup>s</sup>	
		21			↓	60 <sup>s</sup>	
		22	10:16:24.6	05:52:40		5 <sup>m</sup>	17 Asteroid 10.6/80
		23			↑	60 <sup>s</sup>	
		24			↓	60 <sup>s</sup>	
		25	12:10:08.6	16:39:21		5 <sup>m</sup>	17 Asteroid 9.8/150
		26			↑	60 <sup>s</sup>	
		27			↓	60 <sup>s</sup>	
		28	13:09:54.5	17:46:55		3 <sup>m</sup>	17 JAU 7.3/850
		29			↑	60 <sup>s</sup>	
		30			↓	60 <sup>s</sup>	
		31	10:58:21	-11:48:43		15 <sup>m</sup>	F Stars/40 8.10/360
		32			↑	60 <sup>s</sup>	



TO CAM 2/29

Spectrograph ECHELLE Intensified Reticon  
 Log Sheet RAW/RET  
 Grating 300l Observer RJD  
 Telescope 61" Wyo. Tel. Date 2/29-3/1/89 Disk ORO 2017

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	clear. λ 5187Å
		2	96050	11:02:05	-20:51:18	6 <sup>m</sup>	40 F-Stars 8.02/230
		3			↑	60 <sup>s</sup>	
		4			↓	60 <sup>s</sup>	
		5	98413	11:16:39.9	-19:57:12	8 <sup>m</sup>	40 F-Stars 8.10/250
		6			↑	60 <sup>s</sup>	
		7			↓	60 <sup>s</sup>	
		8	102828	11:47:43.4	-19:19:34	12 <sup>m</sup>	40 F-Stars 7.89/215
		9			↑	60 <sup>s</sup>	
		10			↓	60 <sup>s</sup>	
		11	93763	10:47:24.3	53:36:57	20 <sup>m</sup>	40 F-Stars 7.80/230
		12			↑	60 <sup>s</sup>	
		13			↓	60 <sup>s</sup>	
		14	104636	12:00:26.6	41:20:39	10 <sup>m</sup>	40 F-Stars 8.19/275
		15			↑	60 <sup>s</sup>	
		16			↓	60 <sup>s</sup>	
		17	104711	12:00:58	-2:10:03	13 <sup>m</sup>	40 F-Stars 7.6/300
		18			↑	60 <sup>s</sup>	
		19			↓	60 <sup>s</sup>	
		20	105584	12:06:49.5	53:40:27	8 <sup>m</sup>	40 F-Stars 7.51/480
		21			↑	60 <sup>s</sup>	
		22			↓	60 <sup>s</sup>	
		23	GL725a	18:42:12	59:32:18	5 <sup>m</sup>	34/45 8.90/100
		24			↑↓	60 <sup>s</sup>	
		25	GL725b	18:42:12	59:33:18	8 <sup>m</sup>	34/45 9.69/50
		26			↑	60 <sup>s</sup>	
		27			↓	60 <sup>s</sup>	
		28	1016 Cyg	19:55:20	39:41:30	15 <sup>m</sup>	45 Kenyan Symbiotic 10.0/12
		29			↑	60 <sup>s</sup>	
		30			↓	60 <sup>s</sup>	
		31	G142-2	19:59:36	15:59:36	6 <sup>m</sup>	15 Italos 10.38/40
		32			↑	60 <sup>s</sup>	

3/1/88

Intensified Reticon TO CAMI  
 Spectrograph ECHELLE Log Sheet RAW/RET  
 Grating 300L Observer RJD & JMZ  
 Telescope 61" Wyeth Date 2/27-3/1/88 Disk ORO 2018

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	Clear 25187A
	GL699	17:55:23	04:33:18			6 <sup>m</sup>	36/45 9.54/40
		3			↑	60 <sup>s</sup>	
		4			↓	60 <sup>s</sup>	
	592-16	19:35:19	04:11:54			6 <sup>m</sup>	15 Halofin 10.18/30
		6			↑	60 <sup>s</sup>	
		7			↓	60 <sup>s</sup>	
	X CYG	20:41:27	35:24:24			2.5 <sup>m</sup>	38 Cepheids 6.4/2100
		9			↑	60 <sup>s</sup>	
		10			↓	60 <sup>s</sup>	
	GL628	16:27:31	-12:32:18			5 <sup>m</sup>	36/45 (5% Dawn) 10.12/40
		12			↑	60 <sup>s</sup>	
		13			↓	60 <sup>s</sup>	
	H146051	16:11:43	-3:34:01			2 <sup>m</sup>	17 IAU 1.0ND 2.7/1500
		15			↑	60 <sup>s</sup>	
		16			↓	60 <sup>s</sup>	
	SKYDOWN					3 <sup>m</sup>	16 SKY 1/1400+
		18			↑	60 <sup>s</sup>	
		19			↓	60 <sup>s</sup>	
	SKYDOWN					2 <sup>m</sup>	16 SKY 1/2000+
		21			↑	60 <sup>s</sup>	
		22				120 <sup>m</sup>	
		23				120m	
3/1-2/88		24			↓	60s	clear 25187A
	SKYEVEN	meridian	+30°			2m	16 sky
		26			↑	60s	
		27			↓	60s	
	SKYEVEN	4h west	+30°			2m	16 sky
		29			↑	60s	
		30			↓	60s	
	HB779	1:23:54	-00:29:29				17 IAU standards
		32			↑	60s	