

2 NOV 88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date 31 Oct - 1 NOV Observer JC c RPS
 Disk ORO2386

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	λ 5187 Å
	25697	04 02 03	-03 28 29		↓	20M	40 fstars 8.19/500
	THAr				↓	60s	
	25697	"	"		↓	20M	40 fstars 8.19/500
	THAr				↑	60s	
	THAr				↓	60s	
	H26162	04 06 15	19 28 43		↓	2M	17 IAM stars 5.5
	THAr				↑	60s	
	THAr				↓	60s	λ 6562 Å
	2 OR1	05 52 28	07 23 58		↓	20M	SALLY H ₂ Profiles (2.0nd) 0.8
	THAr				↑	60s	
	THAr				↓	60s	λ 5187 Å
	44300	06 19 15	30 58 13		↓	20M	40 fstars 7.00/350
	THAr				↓	60s	
	44300	"	"		↓	10M	" " (intern. by elds) " "
	THAr				↑	60s	(added out 4 min)
	THAr				↓	60s	
	SKY DUNE	4 hrs East	+20°		↓	2M	16 SKY
	THAr				↑	60s	
	THAr				↓	60s	
	SKY DUNE	Meridian	+20°		↓	2M	16 SKY
	THAr				↑	60s	
	INCANDS					120M	
	INCANDS					120s	
2-3 Nov 1988	THAr				↓	60s	- cloudy -
	SKY-EVE	φ hrs	+20°		↓	2M	
	THAr				↑	60s	
	THAr				↓	60s	
	SKY-EVE	4 hrs W	+20°		↓	2M	
	THAr				↑	60s	
	/						
	/						

Blair 88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date 2-3 Nov. 1988 Observer RPS
 Disk ORO 2387

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		Th-Ar			↓	60s	- cloudy -
	H3346	00:34:03	44:12:47			2.5m	S.3 Griffin Standard (IAU project)
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	4267	00:42:43	43:07:36			20m	8.0/300 Estars
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	TV Cet	03:12:03	02:34:10			15m	8.6/100's Zepherus Binocular (Estars)
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	G39-43	04:54:40	34:11:42			2m	15 Hales 8.18
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	P1457	05:31:59	04:35:16			3m	LARRY PMS STR 9.6
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	P2445	05:34:23	05:01:20			12m	LARRY PMS STR 11.0
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	PL Cass	00:27:11	59:56:12			3m	38 Cepheids 10.6
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	T MON	06:22:31	07:06:53			4m	38 Cepheids 6.6
		Th-Ar			↑	60s	(closed off 20m)
	YN LAMPS					120m	
	INCAND					120m	
		Th-Ar			↓	60s	$\lambda = 5187 \text{ \AA}$ CLEAR
	SKY-EVE	4hrs.	+20°			2m	
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	SKY-EVE	4hrs. W	+20°			2m	
		Th-Ar			↑	60s	

3-4 Nov 1988

3 Nov 88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date 3-4 Nov. 1988 Observer RPS
 Disk ORO 2388

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Th-Ar		↓	60s	
		2	H156014	17:12:22	14:26:46	3m	3.1 IAU standard
		3	Th-Ar		↑	60s	
		4	Th-Ar		↓	60s	
		5	(2)	20:08:40	00:08:50	5.5m	10.7 Asteroid (10 uncertain)
		6	Th-Ar		↑	60s	(2* in field)
		7	(2)	"	"	7.5m	
		8	Th-Ar		↑	60s	
		9	Th-Ar		↓	60s	
		10	G204-30	17:48:17	37:32:12	5.5m	10.3/20 Halos
		11	Th-Ar		↑	60s	
		12	Th-Ar		↓	60s	
		13	166281	18:06:54	24:33:56	20m	8.1/500 F stars
		14	Th-Ar		↑	60s	
		15	166281	"	"	10m	
		16	Th-Ar		↑	60s	
		17	Th-Ar		↓	60s	
		18	171275	18:30:32	36:23:16	11.5m	7.7/300 F stars
		19	Th-Ar		↑	60s	
		20	Th-Ar		↓	60s	
		21	G205-42	18:52:44	42:55:00	6.5m	10.0/30 Halos
		22	Th-Ar		↑	60s	
		23	Th-Ar		↓	60s	
		24	189578	19:57:54	14:45:52	8m	8.1/150 F stars
		25	Th-Ar		↑	60s	
		26	Th-Ar		↓	60s	
		27	190045	18:58:37	43:18:07	8m	8.2/200 200!! F stars
		28	Th-Ar		↑	60s	
		29	Th-Ar		↓	60s	
		30	192911	20:13:59	43:29:47	11.5m	8.1/250 F stars (Close Pair; faint
		31	Th-Ar		↑	60s	companion 2" to NW)
		32	/				

3 Nov 88

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300 L

Observer RPS

Telescope 61" Wyeth

Date 3-4 NOV. 1988

Disk ORO 2389

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	(1)	23:33:36	-17:32:45	6m	8.7 Asteroid
		3			↑	60s	
		4			↓	60s	
		5	H693	00:08:43	-15:44:33	2m	5.0 IAU standard
		6			↑	60s	
		7			↓	60s	
		8	H4128	00:41:05	-18:15:39	2m	2.0 IAU standard ND=1.0
		9			↑	60s	
		10			↓	60s	
		11	204813	21:27:48	45:54:43	10m	7.6/400 F stars
		12			↑	60s	
		13			↓	60s	
		14	210607	22:08:31	40:00:55	20m	8.1/400 F stars
		15			↑	60s	
		16			↓	60s	
		17	212313	22:20:21	45:10:49	10.5m	8.2/300 F stars
		18			↑	60s	
		19			↓	60s	
		20	GRS 809	20:52:18	61:58:30	4m	8.5/20 M Stars
		21			↑	60s	
		22			↓	60s	
		23	198224	20:45:07	56:38:59	5m	7.4/75 F stars
		24			↑	60s	
		25			↓	60s	
		26	ε Lac	22:38:53	56:34:05	3m	8.9 Cepheids/Huchra
		27			↑	60s	
		28			↓	60s	
		29	217160	22:55:33	55:43:46	5m	8.2/150 F stars
		30			↑	60s	
		31					
		32					

3 Nov 88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date 3-4 Nov. 88 Observer RPS
 Disk ORO 2390

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments
		1	Th-Ar		↓	60S	
	H3346	2	00:34:03	44:12:47		2m	5.3 IAU standard
		3	Th-Ar		↑	60S	
		4	Th-Ar		↓	60S	
	3081	5	00:31:31	51:22:02		12m	7.7/500 F stars
		6	Th-Ar		↑	60S	
		7	Th-Ar		↓	60S	
	3626	8	00:36:53	36:30:58		20m	7.8/500 F stars (There is a faint companion # 7" to the South)
		9	Th-Ar		↑	60S	
		10	Th-Ar		↓	60S	
	10673N	11	01:42:01	43:27:16		10m	7.7/200 F stars (N component)
		12	Th-Ar		↓	60S	(4" separation, equal mag)
	10673S	13	"	"		12.5m	" (S component)
		14	Th-Ar		↑	60S	
		15	Th-Ar		↓	60S	SKY/CEX Mirror not moving
	10792W	16	01:43:35	45:26:55		9m	9.2/120 F* completely to end of its travel! Beam practically
		17	Th-Ar		↓	60S	(W*)
	10792E	18	"	"		12m	(E*) F* cut off. Do not know how long this has been occurring.
		19	Th-Ar		↑	60S	
		20	Th-Ar		↓	60S	Rotated SKY/CEX gear to "new"
	G217-8	21	23:24:15	60:21:06		20m	10.5/60 teeth Halos
		22	Th-Ar		↑	60S	
		23	Th-Ar		↓	60S	
	DLCAS	24	00:27:11	59:56:12		5m	10.6 Cepheids
		25	Th-Ar		↑	60S	
		26	Th-Ar		↓	60S	
	H22484	27	03:34:19	00:14:40		2m	4.4 IAU standard
		28	Th-Ar		↑	60S	
		29	Th-Ar		↓	60S	(17) (2)
	H38899	30	04:23:48	16:38:08		35m	8.1 Velocity Standard & Hyades
		31	Th-Ar		↑	60S	
		32	/				

3 Nov 88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date 3-4 Nov 88 Observer RDS
 Disk ORO 2391

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	G81-15	04:17:22	45:42:18		3m 9.9/15 Halos
		3	Th-Ar		↑	60s	
		4	Th-Ar		↓	60s	
		5	G83-34	04:45:46	18:37:36		2.5m 9.7/15 "
		6	Th-Ar		↑	60s	
		7	Th-Ar		↓	60s	
		8	G85154	03:43:19	26:03:42		5m 9.6/20 M Stars
		9	Th-Ar		↑	60s	
		10	Th-Ar		↓	60s	
		11	S076206	03:45:07	24:50:08		3m 6.8/20 "
		12	Th-Ar		↑	60s	
		13	Th-Ar		↓	60s	
		14	G8569	01:40:10	63:34:24		3m 8.5/20 "
		15	Th-Ar		↑	60s	
		16	Th-Ar		↓	60s	
		17	S011983	01:44:10	63:36:14		2m 5.7/20 "
		18	Th-Ar		↑	60s	
		19	Th-Ar		↓	60s	
		20	V643 Ori	06:04:31	-02:54:30		20m 10.5/100's Eclipsing Binary / F stars
		21	Th-Ar		↑	60s	
		22	Th-Ar		↓	60s	
		23	S133424	06:31:51	-03:02:51		2m 7.1/20 M Stars
		24	Th-Ar		↑	60s	
		25	Th-Ar		↓	60s	
		26	G86273	07:24:43	05:22:42		6.5m 9.8/20 M Stars, Nounby, Spore Motin (34,36,45)
		27	Th-Ar		↑	60s	
		28	Th-Ar		↓	60s	
		29	UV Aur	05:18:33	32:27:48		6m 10.0 Kanyon / Symbiotics
		30	Th-Ar		↑	60s	
		31					
		32					

TO CAM 11/4/88

Spectrograph ECHELLE Intensified Reticon
 Grating 300 l Log Sheet
 Telescope 61" Wyeth Date 3-4 Nov. 1988 Observer RPS
 Disk ORO 2392

Change....	File	ID	RA	Dec	1950.0 L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	G175-35	04:29:34	46:35:48		2.5m 9.2/15 Halos
		3	Th-Ar		↑	60s	
		4	Th-Ar		↓	60s	
		5	G81-38	04:48:03	45:45:24		2m 7.6/15 "
		6	Th-Ar		↑	60s	
		7	Th-Ar		↓	60s	
		8	G96-1	04:43:38	45:53:54		6.5m 10.2/15 " (Very faint, close
		9	Th-Ar		↑	60s	companion to the East; better A in slit)
		10	Th-Ar		↓	60s	
		11	G175-47	04:40:06	52:53:36		3m 9.1/15 "
		12	Th-Ar		↑	60s	
		13	Th-Ar		↓	60s	
		14	G102-44	05:59:54	13:04:48		9m 10.8/15 "
		15	Th-Ar		↑	60s	
		16	Th-Ar		↓	60s	
		17	G103-53	06:40:41	25:34:48		5m 10.2/15 "
		18	Th-Ar		↑	60s	
		19	Th-Ar		↓	60s	
		20	H54716	07:08:13	39:24:15		2m 4.9 IAU standard
		21	Th-Ar		↑	60s	
		22	Th-Ar		↓	60s	
		23	H66141	07:59:40	02:28:24		2m 4.4 "
		24	Th-Ar		↑	60s	
		25	Th-Ar		↓	60s	
		26	SKY-DWN	4 1/2 hrs E	+30°		2m
		27	Th-Ar		↑	60s	
		28	Th-Ar		↓	60s	
		29	SKY-DWN	φ hrs.	130°		2m
		30	Th-Ar		↑	60s	
		31	INCANDS			120m	
		32	INCANDS			120m	

End of Oct-Nov
Run

11/14/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW RET
 Telescope 61" Wyeth Date 13-14 NOV. 1988 Observer RPS & DWL
 Disk ORO 2393

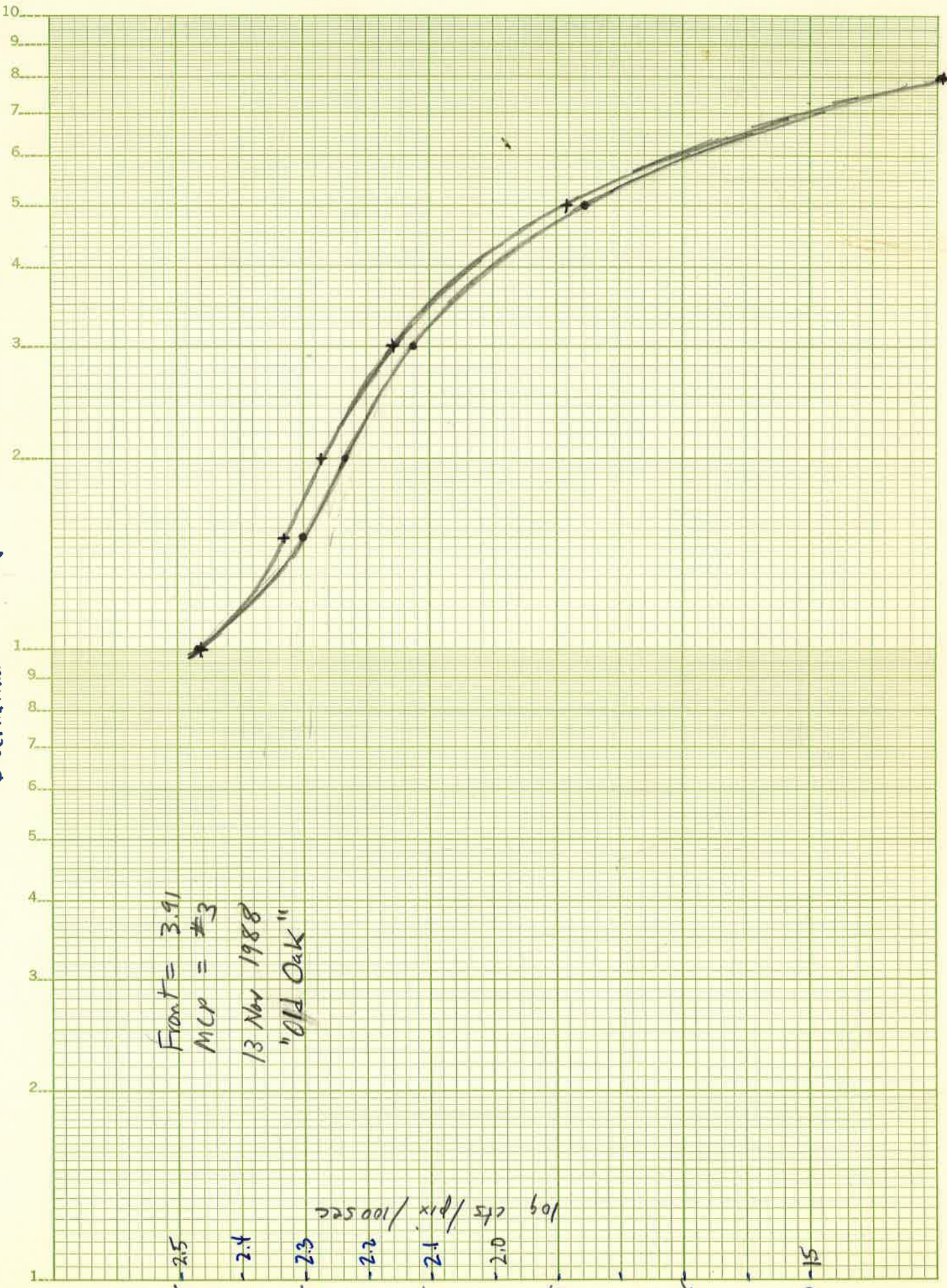
Change.... File ID RA Dec L/R Exposure Comments Start of Nov-Dec Echelle Run

1	TR1.0					
2	TR4.0					
3	ROT.450					
4	ROT.300					
5	ROT.400					
6	ROT.350					
7	TR1.5					
8	TR4.2					
9	TR4.2					
10	PH 1.00					
11	PH 1.50					
12	PH 2.00					
13	PH 3.00					
14	PH 5.00					
15	PH 8.00					
16	TR1.0F					
17	TR1.0W					
18	TR0.0W					
19	TR1.0W					
20	ROT.370					
21	TR1.5W					
22	TR0.5W					
23	TR1.0W					
24	MAGBIG					
25	MAGSMAL					
26	BIGDN					
27	BIGUP					
28	BIGW					
29	BIGE					
30	PH +44					
31	PH -20					
32	PH +10					

Discriminator Voltage

Front = 3.91
MCP = #3
13 Nov 1988
"Old Oak"

log cts / pix / 100 sec



14 Nov 88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date 13-14 Nov. 1988 Observer RPS & JAC
 Disk ORO 2394

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1					
		2					
		3					
		4					
		5					
		6			↓	60s	
		7	H 66141	07 59 39 02 28 23		2m	17 ION STPS 1.0 ND FILTER 4.4
		8			↑	60s	
		9			↓	60s	
		10	M 67978	08 48 33 11 56 41		6m	17 ION STPS ID should be 67-978 9.7
		11			↑	60s	
		12			↓	60s	
		13	G 88-11	07 07 39 20 31 36		4m	15 Halos 9.09/15
		14			↑	60s	
		15			↓	60s	
		16	GLs 273	07 24 43 05 22 42		14m	34 M STARS + Newby's Space Motion 9.8/20
		17			↑	60s	
		18			↓	60s	
		19	G 25319	08:40:02 09:44:18		9m	9.7/20 M stars
		20			↑	60s	
		21			↓	60s	
		22	(7)	09:32:33 10:51:39		7m	10.4 Asteroid
		23			↑	60s	
		24			↓	60s	
		25	H 89449	10:17:01 19:43:31		2m	4.8 IAU standard
		26			↑	60s	
		27			↓	60s	
		28	H 92588	10:38:52 -01:28:41		2m	6.3 IAU standard
		29			↑	60s	
		30					
		31					
		32					

11/14/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date 13-14 Nov. 1988 Observer RPS & JMJ
 Disk ORO 2395

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Th-Ar		↓	60s	
		2	69715B	08:16:20	35:12:00	7m	7.1/100 F stars (Confirmed ID SW#)
		3	Th-Ar		↑	60s	
		4	Th-Ar		↓	60s	
		5	H81797	09:25:08	-08:26:28	2m	2.0 IAU standard)
		6	Th-Ar		↑	60s	
		7	Th-Ar		↓	60s	
		8	SKY-DWN	4hrs.E	+20°	2m	
		9	Th-Ar		↑	60s	
		10	Th-Ar		↓	60s	
		11	SKY-DWN	φhrs	+20°	2m	
		12	Th-Ar		↑	60s	
		13	INCANDS	φhrs	φ°	120m	
		14	INCANDS			120m	
		15	INCANDS			100m	
		16	INCANDS			120m	
		17	ThAr		↓	60s	7 = 5187A CLEAR
		18	SKYEVIEW	φhrs	φ°	2m	16 SKY
		19	ThAr		↑	60s	
		20	ThAr		↓	60s	
		21	SKYEVIEW	4h west	φ°	2m	16 SKY
		22	ThAr		↑	60s	
		23	ThAr		↓	60s	
		24	H182572	19:22:35	11:50:10	2m	5.2 IAU STANDARD
		25	ThAr		↑	60s	
		26	ThAr		↓	60s	
		27	H18448	18:48:10	33:05:20	15m	10.3/30 CLEAR
		28	ThAr		↑	60s	
		29	ThAr		↓	60s	
		30	V433Hc	18:20:03	23:25:47	20m	10.5 Symbiotic
		31	ThAr		↑	60s	
		32					

11/14/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date 14-15 Nov. 1988 Observer JMZ
 Disk ORO 2397

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	ThAr		↓	60s	2 = 5187A CLEAR
] →		2	MVASSC	21:37:19	57:26:16		20M 11.7/15? MARSHALL
		3	ThAr		↑↓	60s	2 refracted telescopes
		4	MVASSC	"	"	10m	" "
		5	ThAr		↑	60s	
		6	ThAr		↓	60s	
		7	G231-52	21:37:51	60:03:12		17M 10.34/30 HALOS
		8	ThAr		↑	60s	
		9	ThAr		↓	60s	
		10	G1860A	22:26:13	57:26:48		15M 9.85 METARS NEARBY
		11	ThAr		↑	60s	2 components not included
		12	ThAr		↓	60s	
		13	Z Lac	22:38:52	56:34:25		5M 8.5 CEPHEIDS
		14	ThAr		↑	60s	
		15	ThAr		↓	60s	
		16	G190-10	23:05:39	41:35:12		20M 11.22/20 HALOS
		17	ThAr		↑	60s	
		18	ThAr		↓	60s	
		19	G217-8	23:24:15	60:21:06		20M 10.49/60 HALOS
		20	ThAr		↑	60s	
		21	ThAr		↓	60s	
		22	DL Cas	00:27:11	59:56:12		5M 10.4 CEPHEIDS
		23	ThAr		↑	60s	
		24	ThAr		↓	60s	
		25	G115b	00:15:31	43:44:11		20M 11.04 METARS, SPACE AND NEARBY
		26	ThAr		↑↓	60s	
		27	G115g	00:15:31	43:44:16		4M 8.07 " "
		28	ThAr		↑	60s	
		29	ThAr	3:12:03	2:34:10		60s 8.6/100's
		30	TV Cet	3:12:03	2:34:10		7M 8.6/100' F STARS
		31	ThAr			60s	
		32					

11/14/88

Spectrograph ECHELLE Intensified Reticon TO CAM1
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date 14-15 Nov 88 Observer JMZ
 Disk ORO 2398

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments
		1	ThAr		↓	60s	7 = 5187A clear
		2	G6166C	4:12:58	-7:43:48	20M	11.17 NEARBY & SPACE
		3	ThAr		↑↓	60s	
		4	G1166a	4:12:58	-7:43:48	3M	4.43 " "
		5	ThAr		↑	60s	
		6	ThAr		↓	60s	
		7	SWCma	7:06:08	-22:21:36	20M	9.5/100'S F STARS
		8	ThAr		↑	60s	CLN - 0.7? NO CHART
		9	ThAr		↓	60s	USED AAVSO ATLAS
		10	Ax Per	1:33:06	54:10:19	10M	11.0 SYMBOLICS
		11	ThAr		↑	60s	
		12	ThAr		↓	60s	
		13	G77-56	3:26:43	1:48:24	8M	10.45/15 HALOS
		14	ThAr		↑	60s	
		15	ThAr	4:24:55		60s	
		16	G8-46	4:34:53	19:58:17	10M	11.03/15 HALOS
		17	ThAr		↑	60s	
		18	ThAr		↓	60s	
		19	G108-58	7:07:30	-1:12:54	16M	11.84/15 HALOS
		20	ThAr		↑	60s	
		21	ThAr		↓	60s	
		22	P244c	5:34:23	-5:01:20	13.5M	11.0/15 ORION
		23	ThAr		↑↓	60s	
		24	P1457	5:31:59	-4:35:16	5.5M	9.6/20 ORION
		25	ThAr		↑	60s	
		26	ThAr		↓	60s	
		27	G6234a	6:26:51	-2:46:12	20M	11.07 NEARBY & F STARS
		28	ThAr		↑↓	60s	2 SYSTEM NOT RESOLVED
		29	G6234a	6:26:51	-2:46:12	20M	both a & b observed together
		30	ThAr		↑	60s	
		31	/			/	
		32	/			/	



11/15/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW RET
 Telescope 61" Wyeth Date 14-15 Nov 88 Observer JME
 Disk ORO 2399

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		7hAr			↓	60s	$\lambda = 5187\text{\AA}$ clear
		SWCMa	7:06:08	-27:21:30		20M	9.5/100's STARS
		7hAr			↑	60s	(2nd observation tonight)
		7hAr			↓	60s	
		(3)	10:01:47	2:04:29		3.5M	10.7 ASTEROIDS
		7hAr			↑	60s	
		7hAr			↓	60s	
		H92588	10:38:52	-1:28:48		2M	6.3 IAU STANDARDS
		7hAr			↑	60s	
		7hAr			↓	60s	
		SKYDOWN	4h East	0°		2M	16 sky
		7hAr			↑	60s	
		7hAr			↓	60s	
		SKYDOWN	Meridian	0°		2M	16 sky
		7hAr			↑	60s	
		INCANDS				120M	
		INCANDS				120M	
15-16 NOV 1988 JME		7hAr			↓	60s	$\lambda = 5187\text{\AA}$ HIGH clouds
		SKYVIEW	Meridian	0°		2M	16 sky
		7hAr			↑	60s	
		7hAr			↓	60s	
		SKYVIEW	4h West	0°		2M	16 sky
		7hAr			↑	60s	readjusted "SET"
		7hAr			↓	60s	
		H212943	22:25:20	4:26:39		2M	4.9 IAU STANDARDS
		7hAr			↑	60s	
		7hAr			↓	60s	
		H144284	16:00:57	58:41:29		3M	4.1/700 M STARS
		7hAr			↑	60s	
		7hAr			↓	60s	
		G18673	16:22:39	48:28:20		12M	10.3/20 M STARS
		7hAr			↑	60s	

11/15/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW RET
 Telescope 61" Wyeth Observer J M Z
 Date 15-16 Nov 88 Disk ORO 2401

Change....	File	ID	RA	Dec	1950.0 L/R ↑/↓	Exposure	Comments
		1			↓	60s	$\lambda = 5187\text{\AA}$ CLEARING
		2	G1s 846	21:59:38	1:09:30	4m	9.2/20 METARS
		3	7hAr		↑	60s	
		4	7hAr		↓	60s	
		5	G1s 876	22:50:35	-14:31:12	9m	10.2/20 NEARBY METARS
		6	7hAr		↑	60s	
		7	7hAr		↓	60s	
		8	G1s 908	23:46:37	2:07:37	4.5m	9.0/20 METARS
		9	7hAr		↑	60s	
		10	7hAr		↓	60s	
		11	G130-10	23:43:38	34:58:17	4m	9.13/20 HALOS
		12	7hAr		↑	60s	
		13	7hAr		↓	60s	
		14	ZAnd	23:31:15	48:32:32	8m	10.0 Symbiotic
		15	7hAr		↑	60s	
		16	7hAr		↓	60s	
		17	EGAnd	00:41:53	40:24:22	2m	7.5 " "
		18	7hAr		↑	60s	
		19	7hAr		↓	60s	
		20	G33-30	00:58:27	16:06:10	6m	10.65/30 HALOS
		21	7hAr		↑	60s	
		22	7hAr		↓	60s	
		23	G2-50	1:34:14	4:12:24	12m	11.37/15 HALOS
		24	7hAr		↑	60s	
		25	7hAr		↓	60s	
		26	G1s 46	00:03:05	45:32:40	4.5m	9.0/20 METARS
		27	7hAr		↑	60s	
		28	7hAr		↓	60s	
		29	G1s 14	00:14:28	46:40:18	3m	9.0/20 "
		30	7hAr		↑	60s	
		31					
		32					

11/15/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW RET
 Telescope 61" Wyeth Date 15-16 NOV 88 Observer JMZ
 Disk ORO 2402

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	ThAr		↓	60s	2 = 5187A c16m12
	G1860b	2	22:26:13	57:26:48		17m	11.3 NEARBY & SPACE
		3	ThAr		↑↓	60s	EXCELLENT seeing! PAIR resolved LITTLE CONTAMINATION
	G1860a	4	22:26:13	57:26:48		5m	9.85 NEARBY & M57AIDS
		5	ThAr		↑	60s	
		6	ThAr		↓	60s	
	G172-38	7	1:02:41	49:11:18		12m	11.08/15 HALOS
		8	ThAr		↑	60s	
		9	ThAr		↓	60s	
	G172-46	10	1:13:37	51:35:46		9m	11.15/20 HALOS
		11	ThAr		↑	60s	
		12	ThAr		↓	60s	
	G172-58	13	1:20:13	47:44:54		5m	10.17/30 HALOS
		14	ThAr		↑↓	60s	
	G172-61	15	1:31:16	48:29:06		8m	11.0/20 HALOS
		16	ThAr		↑	60s	
		17	ThAr		↓	60s	
	G173-2	18	1:27:49	52:29:18		5m	10.05/15 HALOS
		19	ThAr		↑	60s	
		20	ThAr		↓	60s	
	G134-10	21	2:34:26	43:46:42		4m	10.18/15 "
		22	ThAr		↑	60s	
		23	ThAr		↓	60s	
	G76-21	24	2:28:32	9:33:24		11m	10.18/60 "
		25	ThAr		↑	60s	
		26	ThAr		↓	60s	
	G38-13	27	3:42:21	28:53:48		11m	11.49/15 "
		28	ThAr		↑	60s	
		29	ThAr		↓	60s	
	G83-34	30	4:45:46	18:37:38		2m	9.69/15 HALOS
		31	ThAr		↑	60s	2 TOO FAINT
		32					wrong way

11/15/88

Spectrograph ECHELLE Intensified Reticon TO CAM1
 Grating 300 l Log Sheet RAW RET
 Telescope 61" Wyeth Date 15-16 Nov 88 Observer J M Z
 Disk ORO 2403

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	$\lambda = 5187\text{\AA}$ CLEAR
		2	TV Cet 3:12:03	2:34:10		15M	8.6/100's F STARS
		3			↑	60s	
		4			↓	60s	
		5	SPH 1983 1:44:10	63:36:14		4.5m	5.7/20 M STARS
		6			↑	60s	
		7			↓	60s	
		8	G103-46 6:36:55	30:09:51		10M	10.87/39? HAIOS
		9			↑	60s	
		10			↓	60s	
		11	UVAur 5:18:33	32:27:48		5m	10.0 SYNCHROTRONS
		12			↑	60s	*NOTE FAINT VISUAL
		13			↓	60s	COMPONENT ~1-2" NORTH
		14	TV Cet 3:12:03	2:34:10		12M	8.6/100 F STARS
		15			↑	60s	
		16			↓	60s	
		17	SWCma 7:06:08	-22:21:36		15m	9.5/100's F STARS 2 2'
		18			↑	60s	which one?
		19	SWCma 7:06:08	-22:21:36		15m	9.5/100's F STARS 2 2'
		20			↑	60s	
		21			↓	60s	
		22	G10319 8:40:02	9:44:18		5M	9.7/20 M STARS
		23			↑	60s	
		24			↓	60s	
		25	H1085217 9:47:54	4:34:42		2M	6.2/200 "
		26			↑	60s	
		27			↓	60s	
		28	H100018 11:28:07	41:33:51		2M	7.0/100 M STARS
		29			↑	60s	
		30					
		31					
		32					

TO CAM 11/16/88

Spectrograph ECHELLE Intensified Reticon
 Grating 300 l Log Sheet
 Telescope 61" Wyeth Date 15-16 Nov 88 Observer JMZ
 Disk ORO 2404

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	7 = 5187A CLEAR
		2	G147-42	11:37:03	36:29:30	↓	15m 11.35/15 HALOS
		3			↓	60s	
		4			↓	60s	
		5	G15499	13:03:49	20:59:42	↓	5m 9.4/20 MISTARS
		6			↓	60s	
		7	S422651	13:03:56	22:53:00	↓	2m 5.9/20 MISTARS
		8			↓	60s	
		9			↓	60s	
*		10	L114762	13:09:59	17:46:59	↓	3m 7.3/30 HALOS
		11			↓	60s	(IT'S BACK!)
		12			↓	60s	(Great)
		13	G165-22	13:35:51	39:26:00	↓	2m 7.78/15 HALOS
		14			↓	60s	-0-
		15			↓	60s	
		16	G111-33	7:15:13	46:44:0	↓	5m 9.43/15 HALOS
		17			↓	60s	
		18			↓	60s	
		19	H103095	11:50:06	38:04:39	↓	2m 6.5 JAV STANDARD
		20			↓	60s	
		21			↓	60s	
		22	SKYDOME	4 ^h East	0°	↓	2m 16 SKY
		23			↓	60s	
		24			↓	60s	
		25	SKYDOME	Meridian	0°	↓	2m 16 SKY
		26			↑	60s	
		27				120m	
		28				120m	
		29					
		30					
		31					
		32					

11/17/88

Intensified Reticon TO CAM
 Spectrograph ECHELLE Log Sheet RAW RET
 Grating 300 L Observer JRC
 Telescope 61" Wyeth Date NOV 16-17 1988 Disk ORO 2405

Change....	File	ID	RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	605	2.91878
		2	SKMEVEW	0 hrs	+10°	3M	16 SKM
		3	TWR		↑	605	
		4	TWR		↓	605	
		5	SKMEVEW	+ hrs West	+10°	3M	16 SKM
		6	TWR		↑	605	
NOV 17-18 1988		7	TWR		↓	605	reset thr Ar cen/skm
		8	SKMEVEW	0 hrs	+20°	2M	16 SKM mech-stops readjusted- possible t-shifts.
		9	TWR		↑	605	
		10	TWR		↓	605	
		11	SKMEVEW	+ hrs West	+20°	2M	16 SKM
		12	TWR		↑	605	
		13	TWR		↓	605	
		14	H182572	14 27 35	11 50 09	2M	17 IAN STDS 5.2
		15	TWR		↑	605	
		16	TWR		↓	605	
		17	G21-20	18 35 15	06 50 30	2M	15 Halos (10% sky) 8.34/15
		18	TWR		↑	605	
		19	TWR		↓	605	
		20	G22-7	18 53 13	-05 48 24	2M	15 Halos 7.46/15
		21	TWR		↑	605	
		22	TWR		↓	605	
		23	G142-2	18 59 36	16 59 36	8M	15 Halos 12.38/15
		24	TWR		↑	605	
		25	TWR		↓	605	
		26	S162947	19 42 21	-17 37 42	10M	15 Halos 9.16/30
		27	TWR		↑	605	
		28	TWR		↓	605	
		29	G1828	22 03 14	12 38 18	7M	15 Halos 9.54/30
		30	TWR		↑	605	
		31					
		32					

Spectrograph ECHELLE Intensified Reticon TO CAM 11/17/88
 Grating 300 l Log Sheet RAW RET
 Telescope 61" Wyeth Date NOV 17-19 1988 Observer JRC
 Disk ORO 2406

Change....	File	ID	RA	Dec	1950.0	L/R	Exposure	Comments
						↑/↓		
		TNR				↓	60s	
	G137-33		22 25 40	24 41 00			9 ^m	15 Halos 9.99/15
		TNR				↑	60s	
		TNR				↓	60s	
	G157-21		23 06 29	02 49 18			6 ^m	15 Halos 9.27/20
		TNR				↑	60s	
		TNR				↓	60s	
	157-51W		23 15 02	-01 47 38			2 ^m	15 Halos 9.0/15
		TNR				↑	60s	
		TNR				↓	60s	
	(1)		23 33 03	-16 24 53			4 ^m	17 Asteroids
		TNR				↑	60s	
		TNR				↓	60s	
	GLS TCSA		18 42 18	59 34 22			5 ^m	45 Nearby & MSTARS 9.9/
		TNR				↑	60s	
	GLS 725B		18 42 19	59 34 06			11 ^m	45 Nearby & MSTARS 9.69/
		TNR				↑	60s	
		TNR				↓	60s	
	S166200		00 18 13	-26 44 36			5 ^m	15 Halos 8.34/20
		TNR				↑	60s	
		TNR				↓	60s	
	H3008		00 30 42	-11 00 00			6 ^m	15 Halos 9.46/15
		TNR				↑	60s	
		TNR				↓	60s	
	G30-24		23 49 07	17 04 54			12 ^m	15 Halos 10.56/15
		TNR				↑	60s	
		TNR				↓	60s	
	H4128		00 41 05	-18 15 39			2 ^m	17 IAU STDS 1.0 m filter 2.0.
		TNR				↑	60s	
		TNR				↓	60s	
	G71-27						3 ^m	15 Halos 8.88/20
		TNR				↑	60s	

Spectrograph ECHELLE Intensified Reticon TO CAM 11/17/88
 Grating 300 L Log Sheet RAW RET
 Telescope 61" Wyeth Date Nov 17-18 1988 Observer JRC
 Disk ORO 2407

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	G72-58	02 05 31 29 24 36		6 ^m	15 Halos 9.99/15
		3			↑	60s	
		4			↓	60s	
		5	G173-59	02 30 30 49 17 12		2 ^m	15 Halos 7.75/15
		6			↑	60s	
		7			↓	60s	
		8	-18271	01 34 54 -17 41 12		7 ^m	15 Halos 9.8/20
		9			↑	60s	
		10			↓	60s	
		11	G73-57	02 23 23 05 33 12		2 ^m	15 Halos 7.95/15
		12			↑	60s	
		13			↓	60s	
		14	-10548	02 44 31 -10 20 18		10 ^m	15 Halos 10.42/20
		15			↑	60s	
		16			↓	60s	
		17	G94-70	02 25 20 25 37 30		3 ^m	15 Halos 9.36/15
		18			↑	60s	
		19			↓	10s	
		20	15227	02 24 46 16 25 16		8 ^m	40 f Stars 7.26/300
		21			↑	60s	
		22			↓	60s	
		23	TV Cat	03 12 03 02 34 10		8 ^m	40 f Stars Ecl. Bin. 9.6/106
		24			↑	60s	
		25			↓	60s	
		26	G87-35	03 12 29 00 51 06		7 ^m	15 Halos 10.22/15
		27			↑	60s	
		28			↓	60s	
		29	556455	03 23 53 34 15 18		2 ^m	15 Halos 6.74/50
		30			↑	60s	
		31					
		32					

Spectrograph ECHELLE Intensified Reticon TO CAM 11/17/88
 Grating 300 l Log Sheet RAW RET
 Telescope 61" Wyeth Date 11 17-18 1988 Observer JRC
 Disk ORO 2408

Change....	File	ID	RA	Dec	L/R ↑/↓	Exposure	Comments
		TNR			↓	60s	
	G8-36		04 24 50	24 20 00		7 M	15 Halos 9.42/30
		TNR			↑	60s	
		TNR			↓	60s	
	Alph Ori		05 52 28	07 23 58		8 M	SALLY Ha Profiles 1.04. 1.08 λ 6562. Ha R
		TNR			↑	60s	
		TNR			↓	60s	
	P2445		05 34 23	-05 01 20		14 M	Larry ORION PMS STARS 11.0/15
		TNR			↑	60s	
	P1457		05 31 59	-04 55 16		5 M	Larry ORION PMS STARS 9.6/20
		TNR			↑	60s	
		TNR			↓	60s	
	G102-20		05 37 21	12 09 12		7 M	15 Halos 10.22/15
		TNR			↑	60s	
		TNR			↓	60s	
	G102-27		05 42 49	14 40 18		2 M	15 Halos 9.05/15
		TNR			↑	60s	
		TNR			↓	60s	
	G106-46		06 22 34	00 40 48		3 M	15 Halos 9.09/15
		TNR			↑	60s	
		TNR			↓	60s	
	37603		05 37 26	15 19 18		10 M	40 fstars CTS WOULD NOT PALATKA - DR * F20 CLOSE 6.66/150
		TNR			↑	60s	
		TNR			↓	60s	
	G103-53		06 40 41	25 34 48		5 M	15 Halos 10.19/15
		TNR			↑	60s	
		TNR			↓	60s	
	SWC Ma		07 06 08	-22 21 36		20 M	40 fstars Ecl. Bin. 9.5
		TNR			↑	60s	
		TNR			↓	60s	
	-191422		06 19 00	-19 14 06		10 M	15 Halos 9.69/15
		TNR			↑	60s	

Intensified Reticon

TO CAM 11/17/88

Spectrograph ECHELLE Log Sheet

Grating 300 l Observer JRC

Telescope 61" Wyeth Date NOV 17-18 1988 Disk ORO 2409

Change....	File	ID	RA	Dec	1950.0 L/R ↑/↓	Exposure	Comments
		1			↓	605	2515-R
		2	G106-53	06 28 52	-01 31 54	7M	15 Halos 12.06/15
		3	thAr		↑	605	
		4	thAr		↓	605	
		5	H66141	07 59 39	02 28 23	2M	17 IAG STDS 4.4
		6	thAr		↑	605	
		7	thAr		↓	605	
		8	G9-42	08 57 54	21 39 12	3M	15 Halos 8.8/15
		9	thAr		↑	605	
		10	thAr		↓	605	
		11	75638	08 48 43	2 18 49	21M	40 fstars 7.8/400
		12	thAr		↑	605	
		13	thAr		↓	605	
		14	G108-53	07 02 29	01 28 30	2M	15 Halos 8.45/15
		15	thAr		↑	605	
		16	thAr		↓	605	
		17	+ Mon	06 22 31	07 06 53	2M	38 Cepheids 6.6
		18	thAr		↑	605	
		19	thAr		↓	605	
		20	G-Ls 319	08 40 02	09 44 18	8M	34 MStars 9.7/20
		21	thAr		↑	605	
		22	thAr		↓	605	
		23	72854	08 32 12	21 01 44	20M	40 fstars 7.89/500
		24	thAr		↓	605	
		25	72854	"	"	20M	40 fstars 7.89/500
		26	thAr		↑	605	
		27	72854	"	"	17M	40 fstars 7.89/500
		28	thAr		↑	605	
		29	thAr		↓	605	
		30	1114762	13 09 54	17 46 55	2M	17 IAG STD 7.3
		31	thAr		↑	605	
		32					

Intensified Reticon TO CAM 11/18/88

Spectrograph ECHELLE Log Sheet RAW RET

Grating 300 l Observer JRC

Telescope 61" Wyeth Date Nov 17-18 1988 Disk ORO 2410

Change....	File	ID	RA	Dec	1950.0	L/R	Exposure	Comments
						↑/↓		
		THAr				↓	60s	λ 5157 Å
	658-23		10 47 12	20 45 30			4 ^m	15 Hα
		THAr				↑	60s	9.46/15
		THAr				↓	60s	
	SK41WNE		+ hrs East	+20°			2 ^m	16 SKY
		THAr				↑	60s	
		THAr				↓	60s	
	SK41WNM		Meridian	+20°			2 ^m	16 SKY
		THAr				↑	60s	
	INCANDS						120 ^m	incand. done at +20°
	INCANDS						120 ^m	
NOV 18-19 1988		THAr				↓	60s	
	SK41EVM		Meridian	+20°			2 ^m	16 SKY
		THAr				↑	60s	
		THAr				↓	60s	
	SK41EVEW		4 hrs west	+20°			2 ^m	16 SKY
		THAr				↑	60s	
		THAr				↓	60s	
	1187691		19 48 37	10 17 21			2 ^m	17 Hα STD 1.0 ndi filter 5.1
		THAr				↑	60s	
		THAr				↓	60s	
	692-15		19 33 47	04 39 18			2 ^m	15 Hα 9.2/15
		THAr				↑	60s	
		THAr				↓	60s	
	6202-25		15 58 22	45 52 48			8 ^m	15 Hα 11.24/15
		THAr				↑	60s	
		THAr				↓	60s	
	6224-81		15 44 07	63 00 48			2.5 ^m	15 Hα 8.92/15
		THAr				↑	60s	
		THAr				↓	60s	
	6163-11		7 52 35	20 11 54			12 ^m	15 Hα 9.76/50
		THAr				↑	60s	

Spectrograph ECHELLE
 Grating 300 l
 Telescope 61" Wyeth

Intensified Reticon
 Log Sheet
 Date Nov

TO CAM 11/18/88
RAW RET
 Observer JRC
 Disk ORO 2411

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments
		1			↓	60s	
		2	1E1037	19 37 05	30 27 58	6M	LARRY W HAN 9.5
		3			↑	60s	
		4			↓	60s	
		5	G205-42	18 52 44	42 55 00	7M	15 Halos 9.96/30
		6			↑	60s	
		7			↓	60s	
		8	G208-29	19 30 72	48 28 54	10M	15 Halos 8.51/200
		9			↑	60s	
		10			↓	60s	
		11	S191333	22 39 17	-21 02 48	6M	15 Halos 9.27/30
		12			↑	60s	
		13			↓	10s	
		14	S165532	23 07 48	-13 34 54	9M	15 Halos 8.41/100
		15			↑	60s	
		16			↓	60s	
		17	G29-25	23 19 46	11 53 06	11M	15 Halos 10.82/15
		18			↑	60s	
		19			↓	60s	
		20	G68-31	23 33 33	18 09 48	2M	15 Halos 7.66/20
		21			↑	60s	
		22			↓	10s	
		23	G129-42	23 52 30	20 06 24	2M	15 Halos 8.96/20
		24			↑	60s	
		25			↓	60s	
		26	G128-45	23 15 33	31 15 30	15M	15 Halos 11.73/25
		27			↑	60s	
		28			↓	60s	
		29	G128-84	23 23 52	32 54 54	3M	15 Halos 9.58/15
		30			↑	60s	
		31					
		32					

TO CAM 11/21/88

Spectrograph ECHELLE Intensified Reticon
 Grating 300 l Log Sheet RAW RET
 Telescope 61" Wyeth Date Nov 18-19 1988 Observer JRC
 Disk ORO 2415

Change....	File	ID	RA	Dec	1950.0	L/R	Exposure	Comments
						↑/↓		
		1				↓	60s	
		2	87610	10 04 46	-21 00 36		20 ^m	40 F Stars 6.66/200
		3				↑	60s	
		4				↓	60s	
		5	92197	10 36 19	16 14 36		20 ^m	40 f Stars 8.00/100
		6				↑	60s	
		7				↓	60s	
		8	H114762	13 09 54	17 46 54		5 ^m	17 IGUSIOS & HALOS 898 (100% SKY) 7.3/30
		9				↑	60s	
		10				↓	60s	
		11	SKYDUNE	4 hrs East	+20°		2 ^m	16 SKY
		12				↑	60s	
		13				↓	60s	
		14	SKYDWNM	Meridian	+20°		2 ^m	16 SKY
		15				↑	60s	
		16	INLANDS				120 ^m	
		17	INLANDS				120 ^m	
19-20 Nov 1988 JME		18					60s	2 = SIB? OVERCAST
		19	SKYEVEN	Meridian	+30°		2 ^m	16 SKY
		20					60s	
		21					60s	
		22	SKYEVEN	4 ^h West	+30°		3 ^m	16 SKY
		23					60s	
21-22 Nov 1988 JME		24				↓	60s	2 = SIB? partly cloudy
		25	SKYEVEN	0 hrs	+20°		2 ^m	16 SKY
		26				↑	60s	
		27				↓	60s	
		28	SKYEVEN	4 hrs West	+20°		2 ^m	16 SKY
		29				↑	60s	
		30						
		31						
		32						

Spectrograph ECHELLE Intensified Reticon TO CAM 11/21/88
 Grating 300 l Log Sheet RAW RET
 Telescope 61" Wyeth Date NOV 21-22 1988 Observer JRC
 Disk ORO 2417

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	λ 51678
		2	G1s176	04 40 00	18 52 06	↓	9M 34 Mstars 9.9/20
		3			↑	60s	
		4			↓	60s	
		5	GLs 234	06 26 52	-02 46 42	↓	20M 34 Mstars 11.1/30
		6			↓	60s	
		7	GLs 234	" "	" "	↓	13M 34 Mstars 11.1/30
		8			↑	60s	
		9			↓	60s	
		10	GLs 273	07 24 43	05 22 42	↓	9M 34 Mstars 9.8/20
		11			↑	60s	
		12			↓	60s	
		13	SW CM9	07 06 08	-22 21 36	↓	7M 40 fstars ECL Bin 9.5
		14			↑	60s	
		15			↓	60s	
		16	H 6614	07 59 39	02 28 23	↓	2M 17 ICM STDS 1.0 mp filter 4.4
		17			↑	60s	
		18			↓	60s	
		19	+ MON	06 22 31	07 06 53	↓	2M 38 Cepheids 6.6
		20			↑	60s	
		21			↓	60s	
		22	G88-31	07 27 34	14 04 18	↓	2M 15 Halos 8.49/15
		23			↑	60s	
		24			↓	60s	
		25	SW CMa	07 06 08	-22 21 36	↓	10M 40 fstars ECL Bin 9.5
		26			↑	60s	
		27			↓	60s	
		28	S176026	08 30 00	-20 34 12	↓	10M 15 Halos 10.02/20
		29			↑	60s	
		30			↓	60s	
		31	S0618	09 17 54	-23 16 00	↓	8M 40 fstars 7.76/150
		32			↑	60s	

Spectrograph ECHELLE
 Grating 300 l
 Telescope 61" Wyeth

Intensified Reticon
 Log Sheet

TO CAM 11/22/88
RAW RET
 Observer JM & JRL

Date NOV 27-88 Disk ORO 2470

Change....	File	ID	RA	Dec	1950.0	L/R	Exposure	Comments
						↑/↓		
		THA				↓	60s	2-5187A CLM17
	5164461		21:29:39	-12:29:21			2M	6.9/20 M STARS
		THA				↑	60s	
		THA				↓	60s	
	5127114		21:48:59	00:32:09			2M	6.9/20 "
		THA				↑	60s	
		THA				↓	60s	
	613846		21:59:38	1:09:20			5M	9.2/20 M STARS
		THA				↑	60s	
		THA				↓	60s	- clouds -
	615876		22:50:35	-14:31:12			12M	10.2/20 "
		THA				↑	60s	
		THA				↓	60s	
	613357		1:54:31	41:50:06			2M	9.01/15 HALOS
		THA				↑	60s	
		THA				↓	60s	
	6469		1:03:21	35:14:58			8.5M	7.52/500 15 STARS
		THA				↑	60s	
		TMR				↓	60s	
	GLS 14		00 14 28	40 40 18			3M	34 M STARS 9.0/20
		TMR				↑	60s	
		TMR				↓	60s	
	GLS 2		00 02 35	45 30 31			9M	34 M STARS 9.9/20
		TMR				↑	60s	
		TMR				↓	60s	
	GLS 4 B		00 03 05	45 32 00			2.5M	74 M STARS <input type="checkbox"/> 9.0/20
		TMR				↓	60s	
	GLS 4a		00 03 05	45 32 06			2.5M	34 M STARS <input type="checkbox"/> 8.9/20
		TMR				↑	60s	
		TMR				↓	60s	
	6171-57		00 22 23	45 24 48			4M	15 Halos 9.61/20
		TMR				↑	60s	

TO CAM 11/22/88

Intensified Reticon

Spectrograph ECHELLE Log Sheet RAW/RET

Grating 300 l Observer JRC

Telescope 61" Wyeth Date Nov 22-23 1988 Disk ORO 2421

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		TAr			↓	60s	λ 5187 Å
	14285	02 15 46	-23 51 25			7 ^m	40 Fstars 7.34/300
		TAr			↑	60s	
		TAr			↓	60s	
	GLS 206	05 29 30	09 17 18			20 ^m	34 Mstars 11.5/20
		TAr			↑	60s	
		TAr			↓	60s	
	H 36079	05 26 06	-22 47 53			2 ^m	17 IAM STDS 1.0ND Filter 2.8/
		TAr			↑	60s	
		TAr			↓	60s	
	P 1457	05 31 59	-04 35 16			8 ^m	Larry 9.6/
		TAr			↑	60s	
		TAr			↓	60s	
	V 643 Ori	06 04 31	-02 54 36			6 ^m	40 FSTARS ECL BIN 10.5
		TAr			↑	60s	
		TAr			↓	60s	
	2 OR1	05 52 28	07 23 58			8 ^m	SALLY H ₂ Profiles. 2.0ND Filter .8/1000 λ 6562 Å
		TAr			↑	60s	
		TAr			↓	60s	
	H 28079	04 23 48	16 38 08			2 ^m	17 IAM STDS λ 5187 Å 8.1
		TAr			↑	60s	
		TAr			↓	60s	
	G 243-63	01 06 30	61 16 48			6 ^m	15 Halos 7.72/100
		TAr			↑	60s	
		TAr			↓	60s	
	GLS 338A	04 10 52	52 53 43			2 ^m	34 Mstars 7.6/20
		TAr			↓	60s	
	GLS 338B	09	52			2 ^m	34 Mstars 7.7/20
		TAr			↑	60s	
		TAr			↓	60s	
	H 67978	08 48 33	56 41			4 ^m	7 IAM STDS 9.7
		TAr			↑	60s	

— ID should be 67-978

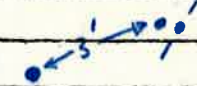
11/23/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date Nov 22-23 1988 Observer JRC
 Disk ORO 2423

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		ThAr			↓	60s	
		S155275	09 30 09	-17 12 42		3 ^m	15 Halos 9.41/20
		ThAr			↑	60s	
		ThAr			↓	60s	
		H114762	3 09 54	17 46 55		2 ^m	17 ILM STDS 7.3
		ThAr			↑	60s	
		ThAr			↓	60s	
		111271	12 45 23	29 48 11		4 ^m	40 Fstars 7.10/300
		ThAr			↑	60s	
		ThAr			↓	60s	
		100043	11 28 07	-12 46 24		8 ^m	40 Fstars 7.07/400
		ThAr			↑	60s	
		ThAr			↓	60s	
		SKYDWN E	4 hrs East	+20°		2 ^m	16 SKY
		ThAr			↑	60s	
		ThAr			↓	60s	
		SKYDWN M	Meridiam	+20°		2 ^m	16 SKY
		ThAr			↑	60s	
		Th-Ar			↓	60s	NO INCRANDS - Roof Repair
23-24 Nov. 1988		SKY-EVE	φ hrs	+25°		3m	Late Sky - Roof Repair
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		H204867	21:28:56	-05:47:32		2.5m	2.9 IAU standard (ND=1.0)
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		171275	18:30:32	36:23:16		20m	7.7/300 Fstars
		Th-Ar			↓	60s	
		171275	"	"		5m	
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		G23-3	19:30:28	07:18:00		6m	9.4/15 Halos
		Th-Ar			↑	60s	

11/23/88

Intensified Reticon TO CAMI
 Spectrograph ECHELLE Log Sheet RAW/RET
 Grating 300 L Observer RPS
 Telescope 61" Wyeth Date 23-24 NOV 1988 Disk ORO 2424

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		Th-Ar			↓	60s	
		IE1037	19:37:05	30:27:58		11m	9.5/30 Marschaell
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		(18)	23:12:21	-15:55:08		6m	10.3 Asteroid
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		H222368	23:37:23	05:21:19		2m	4.1 IAU standard
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		198226	20:45:54	27:16:03		13m	8.0/250 F stars
		Th-Ar			↑	60s	10"
		Th-Ar			↓	60s	
		199765C	20:56:27	16:13:40		17m	7.9/200 F stars 
		Th-Ar			↑	60s	Is this "C"? featureless!
		Th-Ar			↓	60s	The E star came up on the off-set;
		200370	20:59:55	39:03:49		18m	7.5/600 W-pair the only bright * around.
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		203031	21:16:48	25:52:40		20m	8.2/300 F stars
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		206966S	21:42:51 22:39:53			20m	8.3/500 F stars Assuming B = S star;
		Th-Ar			↑	60s	N * is of equal brightness but
		Th-Ar			↓	60s	of later type, OK I agree
		G171-3	23:30:57	42:34:06		2m	7.1/20 Halos with SAO cat.
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		G25809	20:52:18	61:58:30		4m	9.1/20 M stars
		Th-Ar			↑	60s	
		/					
		/					

TO CAM 11/23/88

Intensified Reticon

Spectrograph ECHELLE Log Sheet

Grating 300 l Observer RPS & JAC

Telescope 61" Wyeth Date 23-24 Nov. 1988 Disk ORO 2425

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	22 02 42	23:19:30	26:20:11	4.5m	6.6/200 Fstars
		3			↑	60s	
		4			↓	60s	
		5	217 63 4	22:59:13	46:33:38	11m	7.7/500 Fstars
		6			↑	60s	
		7			↓	60s	
		8	OB5C	02:46:28	17:15:17	20m	10.7/100 LINDROOS
		9			↕	60s	(10% Moon)
		10	OB5C	"	"	20m	" "
		11			↑	60s	
		12			↓	60s	
		13	H 3346	00 34 03	14 12 47	2m	17 IAN STDS 5.3
		14			↑	60s	
		15			↓	60s	
		16	H16884	02 59 39	03 53 41	2m	17 IAN STDS 1.0 nd filter 2.5
		17			↑	60s	
		18			↓	60s	
		19	TV Cat	03 12 03	02 34 10	6m	40 FSTARS ECL BIN. 8.6
		20			↑	60s	
		21			↓	60s	
		22	GLs 34B	00 46 08	57 33 00	2m	34 M STARS 7 Cass B? 7.5
		23			↑	60s	
		24			↓	60s	
		25	V 6430ri	06 04 31	02 54 36	8m	40 FSTARS ECL BIN 10.5
		26			↑	60s	
		27			↓	60s	
		28	SW CMA	07 06 08	22 21 36	11m	40 FSTARS ECL BIN 9.5
		29			↑	60s	
		30			↓	60s	
		31	H65583	07 57 27	29 22 00	2m	17 IAN STDS 7.0
		32			↑	60s	

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date Nov 23-24 1988 Observer JRC
 Disk ORO 2425

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	G111-38	07 46 05	41 35 54	2 ^m	15 Halos 9.11/15
		3			↑	60s	
		4			↓	60s	
		5	18508	02 56 19	19 47 25	5 ^m	40 fstars 8.00/150
		6			↑	60s	
		7			↓	60s	
		8	20933	03 20 29	32 48 58	4 ^m	40 fstars 7.89/100
		9			↑	60s	
		10			↓	60s	
		11	H29139	04 33 03	16 24 38	2 ^m	17 ION SIDS 2.0nd filter 0.9/
		12			↑	60s	
		13			↓	60s	
		14	SW CMA	07 06 08	-22 21 36	11 ^m	40 fstars (down from 230-315-blown 30A fuse) ECLIPSE 9.5
		15			↑	60s	
		16			↓	60s	
		17	G108-29	06 45 57	07 41 20	3 ^m	15 Halos 7.93/15
		18			↑	60s	
		19			↓	60s	
		20	G89-13	07 19 43	09 00 06	3 ^m	15 Halos 9.42/15
		21			↑	60s	
		22			↓	60s	
		23	96363	11 03 55	00 09 30	6 ^m	40 fstars 7.91/100
		24			↑	60s	
		25			↓	60s	
		26	100066	11 26 32	36 30 28	10 ^m	40 fstars 8.19/150
		27			↑	60s	
		28			↓	60s	
		29	104636	12 00 26	41 20 39	12 ^m	40 fstars 8.19/300
		30			↑	60s	
		31					
		32					

11/24/88

Intensified Reticon TO CAM
 Spectrograph ECHELLE Log Sheet RAW RET
 Grating 300 L Observer JRC
 Telescope 61" Wyeth Date Nov 23-24 1988 Disk ORO 2427

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	10 55 84	12 06 49 53 40 27		12 ^m	40 fstars 7.51/800
		3			↑	60s	
		4			↓	60s	
		5	FLS 499	13 03 49 20 59 42		8 ^m	34 M STARS 9.4/20
		6			↑	60s	
		7			↓	60s	
		8	H 114762	13 09 59 17 46 55		2 ^m	17 IAN STDS 7.3
		9			↑	60s	
		10			↓	60s	
		11	104711	12 00 58 -02 10 03		14 ^m	40 fstars 7.6/300
		12			↑	60s	
		13			↓	60s	
		14	SKYDNE	+ hrs East +20°		2 ^m	16 SKY
		15			↑	60s	
		16			↓	60s	
		17	SKYDWNM	0 hrs +20°		2 ^m	16 SKY
		18			↑	60s	
		19	INCANDS			120 ^m	
		20	INCANDS			120 ^m	
		21	INCANDS			102 ^m	
24-25 NOV. 1988		22	Th-Ar		↓	60s	
		23	SKY-EVE	0 hrs. +30°		2 ^m	
		24	Th-Ar		↑	60s	
		25	Th-Ar		↓	60s	
		26	SKY-EVE	4 1/2 hrs W +30°		2 ^m	
		27	Th-Ar		↑	60s	
		28	Th-Ar		↓	60s	
		29	1118 2572	19:22:35 11:50:09		2 ^m	5.2 190 Standard
		30	Th-Ar		↑	60s	
		31					
		32					

11/24/88

Intensified Reticon TO CAM
 Spectrograph ECHELLE Log Sheet RAW/RET
 Grating 300 L Observer RDS
 Telescope 61" Wyeth Date 24-25 NOV. 1988 Disk ORO 2428

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	(2)	20:27:14	-02:04:13	7m	10.5 A standard
		3			↑	60s	
		4			↓	60s	
		5	1E1848	18:48:10	33:05:30	12m	10.3/30 Marschall objects
		6			↑	60s	
		7			↓	60s	
		8	1E1037	19:37:05	30:27:58	6m	9.5/30 "
		9			↑	60s	
		10			↓	60s	
		11	G227-37	18:34:48	63:39:18	2m	8.0/20 Halos
		12			↑	60s	
		13			↓	60s	
		14	186981	19:44:39	18:45:24	22m	8.1/300 F stars clouds
		15			↑	60s	
		16			↓	60s	
		17	190994	20:04:55	10:54:27	11m	7.0/500 "
		18			↑	60s	
		19			↓	60s	
		20	H184467	19:30:18	56:29:03	2m	6.6 IAU standard
		21			↑	60s	
		22			↓	60s	
		23	205398	21:34:46	33:29:28	102m	8.0/400 F stars
		24			↑	60s	
		25			↓	60s	
		26	205851	21:35:07	29:14:45	12.5m	8.0/300 " (faint companion x to the South, ± 12") (stop: go)
		27			↑	60s	
		28			↓	60s	
		29	H4128	00:41:05	-18:15:39	3m	2.2 IAU standard cloudy
		30			↑	60s	ND 1.0
		31					
		32					

11/24/88

Intensified Reticon TO CAMI
 Spectrograph ECHELLE Log Sheet RAW/RET
 Grating 300 L Observer RPS
 Telescope 61" Wyeth Date 24-25 NOV 1988 Disk ORO 2429

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	1101	00:12:44	-17:02:02	9m	F stars (stop! go)
		3			↑	60s	
		4			↓	60s	
		5	2795	00:28:48	-11:29:59	13.5m	F stars (faint companion to the South about 20")
		6			↑	60s	
		7			↓	60s	
		8	Gls 809	20:52:18	61:18:30	4m	M stars 5 hrs W!
		9			↑	60s	
		10			↓	60s	
		11	Gls 48	00:03:05	45:32:00	5m	M stars & Space
		12			↕	60s	
		13	Gls 4A	00:03:05	45:32:06	5m	" & Space
		14			↑	60s	
		15	Th-Ar	00:14:28	40:40:18	60s	" & "
		16	Gls 14	00:14:28	40:40:18	5.5m	
		17			↑	60s	
		18			↓	60s	
		19	TV Cet	03:12:03	02:34:10	18m	Andersen / Eclipsing Binary (F stars)
		20			↑	60s	
		21			↓	60s	
		22	17613N	02:47:11	08:43:57	11m	F stars
		23			↕	60s	
		24	17613S	"	"	20m	NS Double; separation 5"
		25			↑	60s	
		26			↓	60s	
		27	Gls 154	03:43:19	26:03:42	7m	M stars
		28			↑	60s	
		29			↓	60s	
		30	Sφ7 6206	03:45:07	24:50:08	2m	"
		31			↑	60s	
		32	/				

Intensified Reticon TO CAM 11/24/88

Spectrograph ECHELLE Log Sheet RAW/RET

Grating 300 l Observer RPS

Telescope 61" Wyeth Date 24-25 Nov. 1988 Disk ORO 2430

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	G15156	03:52:09	-06:58:24	5m	9.0/10 Mstars
		3			↑	60s	
		4			↓	60s	
		5	G172-49	01:17:59	51:43:24	4m	9.6/20 Halos
		6			↑	60s	
		7			↓	60s	
		8	H22484	03 34 19	00 14 40	2m	17 IM STDS 1.0 ND Filter 4.4
		9			↑	60s	
		10			↓	60s	
		11	TV Cet	03 12 03	02 34 10	17m	40 filters ECL BIN 8.6/700
		12			↑	60s	
		13			↓	60s	
		14	DW CM9	07 06 08	-22 21 36	20m	40 filters ECL BIN 9.5/92
		15			↑	60s	
		16			↓	60s	
		17	V 643 Ori	06 04 31	-07 54 36	20m	40 filters ECL BIN 10.5/96
		18			↑	60s	
		19			↓	60s	
		20	P145-7	05 31 59	-04 36 16	18m	Larry WMA 9.6
		21			↑	60s	
		22			↓	60s	
		23	G67-27	07 06 46	37 21 36	4m	15 Halos 9.84/15
		24			↑	60s	
		25			↓	60s	
		26	G175-15	04 03 08	54 03 12	6m	15 Halos 9.6/15
		27			↑	60s	
		28			↓	60s	
		29	SW CM9	07 06 08	-22 21 36	20m	40 filters ECL BIN 9.5/71
		30			↑	60s	
		31					
		32					

Spectrograph ECHELLE Intensified Reticon TO CAM 17/24/88
 Grating 300 L Log Sheet RAW RET
 Telescope 61" Wyeth Date 24-25 Nov 1968 Observer JRC
 Disk ORO 2431

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		TNR			↓	60S	
	G40-8	08 05 55	24 46 36			5M	15 Halos 9.65/15
		TNR			↑	60S	
		TNR			↓	60S	
	H74000	08 36 31	-11 09 35			20M	15 Halos (Seeing terrible!) 9.65/60
		TNR			↑	60S	
		TNR			↓	60S	
	G114-19	08 47 53	-05 20 36			6M	15 Halos 9.18/15
		TNR			↑	60S	
		TNR			↓	60S	
	H81757	09 25 08	-08 26 28			2M	17 ID1 STDS 1.0 Nd filter 2.0 (Alphard)
		TNR			↑	60S	
		TNR			↓	60S	
	95938	11 01 26	-08 46 36			16M	40 fstars 8.01/120
		TNR			↑	60S	
		TNR			↓	60S	
	87998A	10 05 59	-19 30 19			10M	48 MOV-GRP 7.3
		TNR			↑	60S	
		TNR			↓	60S	
	103459	11 52 18	-01 10 08			4M	48 MOV-GRP 7.6
		TNR			↑	60S	
		TNR			↓	60S	
	GL5497	13 03 49	20 59 42			6M	34 MSTARs 9.4/20
		TNR			↑	60S	
		TNR			↓	60S	
	G165-22	13 35 51	39 26 00			2M	15 Halos 7.78/15
		TNR			↑	60S	
		TNR			↓	60S	
	H114762	13 09 59	17 46 55			2M	17 ID1 STDS 7.3
		TNR			↑	60S	

11/25/88

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 L Log Sheet RAW RET
 Telescope 61" Wyeth Observer JRC
 Date Nov 24-25 1988 Disk ORO 2432

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

1950.0	L/R	Exposure	Comments
	↓	60s	
11 48.59 22 23 36		9m	15 Halos >10% sky 25187A 9.30/30
	↑	60s	
	↓	60s	
4 hrs East +20°		2m	16 SKY
	↑	60s	
	↓	60s	
0 hrs +200		2m	16 SKY
	↑	60s	
		120m	
		120m	
		120m	
	↓	60s	
φ hrs. φ°		2m	
	↑	60s	
	↓	60s	
3 1/2 hrs. W φ°		2m	
	↑	60s	
	↓	60s	
19:48:38 10:17:21		2m	S.I. 10V standard
	↑	60s	
	↓	60s	
18:35:15 -06:50:30		3m	8.3/15 Halos (x 10% sky)
	↑	60s	
	↓	60s	
18:53:13 -05:48:24		2m	8.5/15 Halos
	↑	60s	
	↓	60s	
18:47:20 13:09:48		2.5m	8.6/15 Halos
	↑	60s	

25-26
NOV.
1988

11/15/88
TO CAM

Spectrograph ECHELLE Intensified Reticon
 Grating 300 l Log Sheet
 Telescope 61" Wyeth Date 25-26 NOV. 1988 Observer RDS
 Disk ORO 2433

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

Change....	File	ID	1950.0	RA	Dec	L/R	Exposure	Comments
		Th-Ar				↓	60s	
	G92-15	19:33:47	04:39:18				3m	9.2/15 Halos
	Th-Ar					↑	60s	
	Th-Ar					↓	60s	
	G92-16	19:35:19	04:11:54				6m	10.2/15 "
	Th-Ar					↑	60s	
	Th-Ar					↓	60s	
	189478	19:57:33	06:48:11				7.5m	8.0/100 F stars
	Th-Ar					↑	60s	
	Th-Ar					↓	60s	
	1E1037	19:37:05	30:27:58				12m	9.5/30 Marschall
	Th-Ar					↑	60s	
	Th-Ar					↓	60s	
	195776	20:30:40	06:39:55				12m	8.1/350 F stars
	Th-Ar					↑	60s	
	Th-Ar					↓	60s	
	202586	21:14:12	07:18:14				7m	7.6/300 " Local (N.E.) Earle Quake
	Th-Ar					↑	60s	
	Th-Ar					↓	60s	
	206751	21:41:39	06:55:37				16m	7.9/200 " (clouds) many Stop 60's, Long Delays
	Th-Ar					↑	60s	
	Th-Ar					↓	60s	
	H213014	22:25:46	17:00:28				2m	7.7 IAU standard
	Th-Ar					↑	60s	
	Th-Ar					↓	60s	
	H212943	22:25:20	04:26:39				2.5m	4.9 IAU standard
	Th-Ar					↑	60s	
	Th-Ar					↓	60s	
	211244	22:13:03	18:21:14				13m	8.1/500 F stars
	Th-Ar					↑	60s	
	/							
	/							

Spectrograph ECHELLE Intensified Reticon TO CAMI
 Grating 300 l Log Sheet RAW RET
 Telescope 61" Wyeth Date 25-26 Nov. 1988 Observer RPS & JRC
 Disk ORO 2435

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		TNR			↓	60s	
	P1457	053159	04 35 16			11 ^m	42 WUM, Larry 9.6
	TNR	053159	04 35 16		↑	60s	
	TNR				↓	60s	
	V6430XK1	060431	02 59 36			17.5 ^m	40 fStars ECL BIN. 10.5
	TNR				↑	60s	
	TNR				↓	60s	
	TV Get	031203	02 34 10			6 ^m	40 fStars ECL BIN 8.6
	TNR				↑	60s	
	TNR				↓	60s	
	S011983	014410	63 36 14			2 ^m	34 MSTARs 5.7/20
	TNR				↑	60s	
	TNR				↓	60s	
	H29139	043302	16 24 38			2 ^m	17 IAG 40s 2.0 Nd Filter 0.9
	TNR				↑	60s	
	TNR				↓	60s	
	SW CMa	070608	22 21 36			15 ^m	40 fStars ECL BIN. 9.5
	TNR				↑	60s	
	TNR				↓	60s	
	G88-11	070739	20 31 36			2 ^m	15 Halos 9.09/15
	TNR				↑	60s	
	TNR				↓	60s	
	G108-53	070229	01 28 30			2 ^m	15 Halos 8.45/15
	TNR				↑	60s	
	TNR				↓	60s	
	G9-42	085754	21 39 12			2 ^m	15 Halos 8.80/
	TNR				↑	60s	
	TNR				↓	60s	
	H085217	094754	04 34 42			2 ^m	34 MSTARs 6.2/200
	TNR				↑	60s	

Intensified Reticon TO CAM w/ 25/88
 Spectrograph ECHELLE Log Sheet RAW RET
 Grating 300 l Observer JRC
 Telescope 61" Wyeth Date Nov 25-26 1988 Disk ORO 2436

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		TMR			↓	60s	
		V643ori	06 04 31	-02 54 36		20M	40 fstars Ecl BIN 10.5
		TMR			↑	60s	
		TMR			↓	60s	
		(3)	10 13 16	00 58 06		11M	17 ASTEROID (I hope!)
		TMR			↑	60s	
		TMR			↓	60s	
		G90-33	07 57 13	32 15 48		5M	15 Halos 10.31/15
		TMR			↕	60s	
		G90-43	08 02 29	34 13 24		6M	15 Halos 10.12/15
		TMR			↑	60s	
		TMR			↓	60s	
		102284	11 43 47	-05 04 10		20M	40 fstars 8.10/500
		TMR			↕	60s	
		102284	"	"		20M	40 fstars " "
		TMR			↑	60s	
		TMR			↓	60s	
		H102870	11 48 05	02 02 48		2M	17 ICM STDS 1.0 Nd filter 3.6
		TMR			↑	60s	
		TMR			↓	60s	
		G44-45	10 50 48	10 00 24		5M	15 Halos 10.16/15
		TMR			↑	60s	
		TMR			↓	60s	
		G59-1	12 06 23	22 04 00		2M	15 Halos 9.52/?
		TMR			↕	60s	
		G59-5	12 10 56	23 32 36		2M	15 Halos 9.39/15
		TMR			↑	60s	
		TMR			↓	60s	
		GLs 499	13 03 49	20 59 42		5M	34 M STARS 9.4/20
		TMR			↑	60s	

Intensified Reticon TO CAM 11/26/88

Spectrograph ECHELLE Log Sheet RAW RET

Grating 300 L Observer JRC

Telescope 61" Wyeth Date Nov 25-26 1988 Disk ORO 2437

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	H114762	13 09 54	17 46 55	2 ^m	17 Jan STD 7.3
		3			↑	60s	
		4			↓	60s	
		5	H107328	12 17 48	03 35 27	2 ^m	17 Jan STD 5.0
		6			↑	60s	
		7			↓	60s	
		8	SKYDOME	4 hrs East	+20°	2 ^m	16 SKY
		9			↑	60s	
		10			↓	60s	
		11	SKYDOME	0 hrs	+20°	"	16 SKY
		12			↑	60s	
		13	INCANDS			120 ^m	
		14	INCANDS			120 ^m	
26-27 1988		15			↓	60s	
		16	SKYVIEW	0 hrs	+20°	2 ^m	16 SKY
		17			↑	60s	
		18			↓	60s	
		19	SKYVIEW	4 hrs West	+20°	2 ^m	16 SKY
		20			↑	60s	
		21			↓	60s	
		22	H203638	21 21 19	-21 03 56	2 ^m	17 Jan STD 5.8
		23			↑	60s	
		24			↓	60s	
		25	IE1037	19 37 05	30 27 58	12 ^m	42 Larry 9.5
		26			↑	60s	
		27			↓	60s	
		28	211231	22 13 07	04 01 19	20 ^m	40 fstars 7.35/300
		29			↑	60s	
		30	211231	22 13 07	04 01 19	8 ^m	40 fstars 7.35/300
		31			↑	60s	
		32					

TO CAM 11/26/88

Intensified Reticon

Spectrograph ECHELLE Log Sheet RAW/RET

Grating 300 L Observer JAC

Telescope 61" Wyeth Date Nov 26-27 1988 Disk ORO 2438

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	211461	22 14 36	08 07 24	10 ^m	40 fstars 8.19/300
		3			↑	60s	
		4			↓	60s	
		5	213051	22 26 15	00 16 34	2 ^m	40 fstars 7.61/400
		6			↑	60s	
		7			↓	60s	
		8	213597	22 29 59	01 19 34	9	40 fstars 9.03/250
		9			↓	60s	
		10	214183	22 34 06	00 06 07	20 ^m	40 fstars 8.09/600
		11			↓	60s	
		12	214163	"	"	6 ^m	" " " "
		13			↓	60s	
		14			↓	60s	
		15	213315	22 27 51	22 12 36	20 ^m	40 fstars 7.94/600
		16			↓	60s	
		17	213315	"	"	20 ^m	" " " "
		18			↑	60s	
		19			↓	60s	
		20	222995	23 43 04	12 52 28	15 ^m	40 fstars 7.19/500
		21			↑	60s	
		22			↓	60s	
		23	H18884	02 59 39	03 53 41	2 ^m	17 IAU STD 1.0nd filter 2.5
		24			↑	60s	
		25			↓	60s	
		26	TV C&T	03 12 03	02 34 10	10 ^m	40 fstars Ecl Bin 8.6
		27			↑	60s	
		28			↓	60s	
		29	G133-57	01 54 31	41 50 06	2 ^m	15 Halos 9.01/15
		30			↑	60s	
		31					
		32					

Intensified Reticon TO CAM 11/26/88

Spectrograph ECHELLE Log Sheet RAW RET

Grating 300 L Observer JAC

Telescope 61" Wyeth Date Nov 26-27 1988 Disk ORO 2439

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		TAr			↓	60s	λ 5187 Å
	G72-58	02 05 71	28 04 36			6 ^m	15 Hα lines interv by clids 9.99/
		TAr			↑	60s	
		TAr			↓	60s	
	224093	23 52 29	-09 44 20			5 ^m	40 fstars 6.8/200
		TAr			↑	60s	
		TAr			↓	60s	
	GLs 14	00 14 28	40 40 18			5 ^m	34 M STARS 9.0/20
		TAr			↑	60s	
		TAr			↓	60s	
	G191-23	05 04 19	55 21 30			3 ^m	15 Hα lines 9.33/15
		TAr			↑	60s	
		TAr			↓	60s	
	2 ORI	05 52 28	07 23 58			10 ^m	SALLY Hα Profiles 2.0nd filter 0.8/100
		TAr			↑	60s	
		TAr			↓	60s	
	H 36079	05 26 06	-20 47 53			2 ^m	17 ION STD 1.0 nd filter 2.8
		TAr			↑	60s	
		TAr			↓	60s	
	TV Cet	03 12 03	02 34 10			6 ^m	40 fstars GCL BIN 8.6
		TAr			↑	60s	
		TAr			↓	60s	
	GLs 154	03 43 19	26 03 42			6 ^m	34 M STARS 9.6/20
		TAr			↕	60s	
	S076206	03 45 07	21 50 08			2 ^m	34 M STARS 6.5/20
		TAr			↑	60s	
		TAr			↓	60s	
	V 643 ORI	06 04 31	-02 54 36			20 ^m	40 fstars 10.5/100
		TAr			↑	60s	
		TAr			↓	60s	
	G85-13	04 41 39	25 50 42			3.5 ^m	15 Hα lines 10.17/15
		TAr			↑	60s	

11/26/88

Intensified Reticon
 Spectrograph ECHELLE
 Grating 300 L
 Telescope 61" Wyeth
 Log Sheet
 Observer RAW RET JRC & RPS
 Date Nov 26-27 1988
 Disk ORO 2440
TO CAM

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Th-Ar		↓	60s	
		2	OB7B	04:19:32	25:31:04		3.5m 8.4/15 LINDROOS BINARY
		3	Th-Ar		↑	60s	
		4	Th-Ar		↓	60s	
		5	OB8B	05:09:58	-11:55:29		13m 9.9 "
		6	Th-Ar		↑	60s	
		7	Th-Ar		↓	60s	
		8	G173-59	02:30:30	49:17:12		3m 7.8/15 Halos
		9	Th-Ar		↑	60s	
		10	Th-Ar		↓	60s	
		11	G134-40	02:34:26	43:46:42		7m 10.2/15 "
		12	Th-Ar		↑	60s	
		13	Th-Ar		↓	60s	
		14	G76-21	02:38:32	09:33:24		12.5m 10.2/60 "
		15	Th-Ar		↑	60s	Exposure cut short by clouds - too few counts.
		16	Th-Ar		↓	60s	
		17	G93-34	04:45:46	18:37:36		3m 9.7/15 "
		18	Th-Ar		↑	60s	- stopped by clouds -
		19	Th-Ar		↓	60s	
		20	H26162	04:06:15	19:28:43		2m 5.5 IAU standard
		21	Th-Ar		↑	60s	
		22	Th-Ar		↓	60s	
		23	H89449	10:17:01	19:43:31		2m 4.8 IAU standard
		24	Th-Ar		↑	60s	
		25	Th-Ar		↓	60s	
		26	H113996	13:04:47	27:53:33		2m 4.7 " (stop: go)
		27	Th-Ar		↑	60s	
		28	Th-Ar		↓	60s	
		29	H64762	13:09:55	17:46:55		3m 7.3 "
		30	Th-Ar		↑	60s	
		31	/				
		32	/				

11/28/88

Intensified Reticon TO CAMI
 Spectrograph ECHELLE Log Sheet RAW RET
 Grating 300 L Observer RPS & JRC
 Telescope 61" Wyeth Date 26-27 Nov. 1988 Disk ORO 2441

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2				2m	5.6/20 LINDROOS BINARY
		3			↑	60s	
		4			↓	60s	
		5				2m	3 1/2 hr E φ°
		6			↑	60s	
		7			↓	60s	
		8				2m	φ hrs φ°
		9			↑	60s	
		10				120	φ hrs φ°
		11				115	
		12			↓	60s	minus "warm"
		13				3m	5.0 IAU standard
		14			↑	60s	
		15			↓	60s	(clouds)
		16				5m	8.1/100 IAU standard
		17			↑	60s	
		18			↓	60s	
		19				2m	0.9 IAU standard 1.0 Nd filter
		20			↑	60s	
		21			↓	60s	
		22				2m	34 M stars 6.5/20
		23			↑	60s	
		24			↓	60s	
		25				2m	17 10h stars 1.0 Nd filter 2.8
		26			↑	60s	
		27			↓	60s	
		28				20m	40 stars ECL BIN 8.6/100
		29			↑	60s	
		30			↓	60s	
		31				20m	42 LARRY WUMA 9.6/100
		32				60s	

NOV 26-27 1988

Intensified Reticon TO CAM 11/28/88

Spectrograph ECHELLE Log Sheet RAW/RET

Grating 300 L Observer JRL

Telescope 61" Wyeth Date Nov 28-29, 1988 Disk ORO 2442

Change....	File	ID	RA	Dec	1950.0 L/R ↑/↓	Exposure	Comments
		1			↓	60s	25/87 ⁰
		2	H54716	07 08 13	39 24 14	2 ^m	17 ILM STDS 4.9
		3			↑	60s	
		4			↓	60s	
		5	S076588	04 20 44	22 50 59	2 ^m	34 M STARS 7.2/20
		6			↑	60s	
		7			↓	60	
		8	V6430ri	06 01 31	-02 54 36	20 ^m	40 f Stars ECL Bin 10.5/50
		9			↑	60s	
		10			↓	60s	
		11	SW CMA	07 06 08	-22 21 36	20 ^m	40 f Stars ECL Bin 9.5/60
		12			↑	60s	
		13			↓	60s	
		14	H65583	07 57 26	29 22 00	2 ^m	17 ILM STDS 7.0
		15			↑	60s	
		16			↓	60s	
		17	GLS412A	11 02 43	43 47 39	7 ^m	34 M STARS 8.8/20
		18			↑	60s	
		19			↓	60s	
		20	25-2367	11 20 02	25 00 29	7 ^m	43 ANG P 8.5
		21			↑	60s	
		22	28-1999	11 21 52	27 30 05	7 ^m	43 ANG P 8.9
		23			↓	60s	
		24	30-2141	11 20 29	29 49 45	6 ^m	43 ANG P 8.8
		25			↓	60s	
		26	29-2157	11 22 37	29 16 28	11 ^m	43 ANG P 9.6
		27			↓	60s	
		28	31-2265	11 22 45	30 51 32	7 ^m	43 ANG P 9.5
		29			↓	60s	
		30	29162	11 24 33	28 29 57	11 ^m	43 ANG P 9.7
		31			↑	60s	
		32					

Intensified Reticon TO CAM 11/28/88

Spectrograph ECHELLE Log Sheet RAW RET

Grating 300 L Observer JAC

Telescope 61" Wyeth Date NOV 28-29 1988 Disk ORO 2443

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		TMR			↓	60s	25187
	35-2249	11 22 45	35 05 53			9M 43	ANG-P 9.5
	TMR				↕	60s	
	36-2186	11 24 27	36 02 42			6M 43	ANG-P 8.9
	TMR				↕	60s	
	34-2224	11 24 40	34 13 19			8M 43	ANG-P 9.5
	TMR				↑	60s	
	TMR				↓	60s	
	H103095	11 50 06	38 04 39			2M 17	ION STDS 6.5
	TMR				↑	60s	
	TMR				↓	60s	
	65499	13 03 49	20 59 42			10M 34	MSTARS 9.4/20
	TMR				↑	60s	
	TMR				↓	60s	
	23353	11 25 30	23 27 59			4M 43	ANG-P 8.6
	TMR				↕	60s	
	27-2031	11 27 03	26 50 34			6M 43	ANG-P 9.3
	TMR				↕	60s	
	25-2385	11 27 14	25 13 23			2M 43	ANG-P 7.9
	TMR				↑	60s	
	TMR				↓	60s	
	36-2190	11 27 06	36 14 56			5M 43	ANG-P 9.1
	TMR				↕	60s	
	37-2182	11 26 36	37 11 15			4M 43	ANG-P 8.7
	TMR				↑	60s	
	TMR				↓	60s	
	20-2796	13 05 28	20 12 07			2M 43	ANG-P 7.9
	TMR				↑	60s	
	TMR				↓	60s	
	H114762	13 09 54	17 46 55			2M 17	ION STDS (108 sky?) 7.3
	TMR				↑	60s	

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300 L Log Sheet RAW RET
 Telescope 61" Wyeth Date Nov 28-29-30 88 Observer JRI & JAI2
 Disk ORO 2444

Change....	File	ID	RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	$\lambda = 5187\text{\AA}$
		2	SKYDUNG	4h East	+20°	2m	16 SKY
		3	THAr		↑	60s	
		4	THAr		↓	60s	
		5	SKYDUNG	Meridian	+20°	2m	16 SKY
		6	THAr		↑	60s	BEWARE!
		7	INCANDS			120m	} INCANDS AT -32° } BECAUSE OF ROOF REPAIR
		8	INCANDS			120m	
NOV 29-30 1988 JAI2		9	THAr		↓	60s	NO SKIES (ROOF REPAIR)
		10	H213014	22:25:46	17:00:12A	2m	7.7 JAU STANDARD
		11	THAr		↑	60s	:- (ROTATION OFF)
		12	THAr		↓	60s	
		13	G21-20	18:35:15	-6:50:30	3.5m	8.34/15 HALOS
		14	THAr		↑	60s	
		15	THAr		↓	60s	
	→	16	G15735	18:53:03	8:20:19	20m	10.1/40 M STARS
	→	17	THAr		↑	60s	
		18	G15735	"	"	10m	10.1/40 M STARS
		19	THAr		↑	60s	
		20	THAr		↓	60s	
		21	G92-15	19:33:47	4:39:18	4m	9.2/15 HALOS
		22	THAr		↑	60s	
		23	THAr		↓	60s	~ clouds ~
	→	24	G15829	21:27:12	17:25:06	20m	10.3/60 M STARS
		25	THAr		↑	60s	10.3/60 M STARS
	→	26	G15829	"	"	20m	10.3/60 M STARS
		27	THAr		↑	60s	
		28					
		29					
		30					
		31					
		32					

11/29/88

Intensified Reticon TO CAM
 Spectrograph ECHELLE Log Sheet RAW RET
 Grating 300 L Observer JMZ
 Telescope 61" Wyeth Date 29-30 Nov 88 Disk ORO 2446

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	ThA			60s	$\lambda = 5107 \text{ \AA}$ CLEAR
		2	G1114	00:14:28	40:40:18	3m	9.0/20 MISTARS
		3	ThA			60s	
		4	ThA			60s	
		5	TVCE	3:12:03	2:34:10	6m	8.6/100's FSTARS
		6	ThA			60s	
		7	ThA			60s	
		8	G33-30	0:56:27	16:06:18	14m	10.65/30 M/10s
		9	ThA			60s	AUTOGUIDER NOT WORKING
		10	ThA			60s	REBOOT NOVA
		11	G217-8	23:24:15	60:21:00	20m	10.49/60 M/10s
		12	ThA			60s	
		13	ThA			60s	
		14	DL CAS	00:27:11	59:56:10	4m	10.6 CEPHEIDS
		15	ThA			60s	
		16	ThA			60s	through clouds
		17	G1156	3:52:09	-6:58:29	9m	9.0/20 MISTARS
		18	ThA			60s	CUT SHORT BY CLOUDS
		19	ThA			60s	PAUSE FOR CLOUDS WITH
		20	TUCER	3:12:03	2:34:10	10m	8.6/100's FSTARS
		21	ThA			60s	
		22	ThA			60s	
		23	V6430i	6:04:31	-2:54:31	20m	10.5/100's FSTARS
		24	ThA			60s	Low over clouds
		25	ThA			60s	
		26	P1457	5:31:59	-4:35:10	8m	9.6/20 ORION
		27	ThA			60s	
		28	ThA			60s	
		29	H66141	7:59:40	2:28:24	2m	4.4 JAV STANDARDS
		30	ThA			60s	
		31					
		32					

11/29/88

Spectrograph ECHELLE Intensified Reticon TO CAMI
 Grating 300 l Log Sheet RAW/RET
 Telescope 61" Wyeth Date 29-30 Nov 1988 Observer JM?
 Disk ORO 2448

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	$\lambda = 5187\text{\AA}$ misty cloudy
	G57-11	2	11:36:28	6:20:17	↓	2M	7.59/15 HALOS
	7hAr	3			↑	60s	
	7hAr	4			↓	60s	
	H101095	5	11:50:16	38:04:39	↓	2M	6.42/15 Halo & IAU
	7hAr	6			↑	60s	
	7hAr	7			↓	60s	
	G122-57	8	11:55:27	40:29:26	↓	2M	8.36/15 "
	7hAr	9			↑	60s	
	7hAr	10			↓	60s	
	G122-45	11	11:42:53	47:56:59	↓	2M	8.03/15 HALOS
	7hAr	12			↑	60s	
	7hAr	13			↓	60s	
	G12499	14	13:03:19	20:59:42	↓	5M	9.4/20 M STARS
	7hAr	15			↑	60s	
	7hAr	16			↓	60s	
	H114762	17	13:09:55	17:46:55	↓	3M	7.3 IAU STND & HALOS
	7hAr	18			↑	60s	
	7hAr	19			↓	60s	
	S082651	20	13:03:56	27:53:00	↓	2M	5.9/20 M STARS
	7hAr	21			↑	60s	
	7hAr	22			↓	60s	
	MICROIE	23	11:28:07	41:33:51	↓	2.5M	7.0/100 M STARS
	7hAr	24			↑	60s	
	7hAr	25			↓	60s	
	G61-14	26	12:44:05	24:25:17	↓	2M	6.86/15 HALOS
	7hAr	27			↑	60s	
	7hAr	28			↓	60s	
	G60-67	29	13:06:19	5:28:54	↓	2M	6.8/15 HALOS
	7hAr	30			↑	60s	
		31					
		32					

11/30/88

Intensified Reticon TO CAM
 Spectrograph ECHELLE Log Sheet RAW RET
 Grating 300 l Observer J M Z
 Telescope 61" Wyeth Date 29-30 Nov 88 Disk ORO 2449

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		7hA _v			↓	60s	2 = 5187A partly cloudy
	G12-24		12:10:40	11:06:24		2M	7.58/15 HAIOS
		7hA _v			↑	60s	
	G12-22		12:10:24	10:19:12		2M	7.92/15 "
		7hA _v			↓	60s	
		7hA _v			↓	60s	
	G111-33		7:45:13	46:44:12		2.5	9.43/15 HAIOS
		7hA _v			↑	60s	2 watch for sky
		7hA _v			↓	60s	
	H10732A		17:17:49	3:35:27		2M	S.C. 2M STANDARD
		7hA _v			↑	60s	
		7hA _v			↓	60s	
	SKYDUNK	4h East	+25°			2M	16 sky
		7hA _v			↑	60s	
		7hA _v			↓	60s	
	SKYDUNK	Meridian	+25°			2M	16 sky
		7hA _v			↑	60s	
	INCANDS	φ hrs	-32°			88m	Note: INCANDS at -32° Dec.
	INCANDS	φ hrs	φ°			120m	Roof Repair
		7hA _v			↓	60s	2-5187A
	H6779		1:23:53.6	-00:37:29		2M	6.4 TAU STANDARD
		7hA _v			↑	60s	cloudy until 8 PM EST
		7hA _v			↓	60s	no skies roof
	G12876		22:50:35	-14:31:12		20m	10.2/20 NEARS & NEARBY
		7hA _v			↑	60s	
		7hA _v			↓	60s	
	Z10719		22:09:45	2:29:11		12m	7.02/500 ESTARS
		7hA _v			↑	60s	
		7hA _v			↓	60s	
	Z16276		22:49:09	4:31:14		6m	7.17/300 ESTARS
		7hA _v			↑	60s	

NOV 30 - DEC 1
 1988
 J M Z

11/30/88

Intensified Reticon TO CAM
 Spectrograph ECHELLE Log Sheet RAW/RET
 Grating 300 L Observer JM?
 Telescope 61" Wyeth Date NOV 30 - DEC 1 88 Disk ORO 2450

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	λ=5187A P. cloudy
		2	216419	27:50:03	7:23:31	16m	7.89/500 FSTARS
		3			↑	60s	
		4			↓	60s	
		5	220974	23:25:10	1:36:33	12m	7.39/300 FSTARS
		6			↑	60s	
		7			↓	60s	
→		8	222456	23:38:09	00:39:37	20m	8.2/300 FSTARS
		9			↑	60s	
→		10	222456	23:38:09	00:39:37	10m	" "
		11			↑	60s	
		12			↓	60s	
		13	219669	23:15:01	16:35:12	20m	8.10/175 FSTARS
		14			↑	60s	
		15			↓	60s	
		16	G76-21	2:38:32	9:33:24	13m	10.18/60 HALOS
		17			↑	60s	
		18			↓	60s	
		19	G77-56	3:26:43	1:48:24	6m	10.45/15 "
		20			↑	60s	
		21			↓	60s	
		22	G173-2	1:27:49	52:29:18	4m	10.05/15 "
		23			↑	60s	
		24			↓	60s	
		25	G81-2	4:00:37	39:31:12	6.5m	10.71/15 "
		26			↑	60s	
		27			↓	60s	
→		28	G15206	5:29:20	9:47:18	20m	11.5/20 M STARS
		29			↑	60s	
→		30	G15206	"	"	10m	" "
		31			↑	60s	
		32			↓	60s	

Intensified Reticon TO CAM 12/1/88
 Spectrograph ECHELLE Log Sheet RAW RET
 Grating 300 l Observer JM?
 Telescope 61" Wyeth Date Nov 30 - Dec 1 88 Disk ORO 2451

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	λ = 5187Å CLEAR
		2	P1457	5:31:59	-9:35:16	4m	9.6/20 ORION
		3			↑	60s	
		4			↓	60s	
		5	VG430v	6:04:31	-2:54:36	13.5m	10.5/100's FSTARS
		6			↑	60s	λ stopped by clouds
		7			↓	60s	clouded 1:30 - 5:30
		8	61:499	13:03:49	20:59:42	3m	9.4/20 MSTARS
		9			↑	60s	
		10			↓	60s	
		11	H11476?	13:09:55	17:46:55	3m	7.3 IAU STANDARD
		12			↑	60s	
		13			↓	60s	
		14	H115571	13:15:04	5:48:58	2m	4.8 IAU STANDARD
		15			↑	60s	
		16			↓	60s	
		17	SKYDOME	4 ^h East	+10°	2m	16 SKY
		18			↑	60s	
		19			↓	60s	
		20	SKYDOME	Meridian	+10°	2m	16 SKY
		21			↑	60s	
		22	INCANDS	φ hrs	-32°	120m	? Note: Incands at -32°
		23	INCANDS	φ hrs	-32°	120m	not symmetric. Roof Repair NO SKIES
Dec 1-2 1988		24			↓	60s	
		25	(1)	23 36 44	14 52 33	4m	17 ASTEROIDS
		26			↑	60s	
		27			↓	60s	
		28	IE1037	14 37 05	30 27 58	6m	LARRY WUMA 9.5
		29			↑	60s	
		30			↓	60s	
		31	183107	19 25 28	-09 38 22	7.5m	40 fstars <input checked="" type="checkbox"/> best comp. 8.1/100
		32			↓	60s	