

5/2 ORO-MAY

Spectrograph ECHELLE Intensified Reticon TO CAM
 Log Sheet RAW/RET 17
 Grating 300 line Observer RPS
 Telescope 61" Wyeth Date 5/2-3/1987 Disk ORO 1552

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		Th-Ar			↓	60s	5187A -clear-
		SKY-EVE	φ hrs	+25°		2m	
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		SKY-EVE	4.5W	+25°		2m	
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		H89449	10:17:01	19:43:31		2m	4.9 IAU standard
		Th-Ar			↑	60s	
		Th-Ar			↓	30s	
		H89449	"	"		2m	IAU standard / 30 sec. Th-Ar test
		Th-Ar			↑	30s	
		Th-Ar			↓	60s	
		H74000	08:38:31	-16:09:35		13m	9.6/60 HALO
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		G53-30	10:09:56	-04:23:12		5m	10.3/15 HALO
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		H97916	11:13:19	02:21:36		8m	9.3/100 "
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		29-2177	11:28:55.1	29:16:46		≈ 15m	9.3/7300 NGP-Anderson
		Th-Ar			↑	60s	Computer Crash No date, etc
		Th-Ar			↓	60s	EST ≈ 8:40 5/2/87 in file
		H106516	12:12:36	-10:01:14		2m	6.1/20 HALO
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
		S138815	12:27:10	-03:02:57		2.5m	9.0/15 HALO
		Th-Ar			↑	60s	
		/					
		/					

5/3

Intensified Reticon TO CAM
 Spectrograph ECHELLE Log Sheet RAW RET 17
 Grating 3002 Observer RPS
 Telescope 61" Wyeth Date 2-3 MAY 1987 Disk ORO 1554

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	S187A - clear -
		2	S101380	15:05:06	17:38:30	8.5m	9.2/50 HALO
		3			↑	60s	
		4			↓	60s	
		5	G178-56	14:53:12	143:13:42	13m	11.9/15 "
		6			↑	60s	
		7			↓	60s	
		8	H144515	16:03:32	10:49:11	6m	8.5/70 M stars
		9			↑	60s	
		10			↓	60s	
		11	S101358	15:47:13	12:42:34	2m	6.7/100 "
		12			↑	60s	
		13			↓	60s	
		14	G25600	15:49:46	11:01:25	6m	9.4/30 "
		15			↑	60s	
		16			↓	60s	
		17	(2)	16:10:37.1	23:57:04	2m	9.2 Asteroid
		18			↑	60s	
		19			↓	30s	
		20	(2)	"	"	2m	" 30sec Th-Ar
		21			↑	30s	
		22			↓	60s	
		23	H146051	16:11:43	-03:34:01	2m	2.7 IAU standard 0.1ND
		24			↑	60s	
		25			↓	60s	
		26	G182-7	17:23:01	38:04:54	3.5m	8.1/100 HALOS
		27			↑	60s	
		28			↓	60s	
		29	S045246	14:50:17	46:40:54	2m	7.1/100 M stars
		30			↑	60s	
		31	/				
		32	/				

Intensified Reticon
 Spectrograph ECHELLE Log Sheet
 TO CAM 517
 Grating 200 Observer RR
 Telescope SH Date 5/6-7/87 Disk ORO 1556
 RAW/RET 17

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	5177A ⁰
		2	SKYEVEN	0 ^h MA	-15 ^o	2 ^m	NEW-COVERED
		3	TH-AR		↑	60 ^s	MIRROR
		4	TH-AR		↓	60 ^s	
		5	SKYEVEN	3 ^h W	-15 ^o	2 ^m	
		6	TH-AR		↑	60	
		7	TH-AR		↓	60 ^s	
		8	GST-23	10 47 12	20 45	20 ^m	HALOFIN
		9	TH-AR		↑	60 ^s	
		10	TH-AR		↓	60 ^s	
		11	19563	11 46 17	19 06	5 ^m	ANGP
		12	TH-AR		↑	60 ^s	
		13	21-2369	11 49 57	20 41	5 ^m	
		14	TH-AR		↑	60 ^s	
		15	TH-AR		↑	60 ^s	
		16	17-2422	11 57 41	16 53	15 ^m	
		17	TH-AR		↑	60	ALL GETS WETTER
5/7-8/87		18	TH-AR		↓	60	5187
		19	SKYEVEN	0 ^h MA	+8 ^o	2 ^m	
		20	TH-AR		↑	60	
		21	TH-AR		↓	60	
		22	SKYEVEN	3 ^h 2 ^W	+8 ^o	2 ^m	
		23	TH-AR		↑	60	
		24	TH-AR		↓	60 ^s	6563A ⁰
		25	2 OR 1	05 52 28	7 24	2 ^m	SALLY
		26	TH-AR		↑	60 ^s	
		27	TH-AR		↓	60	5187
		28	37-2233	11 54 58	37 26	5 2 ^m	ANGP
		29	TH-AR		↑	60	
		30					
		31					
		32					

Spectrograph ECHELLE Intensified Reticon
 Log Sheet

TO CAM 5/8

Grating 3008

Observer GS

Telescope 61" WYETH

Date MAY 7/8 1987

Disk ORO 1557

RAW/RET 17

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	5187A 80μSLIT
	13-2494	12:05:02	12:55:38			11 ^{MIN}	8.8/250 (END IN CLDS) A NGP
		3			↑	60 ^s	
		4			↓	60 ^s	
	5V VUL	19:49:28	27:19:53			3 ^{MIN}	7.8/
		6			↑	60 ^s	
		7			↓	60 ^s	
	X CYG	20:41:27	35:24:24			2 ^{MIN}	6.4/
		9			↑	60 ^s	
		10			↓	60 ^s	
	Z LAC	22:38:53	56:34:05			5 ^{MIN}	8.9/ END IN OVERCAST
		12			↑	60 ^s	
		13			↓	60 ^s	
	SKYDWN E	4 ^{HRS} HA	+30			2 ^{MIN}	ABSTRACT
		15			↑	60 ^s	
		16			↓	60 ^s	
	SKYDWN W	0 ^{HRS} HA	+30			2 ^{MIN}	
		18			↑	60 ^s	
	INCANDS					120 ^{MIN}	
	INCANDS					120 ^{MIN}	
MAY 8/9		21			↓	60 ^s	5187A 80μSLIT
	SKYEVEN	0 ^{HRS} HA	+30			2 ^{MIN}	CLEAR
		23			↑	60 ^s	
		24			↓	60 ^s	
	SKYEVEN W	4 ^{HRS} W HA	+30			2 ^{MIN}	
		26			↑	60 ^s	
		27			↓	60 ^s	
	H89449	10:17:01	19:48:31			2 ^{MIN}	IAU Rad Vel Std
		29			↑	60 ^s	
		30			↓	60 ^s	
	GL 411	11:00:37	36:18:18			3 ^{MIN}	Nearby → Kenyon
		32			↑	60 ^s	

Intensified Reticon
TO CAM 5/8

Spectrograph ECHELLE Log Sheet RAW RET 17

Grating 300 l Observer RJD

Telescope 61" Wyeth Date 5/8-9/87 Disk ORO 1558

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	
		2	GL 388	10:16:54	20:07:18		10 ^m Nearby - Kenyon
		3			↑	60 ^s	
		4			↓	60 ^s	
		5	GL 380	10:08:19	49:42:30		2 ^m
		6			↑	60 ^s	
		7			↓	60 ^s	
		8	1022+11	10:22:37	11:21:26		13 ^m CVNS - Maccacaro
		9			↑	60 ^s	
		10			↓	60 ^s	
		11	1049-8	10:49:28.5	-8:49:40		15 ^m
		12			N	60 ^s	
		13	1049-8	"	"		18 ^m
		14			↑	60 ^s	
		15			↓	60 ^s	
		16	1127-15	11:27:55	-15:02:48		18 ^m
		17			↑	60 ^s	
		18			↓	60 ^s	
		19	H89449	10:17:01	19:43:31		2 ^m IAU Rad Vel Std.
		20			↑	60 ^s	
		21			↓	30 ^s	
		22	H89449	10:17:01	19:43:31		2 ^m 2 observations. Reduce Separately
		23			↑	30 ^s	
		24			↓	60 ^s	
		25	S138815	12:27:086	-03:02:57		2 ^m Halo Binaries
		26			↑	60 ^s	
		27			↓	60 ^s	
		28	G59-32	12:37:37	21:05:12		6 ^m
		29			↑	60 ^s	
		30			↓	60 ^s	
		31	S101380	15:05:06	17:38:30		8 ^m
		32			↑	60 ^s	

Spectrograph ECHELLE Intensified Reticon TO CAM 519
 Grating 300 l Log Sheet RAW RET 17
 Telescope 61" Wyeth Date 5/8-9/87 Observer RJD
 Disk ORO 1559

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
					↓	60 ^s	
	LAM-VIR		14:16:24	-13:08:31		2 ^m	M Stars - Mazeh
					↑	60 ^s	
					↓	60 ^s	
	S043627		11:06:51	43:28:44		2 ^m	
					↓	60 ^s	
	Gls 412A		11:02:43	43:47:39		8 ^m	
					↑	60 ^s	
					↓	60 ^s	
	S082651		13:03:56.6	21:53:00		2 ^m	
					↓	60 ^s	
	Gls 499		13:03:49	20:59:42		4 ^{1/2} ^m	
					↑	60 ^s	
					↓	60 ^s	
	Gls 508		13:17:36	48:02:24		4 ^m	
					↑	60 ^s	
					↓	60 ^s	
	S083312		14:20:02.2	29:35:50		2 ^m	
					↓	60 ^s	
	Gls 546		14:19:45.8	29:51:28		5 ^m	
					↑	60 ^s	
					↓	60 ^s	
	S101299		14:54:51.7	16:35:19		2 ^m	
					↑	60 ^s	
					↓	60 ^s	
	Gls 562		14:44:03	16:42:30		7 ^m	
					↑	60 ^s	
					↓	60 ^s	
	S045246		14:50:17.4	46:40:54		2 ^m	
					↓	60 ^s	
	Gls 572		14:59:10	45:37:21		5 ^m	
					↑	60 ^s	
					↑	60 ^s	

Intensified Reticon

TO CAM 5/9

Spectrograph ECHELLE Log Sheet

Grating 300 l Observer RJD

Telescope 61" Wyeth Date 5/8-9/87 Disk ORO 1560

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

 RA Dec +/-

1	ThAr			↓	60 ^s	
2	H144515	16:03:32	10:49:11		7 ^h	M Stars - Mazeh
3	ThAr			↑	60 ^s	
4	ThAr			↓	60 ^s	
5	1552-23	15:52:02.6	-23:38:29		11 ^m	CUNS - MaccaCaro
6	ThAr			↑	60 ^s	
7	ThAr			↓	60 ^s	
8	(2)	16:05:59.7	24:54:22		4 ^m	Asteroid
9	ThAr			↑	60 ^s	
10	ThAr			↓	60 ^s	
11	H146151	16:11:43	-3:34:01		2 ^m	IAU Rad Vel Stds; NDI
12	ThAr			↑	60 ^s	
13	ThAr			↓	60 ^s	
14	GL628	16:27:31	-12:32:18		11 ^m	Nearby Kenyon
15	ThAr			↑	60 ^s	
16	ThAr			↓	60 ^s	
17	GL699	17:55:23	04:34:18		12 ^m	
18	ThAr			↑	60 ^s	
19	ThAr			↓	60 ^s	
20	CH Cys	18:23:14	50:08:31		3 ^m	Symbiotic - Kenyon
21	ThAr			↑	60 ^s	
22	ThAr			↓	60 ^s	
23	V433Her	18:20:03	23:25:47		22 ^m	
24	ThAr			↑	60 ^s	
25	ThAr			↓	60 ^s	
26	(1)	18:21:24.4	-23:15:08		4 ^m	Asteroid
27	ThAr			↑	60 ^s	
28	ThAr			↓	60 ^s	
29	G25-15	21:01:37	02:48:00		2 ^m	Italo Binaries
30	ThAr			↑	60 ^s	
31						
32						

5/9

Intensified Reticon TO CAM
 Spectrograph ECHELLE Log Sheet RAW/RET 17
 Grating 3002 Observer RPS
 Telescope 61" Wyeth Date 5/9-10/1987 Disk ORO 1562

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	30s	
		2	H89449	10:17:01	19:43:31		2m IAU standard 30sec Th-Ar Test
		3			↑	30s	
		4			↓	60s	
		5	H147000	08:38:31	16:09:35		20m 9.6/60 HALOS (telescope is in the trees')
		6			↑	60s	
		7			↓	60s	
		8	G44-45	10:50:48	10:00:24		11m 10.2/30 "
		9			↑	60s	
		10			↓	60s	
		11	G61-24	12:55:04	18:57:48		10.5m 8.9/100 "
		12			↑	60s	
		13			↓	60s	
		14	G63-27	13:22:10	15:07:00		15m 11.1/20 "
		15			↑	60s	
		16			↓	60s	
		17	+182757	13:34:07	18:24:24		5m 9.8/20 "
		18			↑	60s	
		19			↓	60s	
		20	G63-46	13:39:32	12:50:42		3m 9.4/20 "
		21			↑	60s	
		22			↓	60s	
		23	12607	13:34:17.2	12:24:48		8m 10.4 ANGP
		24			↑	60s	
		25			↓	60s	
		26	22607	13:34:04	22:11:11		5.5m 9.4 "
		27			↑	60s	
		28			↓	60s	
		29	28-2244	13:34:55	28:13:06		3.5m 8.8 "
		30			↑	60s	
		31					
		32					

TO CAM 5/10

Intensified Reticon

Spectrograph ECHELLE Log Sheet RAW/RET 17

Grating 3002 Observer RPS

Telescope 61" Wyeth Date 9-10 MAY 1987 Disk ORO 1564

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↕	60s	
		2	TW Her	17:52:36	+30:25:04		13m x11.0 RR Lyrae
		3	Th-Ar		↕	60s	
		4	TW Her	"	"	13m	"
		5	Th-Ar		↕	60s	
		6	TW Her	"	"	13m	"
		7	Th-Ar		↕	60s	
		8	TW Her	"	"	10m	"
		9	Th-Ar		↕	60s	
		10	TW Her	"	"	11m	"
		11	Th-Ar		↑	60s	
		12	Th-Ar		↓	60s	
		13	(2)	16:05:06.9	25:03:32		2m Asteroid
		14	Th-Ar		↑	60s	
		15	Th-Ar		↓	60s	
		16	170544	18:27:11.7	11:52:41		10m 7.9 F stars
		17	Th-Ar		↑	60s	
		18	Th-Ar		↓	60s	
		19	171365	18:31:33	17:41:32		5m 7.0 "
		20	Th-Ar		↑	60s	
		21	Th-Ar		↓	60s	
		22	SKY-DWN	4hrs E	+20°		2m 4hrs E ; +20°
		23	Th-Ar		↑	60s	
		24	Th-Ar		↓	60s	
		25	SKY-DWN	φ hrs	+20°		2m
		26	Th-Ar		↑	60s	
		27	INCAND			120 ^{MIN}	
		28	INCAND			63 ^{MIN}	
		29					
		30					
		31					
		32					

RM 5/10

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET 17

Grating 300L

Observer LAM

Telescope 61" WYETH

Date MAY 10 11 1987

Disk DRD 1565

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	5187A 80μ slit
		2				2m	φ _{in} + 30°
		3			↑	60s	
		4			↓	60s	
		5				2m	4 1/2 hr 130°
		6			↑	60s	
		7			↓	60s	
		8	H 22049	10 17 00	194 33.0	2m	IAU STD
		9			↑	60s	
		10			↓	30s	
		11	H 29449	10 17 01.0	194 33.0	2m	IAU STD
		12			↑	30s	
		13			↓	60s	
		14	H 08227	09 47 59.0	04 34.2	3m	M STARS
		15			↑	60s	
		16			↓	60s	
		17	S 08265	13 03 56.0	22 53.0	2m	M STARS
		18			↑	60s	
		19			↓	60s	
		20	GLS 499	13 03 49	20 59 42	6m	"
		21			↑	60s	
		22			↓	60s	ANGP
		23	22 2500	12 32 42.9	21 47 30	4m	
		24			↑	60s	
		25			↓	60s	
		26	23-2983	12 37 54.9	23 18 20	6m	"
		27			↑	60s	
		28			↓	60s	
		29	21 2753	12 37 56.7	20 03 22	3m	"
		30			↑	60s	
		31					
		32					

Intensified Reticon

TO CAM 5/11

Spectrograph ECHELLE

Log Sheet

RAWRET 17

Grating 300L

Observer LAM

Telescope 61" Wgeth

Date May 10/11 1987

Disk ORO 1568

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	
	159122	17 31 04.0	-17 48 06				5 min	F STAR BINARY
		TH-AR				↑	60s	
		TH-AR				↓	60s	HALOS
	G141-8	18 23 42.0	08 45 06				90s	
		TH-AR				↑	60s	
		TH-AR				↓	60s	
	G141-39	18 47 20.0	13 09 48				70s	"
		TH-AR				↑	60s	
		TH-AR				↓	60s	
	G23-3	19 30 28.0	07 18 00				3 min	
		TH-AR				↑	60s	
		TH-AR				↓	60s	
	190004	17 59 55.9	20 47 49				90s	F STARS
		TH-AR				↑	60s	
		TH-AR				↓	60s	
	SKYDOME						2 min	4 hrs E, +30 deg
		TH-AR				↑	60s	
		TH-AR				↓	60s	
	SKYDOME						2 min	Obs + 30 deg
		TH-AR				↑	60s	
	INCAND						120 min	
	INCAND						120 min	
MAY 11-12		TH-AR				↓	60s	5187A 80μ SLIT
	SKYEVIEW	0 hrs	HA	+30°			2 min	Hazy
		TH-AR				↑	60s	
		TH-AR				↓	60s	
	SKYEVIEW	4 hrs	WHA	+30°			2 min	
		TH-AR				↑	60s	
		TH-AR				↓	60s	
	H66191	07 59 40	02 28				2 min	TAL
		TH-AR				↑	60s	

Intensified Reticon

TO CAM 5/11

Spectrograph ECHELLE

Log Sheet

RAW/RET 17

Grating 200A

Observer AG

Telescope SH

Date 5/11-12/77

Disk ORU 1569

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments	
		1	TH-AR	25-2370		↓	60 ^s	5187.
		2	25-2390	11 30 11	25 00		20 ^m	ANGP
		3	TH-AR			↑	60 ^s	
		4	25-2370	"	"		7 ^m	
		5	TH-AR			↑	60 ^s	
		6	TH-AR			↓	60 ^s	
		7	40-2459	11 41 50	37 46		20 ^m	
		8	TH-AR			↑	60 ^s	
		9	40-2459	"	"		20 ^m	
		10	TH-AR			↓	60 ^s	
		11	41-2242	11 50 24	40 35		20 ^m	
		12	TH-AR			↓	60 ^s	
		13	41-2242	"	"		20 ^m	
		14	TH-AR			↑	60 ^s	
		15	TH-AR			↓	60 ^s	
		16	237319	12 43 00	36 39		10 ^m	
		17	TH-AR			↓	60 ^s	
		18	35376	12 46 33	34 52		6 ^{MIN}	
		19	TH-AR			↑	60 ^s	
		20	36315	12:51:35	35:50:55		10 ^{MIN}	10.5/
		21	TH-AR			↑	60 ^s	
		22	37-2334	12:51:44	37:15:31		10 ^{MIN}	7.1/
		23	TH-AR			↑	60 ^s	
		24	36-2320	2:53:19	36:13:10		6 ^{MIN}	7.5/
		25	TH-AR			↑	60 ^s	
		26	36-2392	2:58:45	37:39:55		6 ^{MIN}	7.4/
		27	TH-AR			↓	60 ^s	
		28	38-2396	3:00:02	37:36:53		4 ^{MIN}	5.1/
		29	TH-AR			↑	60 ^s	
		30	37-2361	3:04:39	36:31:58		5 ^{MIN}	7.7/
		31	TH-AR			↑	60 ^s	
		32						

Intensified Reticon

TO CAM 5/11

Spectrograph ECHELLE

Log Sheet

RAW RET 17

Grating 3008

Observer GS

Telescope 6" WYETH

Date MAY 11-12 1967

Disk ORO 1570

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	60 ^s	5187A 80μ slit
	37-2376	2	13:09:46	37:10:28		4 MIN	8.9/ A NGP
		3	TH-AR		↕	60 ^s	
	35-2421	4	13:10:27	34:47:38		5 MIN	8.1/
		5	TH-AR		↕	60 ^s	
	33-2323	6	13:16:02	33:06:42		13 MIN	9.7/
		7	TH-AR		↕	60 ^s	
	32-2337	8	13:15:51	31:53:37		5 MIN	8.0/
		9	TH-AR		↓	60 ^s	
	28-2213	10	13:17:32	28:21:59		4 MIN	8.3/
		11	TH-AR		↑	60 ^s	
		12	TH-AR		↓	60 ^s	
	(2)	13	16:03:33	25:18:28		5 MIN	9.2/ ASTEROID
		14	TH-AR		↑	60 ^s	
		15	TH-AR		↓	60 ^s	
	H146051	16	16:11:43	-03:34:01		2 MIN	2.7/ .3 ND FILTER IAU STANDARD
		17	TH-AR		↑	60 ^s	
		18	TH-AR		↓	60 ^s	
	U SGR	19	18:28:52	-19:09:42		3 MIN	7.1/ CEPH
		20	TH-AR		↑	60 ^s	
		21	TH-AR		↓	60 ^s	
	SV VUL	22	19:49:28	27:19:53		3 MIN	7.8/
		23	TH-AR		↑	60 ^s	
		24	TH-AR		↓	60 ^s	
	S124835	25	19:33:45	05:53:44		4 MIN	6.7/100 H STARS
		26	TH-AR		↕	60 ^s	
	GLS 763	27	19:32:10	04:28:16		20 MIN	9.4/30
		28	TH-AR		↑	60 ^s	
		29	TH-AR		↓	60 ^s	
	GLS 820A	30	21:04:54	38:32:06		2 MIN	5.2/100 BRITER ONE ON TV SCREEN
		31	TH-AR		↑	60 ^s	
		32					

Intensified Reticon

TO CAM 5/12

Spectrograph ECHELLE

Log Sheet

RAW/RET 17

Grating 300

Observer GS

Telescope 6" WYETH

Date MAY 11-12 1987

Disk ORO 1571

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	5187A 80μSLIT
	GLS820B	2	21:04:54	38:32:06		5 ^{MIN}	6.0/100 (LOWER ON TV) M STARS
	TH-AR	3			↑	60 ^s	
	TH-AR	4			↓	60 ^s	
	Z LAC	5	22:38:53	56:34:05		10 ^{MIN}	8.9/ (CLDS) CEPH
	TH-AR	6			↑	60 ^s	
	TH-AR	7			↓	60 ^s	LS63A 80μSLIT
	LAM AND	8	23:35:06	46:11:14		5 ^{MIN}	3.9/ H ALPHA
	TH-AR	9			↑	60 ^s	
	TH-AR	10			↓	60 ^s	5187A 80μSLIT
	SKYDOWN	11	4 ^{HRS} HA	+35		2 ^{MIN}	PTLY CLOUD
	TH-AR	12			↑	60 ^s	
	TH-AR	13			↓	60 ^s	
	SKYDOWN	14	0 ^{HRS} HA	+35		2 ^{MIN}	
	TH-AR	15			↑	60 ^s	
	INCANDS	16				120 ^{MIN}	
	INCANDS	17				120	
	INCANS	18				46	
5/12-13	TH-AR	19			↓	60	
	SKYEVEN	20	0 HA	+15		2 ^{MIN}	
	TH-AR	21			↑	60 ^s	
	TH-AR	22			↓	60	
	SKYEVEN	23				2 ^{MIN}	
	TH-AR	24			↑	60	
	TH-AR	25			↓	60	
	H87449	26	10 17 01	19 44		2 ^{MIN}	IAW
	TH-AR	27			↑	60	
	TH-AR	28				30^s	
	H87449	29	"	"		2 ^{MIN}	
	TH-AR	30				30^s	
		31					
		32					

TO CAM 5/12

Intensified Reticon

Spectrograph ECHELLE Log Sheet RAWRET 17

Grating 300L Observer RC

Telescope SH Date 5/12-13/87 Disk ORO 1572

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	60 ^s	5187A ^o
		2	12-2413	11 58 48	11 36	16 ^m	ANGP
		3	TH-AR		TL	60 ^s	
		4	14462	11 58 08	13 34	6 ^m	
		5	TH-AR		TL	60 ^s	
		6	13-2476	11 54 40	13 14	3 1/2 ^m	
		7	TH-AR		TL	60 ^s	
		8	15-2399	11 54 32	15 28	2 ^m	
		9	TH-AR		TL	60 ^s	
		10	15401	11 58 31	15 18	10 ^m	
		11	TH-AR		TL	60 ^s	
		12	15-2405	12 00 15	15 04	4 ^m	
		13	TH-AR		↓T	60 ^s	
		14	13-2494	12 05 03	12 56	19 ^m	
		15	TH-AR		TL	60 ^s	
		16	13-2498	12 06 25	12 58	10 ^m	
		17	TH-AR		T	60 ^s	
		18	TH-AR		↓	60 ^s	
		19	13-2503	12 09 24	13 17	15 ^m	
		20	TH-AR		TL	60 ^s	
		21	115427	12 10 21	14 40	10 ^m	
		22	TH-AR		T	60 ^s	
		23	TH-AR		↓	60 ^s	
		24	732233	12 17 56	31 44	12 ^m	
		25	TH-AR		TL	60 ^s	
		26	33239	12 25 43	32 59	15 ^{MIN}	11.1/
		27	TH-AR		↑	60 ^s	
		28	31369	12:26:10	31:05:04	15 ^{MIN}	11.1/
		29	TH-AR		↑	60 ^s	
		30	30293	12:31:45	30:12:17	12 ^{MIN}	11.1/
		31	TH-AR		↑	60 ^s	
		32					

TO CAM 5/12

Intensified Reticon

Spectrograph ECHELLE Log Sheet RAW RET 17

Grating 300l Observer GS

Telescope 6" WYETH Date MAY 12-13 1987 Disk ORO 1573

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^{sec}	5187A 80 μ SLIT
		2	28137	12:34:12	27:45:17	20 ^{MIN}	10.8/ A NGP
		3			↑	60 ^s	
		4			↓	60 ^s	
		5	43332	13:24:08	43:16:42	6 ^{MIN}	10.2/
		6			↕	60 ^s	
		7	41397	13:24:00	40:32:50	5 ^{MIN}	10.2/
		8			↕	60 ^s	
		9	242428	13:38:46	41:59:46	10 ^{MIN}	11.0/
		10			↕	60 ^s	
		11	41425	13:44:34	40:31:17	15 ^{MIN}	10.4/
		12			↕	60 ^s	
		13	44301	13:46:06	43:34:23	5 ^{MIN}	9.6/
		14			↕	60 ^s	
		15	41-2437	13:52:13	41:00:28	5 ^{MIN}	9.2/
		16			↑	60 ^s	
		17			↓	60 ^s	
		18	135503	13:53:17	34:43:50	10 ^{MIN}	11.0/
		19			↕	60 ^s	
		20	34476	13:56:57	34:06:36	18 ^{MIN}	10.0/
		21			↕	60 ^s	
		22	37-2482	13:57:56	36:36:54	4 ^{MIN}	9.4/
		23			↕	60 ^s	
		24	39726	14:06:18	38:34:56	10 ^{MIN}	10.2/
		25			↕	60 ^s	
		26	35534	14:11:24	35:13:46	15 ^{MIN}	10.6/
		27			↕	60 ^s	
		28	35-2538	14:13:41	34:48:58	2 ^{MIN}	8.6/
		29			↕	60 ^s	
		30	34-2513	14:15:10	34:07:31	5 ^{MIN}	8.8/
		31			↑	60 ^s	
		32					

Intensified Reticon

TO CAM 5/13

Spectrograph ECHELLE

Log Sheet

RAW RET 17

Grating 300 L

Observer GS

Telescope 1.1" WYETH

Date MAY 12-13 1987

Disk ORD 1574

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	5187A 80μ SLIT
		2	(2)	16:02:40	25:26:22	3 MIN	9.2/ ASTEROID
		3			↑	60 ^s	
		4			↓	60 ^s	
		5	CI CYG	19:48:21	35:33:24	18 MIN	11.0/ SYMBIOTIC
		6			↑	60 ^s	
		7			↓	60 ^s	
		8	1016 CYG	19:55:20	39:41:30	10 MIN	10.0/
		9			↑	60 ^s	
		10			↓	60 ^s	
		11	HM-SGE	19:39:41	16:37:36	15 MIN	11.0/
		12			↑	60 ^s	
		13			↓	60 ^s	
		14	AG PEG	21:48:36	12:23:27	6 MIN	8.5/
		15			↑	60 ^s	
		16			↓	60 ^s	
		17	H213014	22:25:45	17:00:28	2 MIN	7.7/ IAU STND
		18			↑	60 ^s	
		19			↓	60 ^s	
		20	SKYDOWNE	4 HRS 2 HA	+30°	2 MIN	CLEAR
		21			↑	60 ^s	
		22			↓	60 ^s	
		23	SKYDWNM	0 HRS	+30	2 MIN	
		24			↑	60 ^s	
		25				120	
		26				120	
		27				90	
		28					
		29					
		30					
		31					
		32					

Spectrograph ECHELLE Intensified Reticon TO CAM S/M
 Grating 302L Log Sheet RAW RET 17
 Telescope S14 Date 5/13-14/87 Observer RCM
 Disk ORO 1575

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
						60 ^s	S12A
				+30		2 ^m	
						60 ^s	
						60 ^s	
				30 ^m		2 ^m	
						60 ^s	
						60 ^s	
			16 17 01	17 44		2 ^m	IAN
						60 ^s	IAN
						<u>30^s</u>	
			"	"		2 ^m	
						<u>30^s</u>	
						60 ^s	
			16 21 8	16 21 7		8 ^m	ANGP
						60 ^s	
			11 40 33	17 57		8 ^m	
						60 ^s	
			11 41 45	15 14		5 1/2 ^m	
						60	
			11 42 32	19 17		5 1/2	
						60	
			11 43 19	15 18		4	
						60	
			11 43 21	15 10		8 ^m	
						60	
			11 45 17	13 44		2 ^m	
						60	
			11 45 07	15 49		4 ^m	
						60	
			11 45 02	17 19		17 ^m	
						60	
			11 45 49	17 01		4 1/2	

TO CAM 5/13

Intensified Reticon

Spectrograph ECHELLE Log Sheet RAW RET 17

Grating 300L Observer na

Telescope SH Date 5/13-14/87 Disk ORO 1596

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↑↓	60 ^s	5787
		2	18-253	11 47 21	17 41	7 ^m	ANGP
		3	TH-AR		↑↓	60 ^s	
		4	16-2311	11 50 51	16 16	2 ^m	
		5	TH-AR		↑↓	60 ^s	
		6	16317	11 52 00	16 01	8 ^m	
		7	TH-AR		↑↓	60	
		8	16318	11 52 41	15 57	5 ^m	
		9	TH-AR		↑	60	
		10	TH-AR		↓	60	
		11	16305	11 49 20	15 36	10 ^m	
		12	TH-AR		↑↓	60	
		13	15-2382	11 46 24	14 47	2 ^m	
		14	TH-AR		↑↓	60	
		15	115386	11 48 56	14 29	15 ^m	
		16	TH-AR		↑↓	60	
		17	16442	11 48 21	13 30	7 ^m	14442
		18	TH-AR		↑	60 ^s	
		19	TH-AR		↓	60 ^s	
20 TH-AR 14-2642		21	12609	13 34 59	13 39	2 1/2 ^m	
		22	TH-AR		↑	60 ^s	
		23	122611	13:36:29	11:56:10	4 ^m	100/
		24	TH-AR		↑	60 ^s	
		25	13698	13:37:31	12:51:00	3 ^m	9.3/
		26	TH-AR		↑	60 ^s	
		27	13-2702	3:40:39	12:56:12	4 ^m	9.8/
		28	TH-AR		↑	60 ^s	
		29	15-2615	3:41:42	5:13:08	8 ^m	9.9/
		30	TH-AR		↑	60 ^s	
		31	TH-AR		↓	60 ^s	
		32	15-2627	13:44:54	15:20:59	7 ^m	9.3/
		33	TH-AR		↑	60 ^s	

Intensified Reticon

TO CAM 5/13

Spectrograph ECHELLE Log Sheet RAW/RET 17

Grating 300 Observer GS

Telescope 61" WYETH Date MAY 13-14 1987 Disk ORD 1577

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	5187A 80 μ SLIT
	14-2675		13:49:26	14:10:29		6 MIN	9.0/ A NGP
		3			↕	60 ^s	
	15-2643		13:53:05	15:25:20		3 MIN	9.0/
		5			↕	60 ^s	
	15-2647		13:54:40	14:37:54		8 MIN	9.4/
		7			↕	60 ^s	
	17-2691		13:59:14	16:59:53		2 MIN	7.4/
		9			↑	60 ^s	
		10			↓	60 ^s	
	28-2251		13:40:10	28:27:18		3 MIN	8.4/
		12			↕	60 ^s	
	27-2293		13:45:44	26:45:49		7 MIN	9.2/
		14			↕	60 ^s	
	24651		13:49:25	24:02:59		6 MIN	10.9/
		16			↕	60 ^s	
	24-2654		13:50:14	23:48:33		4 MIN	8.6/
		18			↕	60 ^s	
	25-2699		13:52:17	24:43:04		4 MIN	9.8/
		20			↕	60 ^s	
	23-2642		13:57:21	23:10:28		3 MIN	9.7/
		22			↕	60 ^s	
	23646		14:02:02	23:20:51		6 MIN	10.4/
		24			↕	60 ^s	
	23-2651		14:04:55	23:23:09		4 MIN	9.4/
		26			↕	60 ^s	
	25-2732		14:05:32	24:57:33		4 MIN	9.6/
		28			↕	60 ^s	
	22-2667		14:05:46	22:31:16		4 MIN	9.7/
		30			↕	60 ^s	
	23659		14:08:31	22:42:27		6 MIN	10.2/
		32			↑	60 ^s	

Spectrograph ECHELLE Intensified Reticon TO CAM 5/13
 Grating 300 Log Sheet RAW RET 11
 Telescope 6" WYETH Date MAY 13-14 1987 Observer GS
 Disk ORO 1578

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	5187A 80 μ SLIT
	21-2624	2	14:09:50	21:20:37		4 ^{MIN}	9.8/ A NGP
	TH-AR	3			↕	60 ^s	
	20-2942	4	14:09:51	20:01:58		5 ^{MIN}	9.3/
	TH-AR	5			↕	60 ^s	
	21626	6	14:09:59	21:05:30		4 ^{MIN}	9.5/
	TH-AR	7			↕	60 ^s	
	23-2662	8	14:10:18	22:36:36		5 ^{MIN}	7.9/
	TH-AR	9			↕	60 ^s	
	27-2344	10	14:11:57	26:55:43		3 ^{MIN}	8.1/
	TH-AR	11			↕	60^s	GOOFED
	27-2351	11 ¹²	14:12:30	26:45:25		6 ^{MIN}	8.5/
	TH-AR	12 ¹³			↕	60 ^s	
	27-2356	13 ¹⁴	14:14:37	26:35:52		4 ^{MIN}	8.1/
	TH-AR	14 ¹⁵			↕	60 ^s	
	24-2712	15 ¹⁶	14:14:41	24:25:24		4 ^{MIN}	9.7/
	TH-AR	16 ¹⁷			↑	60 ^s	
	TH-AR	18			↓	60^s	GOOFED
	(2)	17 ¹⁹	16:01:50	25:33:26		3 ^{MIN}	9.2/ ASTEROID
	TH-AR	18 ²⁰			↑	60 ^s	
	TH-AR	19 ²¹			↓	60 ^s	
	GL 623	20 ²²	16:22:39	48:28:24		9 ^{MIN}	10.7/ M STAR
	TH-AR	21 ²³			↑	60 ^s	
	TH-AR	22 ²⁴			↓	60 ^s	
	U SGR	23 ²⁵	18:28:57	-19:09:42		3 ^{MIN}	7.1/ CEN.
	TH-AR	24 ²⁶			↑	60 ^s	
	TH-AR	25 ²⁷			↓	60 ^s	
	<V VUL	26 ²⁸	19:49:28	27:19:53		2 ^{MIN}	7.8/
	TH-AR	27 ²⁹			↑	60 ^s	
	TH-AR	28 ³⁰			↓	60 ^s	
	X CYG	29 ³¹	20:41:27	35:24:24		2 ^{MIN}	6.4/
	TH-AR	30 ³²			↑	60 ^s	

Intensified Reticon

TO CAM 5/14

Spectrograph ECHELLE

Log Sheet

RAW RET 17

Grating 3008

Observer GS

Telescope 6" WYETH

Date MAY 13-14 1987

Disk ORO 1579

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	5187A 80μ SLIT
		2	Z LAC	22:38:53 56:34:05		4 MIN	8.9 / CETH
		3			↑	60 ^s	
		4			↓	60 ^s	
		5	Z AND	23:31:15 48:32:32		7 MIN	10.0 / (WATCH DAWN) SYMBIOTIC
		6			↑	60 ^s	
		7			↓	60 ^s	
		8	SKYDWN E	4 HRS EHA +35		2 MIN	CLEAR
		9			↑	60 ^s	
		10			↓	60 ^s	
		11	SKYDWN M	0 HRS +35		2 MIN	
		12			↑	60 ^s	
		13	INCANDS			120 MIN	
		14	"			120	
		15	"			120	
5/14-15/87		16			↓	60 ^s	
		17	SKYEVEW	0h HA +15		2m	
		18			↑	60 ^s	
		19			↓	60 ^s	
		20	SKYEVEW	4h HA +15		2m	
		21			↑	60 ^s	
		22			↓	60 ^s	
		23	H 89449	10 17 01 19 44		3m	IAN
		24			↑	60 ^s	
		25			↓	30	
		26	H 89449	" "		2m	
		27			↑	30 ^s	
		28			↓	60 ^s	
		29	UU VIR	12 06 01 -00 13		15m	RR LYR
		30			↑	60 ^s	
		31	UU VIR	" "		15m	
		32			↑	60 ^s	

Spectrograph ECHELLE Intensified Reticon TO CAM 5/15
 Grating 200L Log Sheet RAW/RET 17
 Telescope 5H Date 5/14-15/77 Observer Jan
 Disk ORO 1580

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

Change....	File	ID	RA	Dec	L/R	Exposure	Comments
UW VIR	1	TH-AR	12 06 01	-00 13	↓	15 ^m	WRONG DATE
	2	TH-AR			↑	60	(5/15 INSTEAD
	3	UW VIR	"	"		15 ^m	OF 5/14)
	4	TH-AR			↑	60 ^s	PLEASE FIX
	5	TH-AR			↓	60 ^s	
	6	UW VIR	"	"		14 ^m	
	7	TH-AR			↑	60 ^s	
	8	TH-AR			↓	60 ^s	
	9	UW VIR	"	"		14 ^m	
	10	TH-AR			↑	60 ^s	
	11	UW VIR	"	"		12 ^m	
	12	TH-AR			↓	60 ^s	
	13	UW VIR	"	"		11 ^{1/2}	
	14	TH-AR			↑	60 ^s	HOLD FOR CLOS
	15	TH-AR			↓	60 ^s	
	16	UW VIR	"	"		14 ^m	PTLY CLOUDY
	17	TH-AR			↑	60 ^s	
	18	TH-AR			↓	60 ^s	
	19	125488	14:17:08	06:07:33		10 ^m	7.9/ F STARS
	20	TH-AR			↑	60 ^s	
	21	TH-AR			↓	60 ^s	
	22	SV VUI	19:49:28	27:19:53		3 ^m	7.9/ CLOS CEP4
	23	TH-AR			↑	60 ^s	
	24	INCANDS				120 ^m	
	25	INCANDS				120	
	26	INCANDS				120	
	27	INCANDS				120	
	28						
	29						
	30						
	31						
	32						

Intensified Reticon TO CAM 5/15
 Spectrograph ECHELLE Log Sheet RAW/RET 17
 Grating 300l Observer RJD
 Telescope 6' WYETH Date MAY 15-16 1987 Disk ORO 1581

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments	
		1			↓	60 ^s	5187A .80 μ SLIT	
		2				90 ^s	Meridian, +31°	
		3			↑	60 ^s		
		4			↓	60 ^s		
		5				2 ^m	3 ^h W, +31°	
		6			↑	60 ^s		
		7			↓	60 ^s		
		8	H89448	10:17:01	19:43:31		2 ^m	IAU Rad Vel Std.
		9			↑	60 ^s		
		10			↓	30 ^s		
		11	H89449	10:17:01	19:43:31		2 ^m	" Reduce Separately
		12			↑	30 ^s		
		13			↓	60 ^s		
		14	S138815	12:27:09.6	-3:02:57		3 ^m	Halos Binaries
		15			↑	60 ^s		
		16			↓	60 ^s		
		17	G59-32	12:37:37	21:05:12		7 ⁱ m	
		18			↑	60 ^s		
		19			↓	60 ^s		
		20	W9400	12:13:26	05:55:06		15 ^m	M Stars Mazeh
		21			↑	60 ^s		
		22			↓	60 ^s		
		23	GL5519	13:35:13	35:58:24		8 ^m	
		24			↑	60 ^s		
		25			↓	60 ^s		
		26	1022+11	10:22:37	11:21:26		19 ^m	CVNS Maccauro
		27			↑↓	60 ^s		
		28	1022+11	"	"		20 ^m	
		29			↑	60 ^s		
		30			↓	60 ^s		
		31	H97916	11:13:19	02:21:36		16 ^m	Halos Binaries
		32			↑	60 ^s		

Intensified Reticon

TO CAM 5/15

Spectrograph ECHELLE Log Sheet

Grating 300l Observer RJD

Telescope 61" Wyeth Date 5/15-16/87 Disk ORO 1582

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
					↓	60 ^s	
						2 ^m	<i>Italo Binaries</i>
					↑	60 ^s	
					↓	60 ^s	
						6½ ^m	
					↑	60 ^s	
					↓	60 ^s	
						2 ^m	
					↑	60 ^s	
					↓	60 ^s	
						5½ ^m	
					↑	60 ^s	
					↓	60 ^s	
						13 ^m	
					↑	60 ^s	
					↓	60 ^s	
						5 ^m	<i>Asteroid</i>
					↑	60 ^s	
					↓	60 ^s	
						5 ^m	<i>M Stars - Mazeh</i>
					↑	60 ^s	
					↓	60 ^s	
						11½ ^m	<i>CVNS Maccacaro</i>
					↑	60 ^s	
					↓	60 ^s	
						3½ ^m	<i>ANGP Andersen</i>
					↕	60 ^s	
						14 ^m	
					↕	60 ^s	
						5 ^m	
					↑	60 ^s	

Intensified Reticon
TO CAM 5/15

Spectrograph ECHELLE Log Sheet RAW RET 17

Grating 300 l Observer RJD

Telescope 61" Wyeth Date 5/15-16/87 Disk ORO 1583

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	
		2	G15809B	20:52:18	61:58:30	6 ^m	M Stars. SE Star, 2' pair
		3	THAr		↑↓	60 ^s	No finder chart
		4	G15809A	20:52:18	61:58:30	7 ^m	NW Star, 2' pair
		5	THAr		↑	60 ^s	
		6	THAr		↓	60 ^s	
		7	H146051	16:11:43	-3:34:01	2 ^m	IAU Rad Vel Std-NO1
		8	THAr		↑	60 ^s	
		9	THAr		↓	60 ^s	
		10	38-2518	14:07:35.3	37:33:55	5 ^m	ANGP Andersen
		11	THAr		↑↓	60 ^s	
		12	37-2500	14:06:15.2	37:15:56	14 ^m	
		13	THAr		↑↓	60 ^s	
		14	36-2445	14:07:25	36:02:41	8 ^m	Brighter, NE*, 10" Pair
		15	THAr		↑↓	60 ^s	
		16	36B2445	14:07:15	36:02:31	7 ^m	Fainter, SW*, 10" Pair
		17	THAr		↑	60 ^s	
		18	THAr		↓	60 ^s	
		19	G182-7	17:23:01	38:04:54	4 ^m	Italo Binaries
		20	THAr		↑	60 ^s	
		21	THAr		↓	60 ^s	
		22	G141-47	18:50:55	10:33:48	19 ^m	
		23	THAr		↑	60 ^s	
		24	THAr		↓	60 ^s	
		25	U Sgr	18:28:57	-19:09:42	5 ^m	Cepheid
		26	THAr		↑	60 ^s	
		27	THAr		↓	60 ^s	
		28	(1)	18:19:06	-23:38:49	5 ^m	109. Moonlight. Asteroid.
		29	THAr		↑	60 ^s	
		30	THAr		↓	60 ^s	
		31	Z Lac	22:38:53	56:34:05	9 ^m	Cepheid
		32	THAr		↑	60 ^s	

5/16

Intensified Reticon TO CAM
 Spectrograph ECHELLE
 Log Sheet RAW/RET 17
 Grating 300 l Observer RJD
 Telescope 61" Wyeath Date 5/15-16/87 Disk OKO 1584

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	
	5162947	19:42:21	-17:37:42			8 ¹ / ₂ ^m	Italo Binaries
		3			↑	60 ^s	
		4			↓	60 ^s	
	G25-15	21:01:37	02:48:00			2 ¹ / ₂ ^m	
		6			↑	60 ^s	
		7			↓	60 ^s	
	U Sgr	18:28:57	-19:09:42			3 ^m	Cepheid. 20% Moonlight
		9			↑	60 ^s	
		10			↓	60 ^s	
	H182572	19:22:35.1	11:50:09			2 ^m	IAU Rad Vel Std
		12			↑	60 ^s	10% Dawn contamination
		13			↓	60 ^s	
	SKYDOME					2 ^m	3 ^h E, +30°
		15			↑	60 ^s	
		16			↓	60 ^s	
	SKYDOME					1 ^m	Meridian, +30°
		18			↑	60 ^s	
	INCANDS					120 ^m	
		20				120 ^m	
16-17 MAY 1987		21			↓	60s	5187A - clear-
	SKY-EVE	φ hrs	+30°			2m	φ hrs, +30°
		23			↑	60s	
		24			↓	60s	φ
	SKY-EVE	4.5hrs W	+30°			2m	4.5hrs WEST, +30°
		26			↑	60s	
		27			↓	60s	
	H89449	10:17:01	19:43:31			2m	4.9 IAU standard
		29			↑	60s	
		30					
		31					
		32					

Intensified Reticon TO CAM 5/17

Spectrograph ECHELLE Log Sheet RAW RET 17

Grating 3000 Observer LAM

Telescope 61" WYETH Date MAY 17-18 1987 Disk ORU 1586

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments	
		1			↓	60 ^s	5187A 80μ SLIT Clouds	
		2				2 ^m	0" 30" N.	
		3			↑	60 ^s		
		4			↓	60 ^s		
		5				2 ^m	4 2HW 30" N	
		6			↑	60 ^s		
5/17-20/87		7			↓	60 ^s		
		8				2 ^m		
		9			↑	60 ^s		
		10			↓	60 ^s		
		11				2 ^m		
		12			↑	60 ^s		
		13			↓	60 ^s		
		14	H 89449	16 17 01	19 44		2 ^m	IAN
		15			↑	60 ^s		
		16				30^s		
		17	H 89449	"	"		2 ^m	
		18				30^s		
		19			↓	90 ^s	6563A	
		20	V CVh	13 17 17	45 47		20 ^m	8222Y
		21			↑	90 ^s		
		22	V CVh	"	"		20 ^m	
		23			↑	90 ^s		
		24			↓	60^s	5187A	
		25	41-2269	12 00 27	41 21		8 ^m	AN610
		26			↑	60 ^s		
		27	41-2269	12 01 41	41 27		5 ^m	
		28			↑	60 ^s		
		29			↓	60 ^s		
		30	141269	12 02 31	41 09		20 ^m	
		31			↑	60 ^s		
		32	41-2273	12 04 31	41 54		12 ^m	OVERCAST
		33			↑	60 ^s		

Intensified Reticon

TO CAM 5/19

Spectrograph ECHELLE

Log Sheet

RAW RET 17

Grating 300L

Observer GS

Telescope 61" SH WYETH

Date 5 19/20 1987

Disk ORO 1587

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	INCAND			30 MIN	5187A 80 μ SLIT
		2	TH-AR		↓	60 ^s	
		3	38-2719	13:14:17	38:30:13	8 MIN	10.0/ A NGP
		4	TH-AR		↑	60 ^s	
		5	41-2381	13:15:49	40:47:36	2 MIN	8.3/
		6	TH-AR		↑	60 ^s	
		7	40-2642	13:16:12	40:09:40	2 MIN	8.1/
		8	TH-AR		↑	60 ^s	
		9	143322	13:18:59	42:52:25	12 MIN	10.5/
		10	TH-AR		↑	60 ^s	
		11	44-2266	13:19:01	43:54:34	18 MIN	9.6/
		12	TH-AR		↑	60 ^s	
		13	40-2650	13:19:50	40:07:50	4 MIN	8.9/
		14	TH-AR		↑	60 ^s	
		15	39-2637	13:20:14	39:01:20	5 MIN	9.3/
		16	TH-AR		↑	60 ^s	
		17	41-2389	13:20:56	40:44:13	7 MIN	9.8/
		18	TH-AR		↑	60 ^s	
		19	41-2393	13:23:04	40:43:38	3 MIN	8.8/
		20	TH-AR		↑	60 ^s	
		21	40-2658	13:23:31	40:22:46	8 MIN	9.8/
		22	TH-AR		↑	60 ^s	
		23	45-2113	13:28:23	44:50:28	2 MIN	8.4/
		24	TH-AR		↑	60 ^s	
		25	44-2274	13:28:27	44:02:53	10 MIN	8.5/
		26	TH-AR		↑	60 ^s	
		27	40-2662	13:30:01	40:23:29	8 MIN	9.4/
		28	TH-AR		↑	60 ^s	
		29	40-2665	13:30:52	39:36:23	4 MIN	8.6/
		30	TH-AR		↑	60 ^s	
		31	40-2666	13:31:15	40:11:22	2 MIN	7.8/
		32	TH-AR		↑	60 ^s	

TO CAM 5/21

RAW RET 17

Intensified Reticon

Spectrograph ECHELLE Log Sheet

Grating 300l Observer GS

Telescope 6" WYETH Date MAY 19-20 1987 Disk ORO 1588

Change....	File	ID	RA	Dec	1950.0 L/R +/-	Exposure	Comments
		1	TH-AR		↓	60 ^s	5187A. 80μSLIT
		2	41-2410	13:32:05	40:58:04	4 ^{MIN}	8.8/ ANGP
		3	TH-AR		↑	60 ^s	
		4	42-2420	13:35:10	41:47:04	4 ^{MIN}	9.5/
		5	TH-AR		↑	60 ^s	
		6	40-2672	13:36:44	39:50:35	6 ^{MIN}	9.7/
		7	TH-AR		↑	60 ^s	
		8	38-2467	13:37:47	38:13:52	8 ^{MIN}	9.6/
		9	TH-AR		↑	60 ^s	
		10	38-2468	13:39:10	37:37:59	8 ^{MIN}	10.0/
		11	TH-AR		↑	60 ^s	
		12	34-2443	13:40:00	34:16:02	9 ^{MIN}	9.6/
		13	TH-AR		↑	60 ^s	
		14	TH-AR		↓	60 ^s	
		15	(2)	15:56:44	26:08:14	7 ^{MIN}	9.2/ CLDS ASTEROID
		16	TH-AR		↑	60 ^s	
		17	INCANDS			120 ^{MIN}	
		18	INCANDS			120 ^{MIN}	
		19	INCANDS			120 ^{MIN}	
		20	TH-AR		↓	60 ^s	
5/20-21		21	SK/EVEN	oh	+29	2 ^h	OVERCAST
		22	TH-AR		↑	60 ^s	
		23	TH-AR		↓	60 ^s	
		24	24-2530	13:00:44	24:25:44	4 ^{MIN}	9.1/ ANGP
		25	TH-AR		↑	60 ^s	
		26	24-2528	13:00:04	23:46:00	3 ^{MIN}	9.7/
		27	TH-AR		↑	60 ^s	
		28	TH-AR 26-2422	13:01:20	25:42:13	60 ^s	9.6/ (INCANDS, CLDS)
		29	(2)	15:55:54	26:12:39	7 ^{MIN}	9.3/ ASTEROID
		30	TH-AR		↑	60 ^s	
		31					
		32					

Spectrograph ECHELLE Intensified Reticon TO CAM 5/21
 Grating 300X Log Sheet RAW/RET 17
 Telescope 6" WYETH Date MAY 20-21 1987 Observer GS
 Disk ORO 1589

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	5187A 80μ SLIT
		2	19:49:28	27:19:53		2 ^{min}	7.8/ CERN
		3			↑	60 ^s	
		4			↓	60 ^s	
		5	H18R572 19:22:35	11:50:09		3 ^{min}	5.2/ IAU STAND
		6			↑	60 ^s	OVERCAST
		7				120 ^{min}	
		8				120 ^{min}	
		9				115 ^{min}	
5/21-22/87		10				60 ^s	
		11	SKYEVEN 0 ^h	+30		2 ^{min}	
		12				60 ^s	
		13			↓	60 ^s	
		14	H89449 10 17 01	19 44		2 ^{min}	VALI
		15			↑	60 ^s	
		16			↓	30 ^s	
		17	H89449			2 ^{min}	
		18			↑	30 ^s	
		19			↓	90 ^s	6563A
		20	VCVn 13 17 17	45 47		10 ^{min}	SALLY
		21			↑	90 ^s	
		22			↓	60 ^s	5187A
		23	UU VIR 12 06 01	-00 13		12 ^{min}	RR LYR
		24			↑	60 ^s	
		25	UU VIR "	"		11 ^{min}	
		26			↑	60 ^s	
		27	UU VIR "	"		13 ^{min}	BEWARE - BIG POSITION
		28			↑	60 ^s	JUMP BETWEEN CEXS
		29			↓	60 ^s	
		30	UU VIR "	"		12 ^{min}	
		31			↑	60 ^s	
		32				15	

Spectrograph ECHELLE

Intensified Reticon

TO CAM 5/2

Log Sheet

RAW RET 17Grating 3008Observer GSTelescope 61"WYETHDate MAY 21-22 1987Disk ORO 1591

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	60 ^s	5187A 80μ SLIT
		2	23-2580	13:30:08	22:46:23	6 ^{MIN}	9.7/ ANGP
		3	TH-AR		↑	60 ^s	
		4	24-2599	13:32:14	23:53:06	4½ ^{MIN}	9.9/
		5	TH-AR		↑	60 ^s	
		6	24-2620	13:38:49	23:45:10	6 ^{MIN}	9.9/
		7	TH-AR		↑	60 ^s	
		8	25-2666	13:40:56	24:36:41	10 ^{MIN}	9.2/
		9	TH-AR		↑	60 ^s	
		10	TH-AR		↓	60 ^s	
		11	(2)	15:55:02	26:16:57	3 ^{MIN}	9.3/ ASTEROID
		12	TH-AR		↑	60 ^s	
		13	TH-AR		↓	60 ^s	
		14	GL 623	16:22:39	48:28:24	12 ^{MIN}	10.3/ M STAR
		15	TH-AR		↑	60 ^s	
		16	TH-AR		↓	60 ^s	
		17	U 5GR	18:28:57	-19:09:42	2 ^{MIN}	7.1/ CEPH
		18	TH-AR		↑	60 ^s	
		19	TH-AR		↓	60 ^s	6563A 80μ SLIT
		20	LAM AND	23:35:06	46:11:14	10 ^{MIN}	3.9/ 3ND FILT SALLY
		21	TH-AR		↑	60 ^s	
		22	TH-AR		↓	60 ^s	5187A 80μ SLIT
		23	Z LAC	22:38:53	56:34:05	5 ^{MIN}	8.9/ CEPH
		24	TH-AR		↑	60 ^s	
		25	TH-AR		↓	60 ^s	
		26	DL CAS	00:27:11	59:56:12	7 ^{MIN}	10.6/ (267.3 PHASE)
		27	TH-AR		↑	60 ^s	
		28	TH-AR		↓	60 ^s	
		29	HZ13014	22:25:45	17:00:28	2 ^{MIN}	7.7 IAU STND
		30	TH-AR		↑	60 ^s	
		31					
		32					

5/22
17

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 3000 Log Sheet RAW/RET
 Telescope 61" WYETH Date MAY 21-22 1987 Observer GS
 Disk ORO 1592

Change....	File	ID	RA	Dec	1950.0 L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	60 ^s	5187 Å 80μ SLIT
		2	SKYDWN	4 hrs HA	+30°	2 min	THIN CLDS
		3	TH-AR		↑	60 ^s	
		4	TH-AR		↓	60 ^s	
		5	SKYDWN	0 hrs HA	+30°	2 min	
		6	TH-AR		↑	60 ^s	
		7	INCANDS			120 min	
		8	INCANDS			120 min	
		9	INCANDS			101 min	
22-23 MAY 1987		10	TH-AR		↓	60s	5187 Å -prtty cldy-
		11	SKY-EVE	φ hrs HA	+30°	2m	
		12	TH-AR		↑	60s	
		13	TH-AR		↓	60s	
		14	SKY-EVE	4.5 hrs W	+30°	2m	
		15	TH-AR		↑	60s	
		16	TH-AR		↓	60s	
		17	H89449	10:17:01	19:43:31	2m	49 IAU standard
		18	TH-AR		↑	60s	
		19	TH-AR		↓	30s	
		20	H89449	"	"	2m	IAU standard 30sec Th-AR
		21	TH-AR		↑	30s	
		22	TH-AR		↓	60s	
		23	S138815	12:27:09.6	-03:02:57	4.5m	9.0/15 HALO
		24	TH-AR		↑	60s	
		25	TH-AR		↓	60s	
		26	G59-32	12:37:37	21:05:12	5m	9.0/60 HALO
		27	TH-AR		↑	60s	
		28	TH-AR		↓	60s	
		29	H106516	12:12:36	-10:01:14	2m	6.1/20 "
		30	TH-AR		↑	60s	
		31	/				
		32	/				

