

11/1

Intensified Reticon

TO CAM1

Spectrograph ECHELLE

Log Sheet

RAW/RET 14

Grating 300L

Observer RPS

Telescope SH

Date 1-2 NOV. 1986

Disk OR0 1252

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	5187Å - scat. clouds -
		2		φ hours		2m	δ = +33°
		3			↑	90s	
		4			↓	90s	
		5		4.5 hours west		2 1/2 m	δ = +33°
		6			↑	90s	
		7			↓	90s	
		8	U SGR	18:28:57	-19:09:42	6m	7.1 Cepheids
		9			↑	90s	
		10			↓	90s	
		11	H182572	19:22:35	11:56:09	2m	5.2 IAU standard
		12			↑	90s	
		13			↓	90s	
		14	S162947	19:42:21	-17:37:42	17m	9.2/30 HALOS
		15			↑	90s	
		16			↓	90s	
		17	G143-43	20:14:45	17:06:36	16m	10.8/15 II
		18			↑	90s	
		19			↓	90s	
		20	X CYG	20:41:27	35:24:24	3m	6.4 Cepheids
		21			↑	90s	
		22			↓	90s	
		23	GRS820A	21:04:54	38:32:06	10m	5.2/100 - stop! go - clouds - M stars
		24			↑	90s	
		25	GRS820B	21:04:54	38:32:06	7m	6.0/100 II
		26			↑	90s	
		27			↓	90s	
		28	H213014	22:25:46	17:00:28	6m	7.7 IAU standard
		29			↑	90s	
		30					
		31					
		32					

11/1

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET 14

Grating 3002

Observer RPS

Telescope 61" Wyeth

Date 1-2 Nov 1986

Disk ORO 1253

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments
		1			↓	90s	
		2	213014B	22:25:46	17:00:28	10m	IAV standard binary?
		3			↑	90s	
		4			↓	90s	
		5	G68-31	23:33:33	18:09:48	2 1/2	7.7/20 HALOS
		6			↑	90s	
		7			↓	90s	
		8	G129-42	23:52:30	20:06:24	6m	9.0/20 II
		9			↑	90s	
		10			↓	90s	
		11	G130-10	23:43:38	34:58:12	7m	9.1/20 II
		12			↑	90s	
		13			↓	90s	
		14	S128427	23:49:24	02:39:09	4 1/2 m	5.9/100 Mstars
		15			↓	90s	
		16	G25908	23:46:38	02:07:37	19m	9.0/50 II
		17			↑	90s	
		18			↓	90s	
		19	(4)	00:28:42	-08:54:59	3m	Asteroid
		20			↑	90s	
		21			↓	90s	
		22	S147079	00:03:14	-19:56:36	15m	9.7/15 HALOS
		23			↑	90s	
		24			↓	90s	
		25	Z LAC	22:38:53	56:34:05	10m	8.9 Cepheids
		26			↑	90s	
		27			↓	90s	
		28	G252	00:02:35	45:00:30	20m	9.9/30 Mstars
		29			↓	90s	
		30	G252	00:02:35	45:30:30	10m	II
		31			↑	90s	
		32	/				

11/2

Intensified Reticon

TO CAM1

Spectrograph ECHELLE

Log Sheet

RAW RET 14

Grating 300L

Observer RPS

Telescope 61" Wyeth

Date 1-2 Nov 1980

Disk ORO 1254

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
		2	GRS 4A	φφ: 03:05	45:32:06		20m 8.9/40 M stars
		3	TR-AR			90s	
		4	GRS 4B	φφ: 03:05	45:32:00		20m 9.0/40 "
		5	TR-AR			90s	
		6	GRS 4B	φφ: 03:05	45:32:06		10m "
		7	TR-AR			90s	
		8	TR-AR			90s	
		9	Sφ3625φ	φφ: 15:41	44:16:52		16m 7.6/00 "
		10	TR-AR			90s	- clouds; terrible
		11	TR-AR			90s	seeing -
		12	<del>H26162</del>	φ4: 06:15	19:28:43		7m <del>7.6/00</del> 1A U3 standard
		13	TR-AR			90s	- Front coming by -
		14	TR-AR			90s	
		15	H213	φ4: 17:08	13:54:58		13m 5.6 Hyades Binary
		16	TR-AR			90s	
		17	TR-AR			90s	
		18	H448	φ4: 26:08	16:03:00		20m 6.6 " Stop 9"
		19	TR-AR			90s	
		20	TR-AR			90s	
		21	H246	φ4: 18:45	14:17:34		10m 6.6 Probably " "
		22	TR-AR			90s	No Good - stopped by clouds -
		23	INCOMP			120	
		24	"			"	
		25	"			"	
		26	"			"	
		27	INCOMP			62	
		28	TR-AR			90s	
		29	EYESKY			2"	- 20 = S 0 = HA RAIN
		30	TR-AR			90s	
		31	/				
		32	/				

11/2-3/86

Intensified Reticon

TO CAM 11/2

Spectrograph ECHELLE

Log Sheet

RAW/RET 14

Grating 300L

Observer RPS

Telescope 61" Wyeth

Date 2-3 Nov 1986

Disk ORO 1255

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	-breaking clouds-
	X CYG		20:41:27	35:24:24		7m	Cepheids
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	SV VUL		19:49:28	27:19:53		6m	
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	H182532		19:22:35	11:50:09		2 1/2 m	IAU standard
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	S127141		21:51:28	06:37:42		2 1/2 m	6.2/30 HALOS
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	H213014		22:25:46	17:00:28		2 1/2 m	7.7 IAU standard
	Th-Ar				↑	90s	
	21301+B		22:25:46	17:00:28		10m	
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G67-38		22:56:49	11:55:36		5 1/2 m	8.4/30 HALOS
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G18-55		22:30:20	10:09:00		4.5m	9.4/15    (cut short by clouds - maybe o.k.)
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G18-55					5m	9.4/15
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	After long wait - clouds
	G171-3		23:30:57	42:24:06		4m	
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	H8779		01:23:32.6	-00:37:29		4m	IAU Red Vel Std
	Th-Ar				↑	90s	

↑  
RPS  
RJD  
↓

Intensified Reticon

TO CAM 11/2

Spectrograph ECHELLE

Log Sheet

RAWRET 14

Grating 300l

Observer RJD

Telescope 61" wyeth

Date 11/2-3/1986

Disk ORO 1256

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	/
		2	(4)	00:28:08.9	-8:01:30		6 <sup>m</sup> Asteroid
		3			↑↓	90 <sup>s</sup>	
		4	H3 008	00:30:42	-11:00:00		8 <sup>m</sup> Halo Binaries
		5			↑	90 <sup>s</sup>	
		6			↓	90 <sup>s</sup>	
		7	S1662 00	00:18:13	-25:44:36		5 <sup>1/2</sup> <sup>m</sup>
		8			↑	90 <sup>s</sup>	
		9			↓	90 <sup>s</sup>	
		10	Z LAC	22:38:53	56:34:05		5 <sup>m</sup> Cepheid
		11			↑	90 <sup>s</sup>	
		12			↓	90 <sup>s</sup>	
		13	S171-57	00:22:23	45:24:48		6 <sup>m</sup> Halo Binaries
		14			↑↓	90 <sup>s</sup>	
		15	S036250	00:15:41.2	44:16:52		4 <sup>m</sup> M Stars
		16			↑↓	90 <sup>s</sup>	
		17	G1s 15A	00:15:40.5	43:44:37		5 <sup>m</sup>
		18			↑↓	90 <sup>s</sup>	
		19	G1s 14	00:14:28.0	40:40:18		9 <sup>m</sup>
		20			↑	90 <sup>s</sup>	
		21			↓	90 <sup>s</sup>	
		22	G172-38	01:02:41	49:11:18		14 <sup>m</sup> Halo Binaries
		23			↑	90 <sup>s</sup>	
		24			↓	90 <sup>s</sup>	
		25	S70-35	01:01:54	-2:38:00		3 <sup>1/2</sup> <sup>m</sup>
		26			↑↓	90 <sup>s</sup>	
		27	270-174	01:10:46	-2:07:42		3 <sup>m</sup>
		28			↑	90 <sup>s</sup>	
		29			↓	90 <sup>s</sup>	
		30	S021738	00:46:18.9	56:48:10		4 <sup>1/2</sup> <sup>m</sup> M Stars
		31			↑↓	90 <sup>s</sup>	
		32					

Intensified Reticon

TO CAM 11/2

Spectrograph ECHELLE

Log Sheet

RAWRET 14

Grating 300 l

Observer RJD

Telescope 61" Wye Th

Date 11/2-3/86

Disk ORO 1257

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments	
		1	G153413	00:46:08.6	57:33:04		6 <sup>m</sup>	M Stars
		2	ThAr			↑	90 <sup>s</sup>	Bware Contam - 11 Cas B
		3	ThAr			↓	90 <sup>s</sup>	
		4	G243-69	01:06:30	61:16:48		4 <sup>1/2</sup> <sup>m</sup>	11/10 Binaries
		5	ThAr			↑	90 <sup>s</sup>	
		6	ThAr			↓	90 <sup>s</sup>	
		7	G172-46	01:13:37	51:35:48		21 <sup>m</sup>	
		8	ThAr			↑	90 <sup>s</sup>	
		9	G172-49	01:17:59	51:43:24		2 <sup>m</sup>	
		10	ThAr			↑	90 <sup>s</sup>	
		11	G173-2	01:27:49	52:29:18		4 <sup>m</sup>	
		12	ThAr			↑	90 <sup>s</sup>	
		13	ThAr			↓	90 <sup>s</sup>	
		14	G172-58	01:28:13	47:44:54		9 <sup>m</sup>	
		15	ThAr			↑	90 <sup>s</sup>	
		16	G172-61	01:31:18	48:29:04		17 <sup>m</sup>	
		17	ThAr			↑	90 <sup>s</sup>	
		18	ThAr			↓	90 <sup>s</sup>	
		19	G1569	01:40:10	63:34:24		5 <sup>m</sup>	M Stars
		20	ThAr			↑	90 <sup>s</sup>	
		21	S011983	01:44:10	63:36:14		2 <sup>m</sup>	
		22	ThAr			↑	90 <sup>s</sup>	
		23	ThAr			↓	90 <sup>s</sup>	
		24	S076206	03:45:07	24:50:08		2 <sup>m</sup>	
		25	ThAr			↑	90 <sup>s</sup>	
		26	G15154	03:43:19	26:03:42		7 <sup>m</sup>	
		27	ThAr			↑	90 <sup>s</sup>	
		28	ThAr			↓	90 <sup>s</sup>	
		29	(9)	04:40:48.7	20:14:04		10 <sup>m</sup>	Asteroid
		30	ThAr			↑	90 <sup>s</sup>	
		31						
		32						

Intensified Reticon

TO CAM 11/2

Spectrograph ECHELLE

Log Sheet

RAW/RET 14

Grating 300 lObserver RJDTelescope 61" WyethDate 11/2-3/86Disk ORO 1255

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	
*		2	H26162	04:06:49	19:28:43	2 <sup>m</sup>	JAU Rad Vel Std.
		3			↑	90 <sup>s</sup>	
		4			↓	90 <sup>s</sup>	
		5	S076588	04:20:44.7	22:50:59	2 <sup>m</sup>	M Stars
		6			N	90 <sup>s</sup>	
		7	G15169	04:26:02	21:48:47	2 <sup>m</sup>	
		8			↑	90 <sup>s</sup>	
		9			↓	90 <sup>s</sup>	
		10	H26162	04:06:49	19:28:43	2 <sup>m</sup>	JAU Rad Vel Std
		11			↑	90 <sup>s</sup>	
		12			↓	90 <sup>s</sup>	
		13	L081	04:38:40.9	13:07:34	20 <sup>m</sup>	Hyades
		14			↑	90 <sup>s</sup>	
		15			↓	90 <sup>s</sup>	
		16	RX Aur	04:57:55	39:53:17	2 <sup>m</sup>	Cepheid
		17			↑	90 <sup>s</sup>	
		18			↓	90 <sup>s</sup>	
		19	SV Mon	06:18:45	06:29:41	2 <sup>m</sup>	
		20			↑↓	90 <sup>s</sup>	
		21	T Mon	06:22:31	07:06:53	2 <sup>m</sup>	
		22			↑	90 <sup>s</sup>	
		23			↓	90 <sup>s</sup>	
		24	G90-25	07:50:22	30:45:40	2 <sup>m</sup>	Wals Binaries
		25			↑	90 <sup>s</sup>	
		26			↓	90 <sup>s</sup>	
		27	H74000	08:38:31	-14:07:35	7 <sup>1/2</sup> <sup>m</sup>	
		28			↑	90 <sup>s</sup>	
		29			↓	90 <sup>s</sup>	
		30	H16141	07:59:39.9	02:28:24	2 <sup>m</sup>	JAU Rad Vel Std; NO. 5
		31			↑	90 <sup>s</sup>	
		32					

\* Mirror may have been only partially illuminated.  
check rad vel against file no. 10.

Spectrograph ECHELLE Intensified Reticon TO CAM 11/4  
 Grating 300 Log Sheet RAW/RET 14  
 Telescope 61" Wyeth Date 11/2-3/86 Observer RJD  
 Disk ORO 1259

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	
		2				4 <sup>m</sup>	3 <sup>m</sup> E, 0 <sup>o</sup>
		3			↑	90 <sup>s</sup>	
		4			↓	90 <sup>s</sup>	
		5				3 <sup>m</sup>	Meridian, +38 <sup>o</sup>
		6			↑	90 <sup>s</sup>	
		7				120 <sup>m</sup>	
		8					
NOV 4/5		9			↓	130 <sup>s</sup>	5157A SUNSET
		10	0 <sup>h</sup> 44	+40 <sup>o</sup>		2 <sup>m</sup>	
		11			↑	90 <sup>s</sup>	
		12			↓	90 <sup>s</sup>	
		13	4 <sup>h</sup> 12	+40		2 <sup>m</sup>	
		14			↑	90 <sup>s</sup>	
		15			↓	90 <sup>s</sup>	
		16	16 11 43	-3 34		2 <sup>m</sup>	ND = 0.3 FILTER 1A11
		17			↑	90 <sup>s</sup>	
		18			↓	90 <sup>s</sup>	
		19	18 20 57	-19 10		2 <sup>m</sup>	CFM
		20			↑	90 <sup>s</sup>	
		21			↓	90 <sup>s</sup>	
		22	18 20 05	23 26		15 <sup>m</sup>	SYMBIOTIC STAR
		23			↑	90 <sup>s</sup>	
		24			↓	90 <sup>s</sup>	6563 Å
		25	21 28 56	-5 48		2 <sup>m</sup>	11 x PROFILES ND = 0.2
		26			↑	90 <sup>s</sup>	
		27			↓	90 <sup>s</sup>	
		28	22 05 11	-00 34		5 <sup>m</sup>	11 x PROFILES ND = 1.0
		29			↑	90 <sup>s</sup>	
		30			↓	90 <sup>s</sup>	
		31	23 35.1	46 11		6 <sup>1/2</sup> m	11 x ND = 1.0
		32			↑	90 <sup>s</sup>	

Intensified Reticon

TO CAM 11/4

Spectrograph ECHELLE

Log Sheet

RAW RET 14

Grating 300L

Observer JA

Telescope 5H

Date 11/4-5/76

Disk ORO 1210

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	H L. PROFILES
		2	21 57 01	-02 59		20 <sup>h</sup>	
		3			↑	90 <sup>s</sup>	
		4			↓	90 <sup>s</sup>	5187A CEPH
		5	19 49 28	27 20		3 <sup>m</sup>	
		6			↑	90 <sup>s</sup>	
		7			↓	90 <sup>s</sup>	
		8	22 38 53	56 34		8 <sup>m</sup>	CEPH
		9			↑	90 <sup>s</sup>	
		10			↓	90 <sup>s</sup>	
		11	19 23 14	50 09		10 <sup>m</sup>	SYMBIOTIC
		12			↑	90 <sup>s</sup>	
		13			↓	90 <sup>s</sup>	
		14	23 31 15	48 33		15 <sup>m</sup> 20 <sup>h</sup>	SYMBIOTIC CLDS
		15			↑	90 <sup>s</sup>	
		16			↓	90 <sup>s</sup>	6563A 80μ SLIT
		17	05:52:28	07:23:58		8 <sup>m</sup>	0.8/ (20ND) H ALPHA
		18			↑	90 <sup>s</sup>	
		19			↓	90 <sup>s</sup>	5187A 80μ SLIT
		20	05:18:33	32:27:48		17 <sup>m</sup>	10.0/ SYMBIOTIC
		21			↑	90 <sup>s</sup>	
		22			↓	90 <sup>s</sup>	
		23	00:41:53	40:24:22		8 <sup>m</sup>	7.0/ (CLDS)
		24			↑	90 <sup>s</sup>	
		25			↓	90 <sup>s</sup>	
		26	04:57:55	39:53:17		5 <sup>m</sup>	9.2/ CEPHIDS
		27			↑	90 <sup>s</sup>	
		28			↓	90 <sup>s</sup>	
		29	06:18:45	06:29:41		18 <sup>m</sup>	8.9/ (41 CLDS)
		30			↑	90 <sup>s</sup>	
		31					
		32					

AM 11/9

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET 14

Grating 3000

Observer GS LAM

Telescope 61" WYLLI

Date NOV 4-5 1986

Disk 090 1261

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
4:5 INCANDS	1	INCANDS				120	5187A 80μ SLIT
	2	INCANDS				120	
	3	INCANDS				120	
NOV 6-7	4	TH-AR			↓	90s	5187A 80μ SLIT
	5	SKYEVEW				2m	+15 DEC 0h 1LT Fixed
	6	TH-AR			↑	90s	
	7	TH-AR			↓	90s	
	8	SKYEVEW				2m	+15 DEC 4h W 1LT
	9	TH-AR			↑	90s	
	10	TH-AR			↓	90s	5187A 80μ slit light-rain
	11	SKYEVE	4 hrs EAST			2m	<del>δ=10°</del> δ=0° 0.3ND
9-10 NOV.	12	TH-AR			↑	90s	
	13	TH-AR			↓	90s	
	14	SKYEVE	ZERO HOURS			2m	δ=0° 0.3ND
	15	TH-AR			↑	90s	
	16	TH-AR			↓	90s	
	17	SKYEVE	ZERO HOURS			2m	δ=0° No Filter
	18	TH-AR			↑	90s	
	19	TH-AR			↓	90s	
	20	SKY-EVE	4 hours WEST			2 1/2 m	δ=0°
	21	TH-AR			↑	90s	
	22	TH-AR			↓	90s	
	23	X CYG	20:41:27	35:24:24		2 1/2 min	6.4
24	TH-AR			↑	90s		
25	TH-AR			↓	90s	6563A 80μ SLIT	
26	BETA AAR	21:28:56	-05:47:32		3 min		VI ALPHA
27	TH-AR			↑	90s		
28							
29							
30							
31							
32							

Date  
Time  
Need to be  
1LT Fixed

Σ



TO CAM 11/9

Intensified Reticon

Spectrograph ECHELLE

Log Sheet

TO CAM

Grating 300L

Observer LAM

RAW/RET 14

Telescope 61" Wyeth

Date Nov 9-10 1986

Disk ORO 1263

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments	
		1			↓	90 <sup>s</sup>	M STARS (MAZERI)	
		2	S130860	03 56 24.1	05 36 40		3m	
		3			↑	90 <sup>s</sup>		
		4			↓	90 <sup>s</sup>		
		5	G15156	03 32 09.0	06 38 24		10m	
		6			↑	90 <sup>s</sup>		
		7			↓	90 <sup>s</sup>	CEPHEIDS	
		8	RX-AVR	04 37 55.0	39 53 17		3m	
		9			↑	90 <sup>s</sup>		
		10			↓	90 <sup>s</sup>		
		11	P2445				25m	TRAPEZIUM CLUSTER
		12			↑	90 <sup>s</sup>		
		13			↓	90 <sup>s</sup>	CEPHEIDS	
		14	SV MAN	06 18 45.0	06 29 41		10m	
		15			↑	90 <sup>s</sup>		
		16			↓	90 <sup>s</sup>		
		17	VX PFR	02 04 18.0	58 12 22		18m	
		18			↑	90 <sup>s</sup>		
		19			↓	90 <sup>s</sup>	M STARS (MAZERI)	
		20	G15301	08 10 50.0	13 45 48		8m	CLOUDY INTERVAL CUTS THIS SHORT
		21			↑	90 <sup>s</sup>		
		22			↓	90 <sup>s</sup>		
		23	G15301	08 10 50.0	13 45 48		14m	
		24			↑	90 <sup>s</sup>		
		25			↓	90 <sup>s</sup>		
		26	G15334	09 04 19.0	08 36 20		14m	
		27			↑	90 <sup>s</sup>		
		28			↓	90 <sup>s</sup>		
		29	H0 85217	09 47 34.0	04 34 42		3m	
		30			↑	90 <sup>s</sup>		
		31						
		32						

Intensified Reticon

TO CAM 11/10

Spectrograph ECHELLE

Log Sheet

RAWRET 14

Grating 300L

Observer LAM

Telescope 61" Wyeth

Date Nov 9-10 1986

Disk ORD 1264

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90S	
		2				2m	3H EAST; 0° DEC L.
		3			↑	90S	
		4			↓	90S	
		5					MERIDIAN; 31° DEC L
		6			↑	90S	
		7				120 MIN	
		8				120 MIN	
NOV 10-11		9			↓	90S	
		10				2h	0h +35
		11			↑	90S	
		12			↓	90	
		13				2h	4 1/2 HRS W +35
		14			↑	90S	
		15			↓	90S	
		16	H182592	19 22 35	11 50	2h	IAU
		17			↑	90S	
		18			↓	90S	
		19	M SGR	18 27 57	19 10	2h	CEPH
		20			↑	90S	
		21			↓	90S	
		22	X CYG	20 41 27	35 24	2h	CEPH
		23			↑	90S	
		24			↓	90S	
		25	DL CAS	00 27 11	59 56	10h	CEPH
		26			↑	90S	
		27			↓	90S	
		28	VX PER	02 04 18	58 12	18h	CEPH
		29			↑	90S	
		30			↓	90S	
		31	SD 11943	01 40 11	03 35	10h	M <sup>c</sup> CLINTOCK X
		32			↑	90S	



Intensified Reticon

TO CAM 11/11

Spectrograph ECHELLE

Log Sheet

RAW/RET 14

Grating 3001

Observer DM

Telescope 5H

Date 11/10-11/26

Disk ORU 12-66

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	5127
		2	37 51 6	05 39 37		4 <sup>m</sup>	F STARS
		3			↑	90 <sup>s</sup>	
		4			↓	90 <sup>s</sup>	
		5	27 9 11	04 21 50		4 <sup>m</sup>	
		6			↑	90 <sup>s</sup>	
		7			↓	90 <sup>s</sup>	
		8	40 25 9	05 55 13		5 <sup>m</sup>	
		9			↑	90 <sup>s</sup>	
		10			↓	90 <sup>s</sup>	
		11	RX AVR	04 57 55		5 <sup>min</sup>	CEPH
		12			↑	90 <sup>s</sup>	
		13			↓	90 <sup>s</sup>	
		14	GLS 169	04:26:02	21:48:47	5 <sup>min</sup>	8.3/40 M STARS
		15			↑	90 <sup>s</sup>	
		16			↓	90 <sup>s</sup>	
		17	GLS 176	04:40:00	18:52:06	20 <sup>min</sup>	9.9/40 (CLDS)
		18			↑	90 <sup>s</sup>	
		19			↓	90 <sup>s</sup>	
		20	SU MON	06:18:45	06:29:41	12 <sup>min</sup>	8.9/ CEPH
		21			↑	90 <sup>s</sup>	
		22			↓	90 <sup>s</sup>	
		23	425 48	06:08:59	07:47:24	4 <sup>min</sup>	7.3/ F STARS
		24			↑	90 <sup>s</sup>	
		25			↓	90 <sup>s</sup>	
		26	43705	06:15:21	09:20:24	10 <sup>min</sup>	8.0/
		27			↑	90 <sup>s</sup>	0230 OVERCAST
		28	INCANDS			120 <sup>min</sup>	STARTED AT 1015
		29	INCANDS			76 <sup>min</sup>	
		30					
		31					
		32					

Intensified Reticon

TO CAM 11/12

Spectrograph ECHELLE

Log Sheet

RAW RET 14

Grating 300l

Observer GS

Telescope 6" WYETH

Date NOV 12-13 1986

Disk ORO 1267

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	5187 A 80 μ SLIT
		2	SKY EVUM	0 <sup>HR</sup> HA	+30°	2 MIN	
		3			↑	90 <sup>s</sup>	
		4			↓	90 <sup>s</sup>	
		5	SKY EVUM	4 1/2 <sup>HR</sup> WHA	+30°	2 MIN	
		6			↑	90 <sup>s</sup>	
		7			↓	90 <sup>s</sup>	
		8	H 1 P 2572	19:22:35	11:50:09	3 MIN	5.2 / .3ND FILT 1 AU
		9			↑	90 <sup>s</sup>	
		10			↓	90 <sup>s</sup>	
		11	VUL SV	19:49:28	27:19:53	3 MIN	7.0 / Ceph
		12			↑	90 <sup>s</sup>	
		13			↓	90 <sup>s</sup>	
		14	GLS 763	19:32:10	04:29:16	4 MIN	7.4/30 M STAR
		15			↑	90 <sup>s</sup>	
		16			↓	90 <sup>s</sup>	
		17	5124835	19:33:45	05:53:44	2 MIN	6.7/100
		18			↑	90 <sup>s</sup>	
		19			↓	90 <sup>s</sup>	
		20	191317	20:06:44	-02:44:48	3 MIN	8.2 / F STAR
		21			↑	90 <sup>s</sup>	
		22			↓	90 <sup>s</sup>	
		23	192461	20:12:33	-03:39:18	2 MIN	6.9 / BRITE ONE OF THE PR
		24			↑	90 <sup>s</sup>	
		25			↓	90 <sup>s</sup>	
		26	VX PER	02:04:18	58:12:22	6 MIN	9.7 / Ceph
		27			↑	90 <sup>s</sup>	
		28			↓	90 <sup>s</sup>	
		29	GLS 830	21:27:19	-12:43:46	6 MIN	9.1/40 M STAR
		30			↑	90 <sup>s</sup>	
		31					
		32					

Spectrograph ECHELLE Intensified Reticon  
 Grating 300 Log Sheet  
 Telescope 61 WYETH Date NOV 12-13 1986

TO CAM 11/12  
 RAW/RET 14

Observer GS  
 Disk GRU 1268

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90°	5187A 80 μ SLIT
	S164461		21:29:39	-12:29:20		2 MIN	6.9/100 M STARS
	TH-AR				↑	90°	
	TH-AR				↓	90°	
	GLS 846		21:59:38	01:09:30		5 MIN	9.2/40
	TH-AR				↑	90°	
	TH-AR				↓	90°	
	S127114		21:49:00	00:32:08		2 1/2 MIN	6.9/100
	TH-AR				↑	90°	
	TH-AR				↓	90°	
	Z04779		21:28:37	-19:27:24		3 MIN	7.1/ F STARS
	TH-AR				↑	90°	
	TH-AR				↓	90°	
	Z05527		21:33:35	-18:26:54		3 MIN	7.9/
	TH-AR				↑	90°	
	TH-AR				↓	90°	
	Z00411		21:00:48	-02:46:06		3 MIN	7.8/
	TH-AR				↓	90°	
	Z00433		21:00:54	-01:46:43		2 1/2 MIN	6.9/
	TH-AR				↑	90°	
	TH-AR				↓	90°	
	X CYG		20:41:27	35:24:24		2 MIN	6.4/ CEPH
	TH-AR				↑	90°	
	TH-AR				↓	90°	
	Z03458		21:19:51	-03:20:36		2 MIN	6.7/ F STARS
	TH-AR				↑	90°	
	TH-AR				↓	90°	
	Z06916		21:42:53	-03:10:48		4 MIN	8.2/
	TH-AR				↑	90°	
		30					
		31					
		32					

Intensified Reticon

TO CAM 11/12

Spectrograph ECHELLE

Log Sheet

RAW RET 14

Grating 3002

Observer G

Telescope 6" WYETH

Date NOV 12-15 1986

Disk ORD 1269

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90°	5187A 80μ slit
	5031092	2	18:38:37	59:28:50		3 MIN	7.1/100 M STARS
		3	TH-AR		↓	90°	
	GL5725A	4	18:42:18	59:34:22		8 MIN	8.9/50
		5	TH-AR		↓	90°	
	GL5725B	6	18:42:19	59:34:05		9 MIN	9.7/30
		7	TH-AR		↑	90°	
		8	TH-AR		↓	90°	
	G262-14	9	20:27:35	61:50:54		10 MIN	11.5/15 HALOS
		10	TH-AR		↑	90°	
		11	TH-AR		↓	90°	
	G190-10	12	23:05:39	41:35:12		10 MIN	11.2/20
		13	TH-AR		↑	90°	
		14	TH-AR		↓	90°	
	G157-21	15	23:06:29	-02:49:18		3 1/2 MIN	9.3/20
		16	TH-AR		↑	90°	
		17	TH-AR		↓	90°	
	(4)	18	00:24:23	-08:37:59		2 MIN	7.8/ ASTEROID
		19	TH-AR		↑	90°	
		20	TH-AR		↓	90°	
	H 8779	21	01:23:53	-00:39:29		2 MIN	6.4/ IAU STANDARD
		22	TH-AR		↑	90°	
		23	TH-AR		↓	90°	
	-18271	24	01:34:54	-17:44:17		7 MIN	9.8/20 HALOS
		25	TH-AR		↑	90°	
		26	TH-AR		↓	90°	
	-22395	27	02:19:39	-21:44:36		8 MIN	10.5/20
		28	TH-AR		↑	90°	
		29	TH-AR		↓	90°	
	S129772	30	02:12:04	-01:25:59		2 MIN	9.1/20
		31	TH-AR		↑	90°	
		32					

Intensified Reticon

TO CAM 11/13

Spectrograph ECHELLE

Log Sheet

RAWRET 14

Grating 3000

Observer GS/DM

Telescope 6" WYETH

Date NOV 12-13 1986

Disk ORO 1270

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments
		1			↓	90 <sup>s</sup>	5187A 80μSLIT
		2	U033	01:43:58	12:09:48	2 1/2 MIN	8.9 / SPACE MOTION
		3			↑	90 <sup>s</sup>	
		4			↓	90	
		5	U038	02 13 16	06 24	5 <sup>h</sup>	
		6			↑	90	
		7			↓	90	
		8	AXPER	01 33 06	54 00	15 <sup>h</sup>	SYMBIOTIC
		9			↑	90 <sup>s</sup>	
		10			↓	90 <sup>s</sup>	
		11	U21	01 02 51	15 07 30	7 <sup>h</sup>	
		12			↑	90 <sup>s</sup>	
		13	U22	"	"	15 <sup>h</sup>	CAREFULLY EXCLUDED #21
		14			↑	90 <sup>s</sup>	
		15			↓	90 <sup>s</sup>	
		16	G79-56	03 38 59	09 14	15 <sup>h</sup>	HALO
		17			↑	90 <sup>s</sup>	
		18	G79-63	03 41 21	09 47	15 <sup>h</sup>	
		19			↑	90	
		20			↓	90	
		21	G7-20	04 02 47	10 55	13 <sup>h</sup>	
		22			↑	90	
		23			↓	90	
		24	G22-F1	04 23 07	05 10	13 <sup>h</sup>	
		25			↑	90	
		26			↓	90	
		27	SV MON	06 12 45	06 29 41	3 <sup>h</sup>	
		28			↓	90	
		29	T MON	06 22 31	07 07	2 <sup>h</sup>	
		30			↑	90	
		31					
		32					

Spectrograph ECHELLE

Intensified Reticon

TO CAM 11/13

Grating 3000

Log Sheet

RAWRET

Telescope S17Date 11/12-13/86Observer DRDisk SR0 1251

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments	
		1			↓	90 <sup>s</sup>	5187	
		2	GLS176	04 40 00	18 52		12 <sup>h</sup>	1451AA
		3			↑	90 <sup>s</sup>		
		4			↓	90 <sup>s</sup>		
		5	S133424	06 31 51	-03 02		2 <sup>h</sup>	
		6			↑	90 <sup>s</sup>		
		7	GLS234	06 26 52	-02 47		20 <sup>h</sup>	
		8			↑	90 <sup>s</sup>		
		9			↓	90 <sup>s</sup>		
		10	GLS268	07 06 37	38 37		17 <sup>h</sup>	
		11			↑	90 <sup>s</sup>		
		12			↓	90 <sup>s</sup>		
		13	GLS319C	08 40 02	09 44		20 <sup>h</sup>	
		14			↑	90 <sup>s</sup>		
		15	GLS319	08 40 01	09 44.1		10 <sup>h</sup>	
		16			↑	90 <sup>s</sup>		
		17			↓	90 <sup>s</sup>		
		18	G89-14	07 19 48	07 55		18 <sup>h</sup>	
		19			↑	90 <sup>s</sup>		
		20			↓	90 <sup>s</sup>		
		21	GH2-43	07 41 11	06 03		7 <sup>h</sup>	DAWNISH! TOO MUCH?
		22			↑	90 <sup>s</sup>		
		23	GH2-54	07 52 02	-01 17		2 <sup>h</sup>	
		24			↑	90 <sup>s</sup>		
		25			↓	90 <sup>s</sup>		
		26	SKYDOWN				3 <sup>h</sup>	35 DEC 4 1/2 HRS E
		27			↑	90 <sup>s</sup>		
		28			↓	90 <sup>s</sup>		
		29	SKYDOWN				3 <sup>h</sup>	35 DEC 0 <sup>h</sup> HA
		30					90 <sup>s</sup>	
		31	INLAND				120 <sup>h</sup>	
		32	INLAND				120 <sup>h</sup>	



Spectrograph ECHELLE Intensified Reticon  
 Grating 300 Log Sheet  
 Telescope 5H Date 11/13-14/76

TO CAM 11/13

RAW RET 14

Observer na  
 Disk OK 01273

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

Change....	File	ID	1950.0	RA	Dec	L/R	Exposure	Comments
		1	TH-AR			↓	90 <sup>s</sup>	512.7
		2	5191333	22 39 17	-21 03		6 <sup>m</sup>	
		3	TH-AR			↑	90 <sup>s</sup>	
		4	TH-AR			↓	90 <sup>s</sup>	
		5	G25-15	21 01 37	02 42		2 <sup>h</sup>	
		6	TH-AR			↑	90 <sup>s</sup>	
		7	TH-AR			↓	90 <sup>s</sup>	
		8	G127-33	22 25 40	24 41		8 <sup>m</sup>	
		9	TH-AR			↑	90	
		10	TH-AR			↓	90	
		11	G130-32	23 57 31	33 35		3 <sup>h</sup>	
		12	TH-AR			↑	90	
		13	TH-AR			↓	90	
		14	G92-60	02 05 32	31 09		9 <sup>h</sup>	
		15	TH-AR			↑	90 <sup>s</sup>	
		16	TH-AR			↓	90 <sup>s</sup>	
		17	US10	23 30 10	-17 02		20 <sup>m</sup>	
		18	TH-AR			↑	90	
		19	US11	23 30 12	-17 07		9 <sup>h</sup>	
		20	TH-AR			↑	90	
		21	TH-AR			↓	90	
		22	US15	23 46 36	02 07		5 <sup>h</sup>	
		23	TH-AR			↑	90	
		24	TH-AR			↓	90	
		25	US17	23 47 56	30 04		5 <sup>h</sup>	
		26	TH-AR			↑	90	
		27	TH-AR			↓	90	
		28	U001	00 02 24	45 24		3 <sup>h</sup>	
		29	TH-AR			↑	90 <sup>s</sup>	
		30	U002	00 02 32	45 31		2 <sup>h</sup>	
		31	TH-AR			↑	90 <sup>s</sup>	
		32	U003	00 03 02	45 30 36		5 <sup>h</sup>	

Spectrograph ECHELLE

Intensified Reticon

TO CAM 11/13

Grating 300P

Log Sheet

RAW/RET 14

Telescope SH

Date 11/12-14/76

Observer na

Disk ORO 1274

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↑	90 <sup>s</sup>	3127
		2	U004	00 03 02 45 32 00		6 <sup>m</sup>	DEC = 45 30 12 ??
		3	TH-AR		↑	90 <sup>s</sup>	SMALL MOTIONS
		4	TH-AR		↓	90 <sup>s</sup>	
		5	U006	00 15 31 43 44		4 <sup>s</sup>	
		6	TH-AR		↑	90 <sup>s</sup>	
		7	U007	00 15 34 43 45		15 <sup>s</sup>	
		8	TH-AR		↑	90 <sup>s</sup>	
		9	U008	00 15 48 43 44		10 <sup>m</sup>	
		10	TH-AR		↑	90 <sup>s</sup>	
		11	U005	00 14 26 40 40		5 MIN	
		12	TH-AR		↑	90 <sup>s</sup>	
		13	TH-AR		↓	90 <sup>s</sup>	
		14	U025	01:04:56 22:41:42		4 MIN	8.4/
		15	TH-AR		↑	90 <sup>s</sup>	
		16	TH-AR		↓	90 <sup>s</sup>	
		17	U040	02:22:43 28:32:00		4 MIN	9.1/
		18	TH-AR		↑	90 <sup>s</sup>	
		19	U041	02:22:56 28:36:06		5 MIN	10.0/
		20	TH-AR		↑	90 <sup>s</sup>	
		21	U043	02:25:45 32:01:42		6 MIN	9.6/
		22	TH-AR		↑	90 <sup>s</sup>	
		23	TH-AR		↓	90 <sup>s</sup>	
		24	U047	02:41:18 25:19:00		12 MIN	10.6/
		25	TH-AR		↑	90 <sup>s</sup>	
		26	TH-AR		↓	90 <sup>s</sup>	
		27	U066	03:43:18 26:03:48		7 MIN	9.6/
		28	TH-AR		↑	90 <sup>s</sup>	
		29	TH-AR		↓	90 <sup>s</sup>	
		30	U079	04:26:02 21:48:42		3 MIN	8.3/
		31	TH-AR		↑	90 <sup>s</sup>	
		32					

Intensified Reticon

TO CAM 11/13

Spectrograph ECHELLE

Log Sheet

RAWRET 14

Grating 300

Observer GS

Telescope 6" WYETH

Date NOV 13-14 1986

Disk ORO 1275

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	5187A 80μslit
	U084		04:39:56	18:37:42		2 MIN	7.1/ SPACE MOTION
		3			↑	90 <sup>s</sup>	
	U085		04:39:58	18:52:54		6 MIN	9.7/
		5			↓	90 <sup>s</sup>	
	U086		04:40:06	18:37:12		7 MIN	10.3/
		7			↑	90 <sup>s</sup>	
		8			↓	90 <sup>s</sup>	
	VX PER		02:04:18	58:12:22		10 MIN	9.7/ CEPHEIDS
		10			↑	90 <sup>s</sup>	
		11			↓	90 <sup>s</sup>	
	SU MON		06:18:45	06:29:41		3 MIN	8.9/
		13			↑	90 <sup>s</sup>	
		14			↓	90 <sup>s</sup>	
	T MON		06:22:31	07:06:53		2 MIN	6.6/
		16			↑	90 <sup>s</sup>	
		17			↓	90 <sup>s</sup>	
	G88-5		07:03:12	18:42:54		7 MIN	10.2/20 HALOS
		19			↑	90 <sup>s</sup>	
		20			↓	90 <sup>s</sup>	
	-011792		07:37:17	-01:24:12		3 1/2 MIN	9.2/15
		22			↑	90 <sup>s</sup>	
		23			↓	90 <sup>s</sup>	
	G112-43		07:41:11	00:03:18		10 MIN	10.2/30 (SEE NOTE ON DURING EXP.)
		25			↓	90 <sup>s</sup>	
	G112-43		07:41:11	00:03:18		9 MIN	10.2/30 REPEAT
		27			↑	90 <sup>s</sup>	
		28			↓	90 <sup>s</sup>	
	G113-22		08:14:24	00:10:30		4 MIN	9.7/15
		30			↑	90 <sup>s</sup>	
		31					
		32					

Spectrograph ECHELLE Intensified Reticon  
 Log Sheet

TO CAM 11/13  
 RAW RET 14

Grating 3002

Observer CS

Telescope 61" WYETH

Date NOV 17 14 1996

Disk ORD 1276

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90°	5187A. 80μ SLIT
	G113-24		08:15:00	-03:49:42		2 MIN	7.7/30 HALOS
	TH-AR	3			↑	90°	
	TH-AR	4			↓	90°	
	G114-18		08:46:45	03:52:12		3 MIN	7.9/ NO CHART
	TH-AR	6			↑	90°	
	TH-AR	7			↓	90°	
	G114-19		08:47:53	-05:20:36		3 MIN	7.2/15
	TH-AR	9			↑	90°	
	TH-AR	10			↓	90°	
	G114-26		08:56:39	-03:49:37		10 MIN	9.4/50
	TH-AR	12			↑	90°	
	TH-AR	13			↓	90°	
	GL 319		08:40:02	09:44:18		12 MIN	9.7/40 M STARS
	TH-AR	15			↑	90°	
	TH-AR	16			↓	90°	
	71615		08:25:53	-04:07:06		4 MIN	7.9/ F STARS
	TH-AR	18			↑	90°	
	TH-AR	19			↓	90°	
	76735		08:55:29	-04:39:48		2 1/2 MIN	6.7/
	TH-AR	21			↑	90°	
	TH-AR	22			↓	90°	
	77214		08:58:24	-04:18:54		3 MIN	7.6/
	TH-AR	24			↑	90°	
	TH-AR	25			↓	90°	
	H92589		10:38:51	-01:28:41		2 MIN	6.3/ IAU STND
	TH-AR	27			↑	90°	
	TH-AR	28			↓	90°	
	SKY DWNK		4 HR E	+35°		2 MIN	
	TH-AR	30			↑	90°	
		31					
		32					

11/14

Spectrograph ECHELLE Intensified Reticon TO CAM  
 Grating 300 Log Sheet RAWRET 14  
 Telescope 61" WY 271 Date NOV 13-14 1986 Observer GS  
 Disk ORO 1277

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90 <sup>s</sup>	5187A 80μSLIT
		2	SKYDOWN	0 HR	+35	2 MIN	
		3	TH-AR		↑	90 <sup>s</sup>	
		4	INCANDS			120 <sup>MIN</sup>	
		5	INCANDS			120 <sup>MIN</sup>	
14-15 NOV		6	TH-AR		↓	90s	5187A 80μslit - scalar clouds -
		7	SKY-EVE	φ Hours	+10°	2m	sky
		8	TH-AR		↑	90s	
		9	SKY-EVE	φ Hours	+10°	2m	"
		10	TH-AR		↑	90s	
		11	TH-AR		↓	90s	
		12	SKY-EVE	4 Hours W	+10°	2m	"
		13	TH-AR		↑	90s	
		14	SKY-EVE	4 hrs W	+10°	2m	"
		15	TH-AR		↑	90s	
		16	TH-AR		↓	90s	
		17	H 182572	19:22:35	11:50:09	2.5m	IAU standard 0.3 ND filter
		18	TH-AR		↑	90s	
		19	TH-AR		↓	90s	
		20	SV VUL	19:49:28	27:19:53	3m	7.8/100 Cepheids
		21	TH-AR		↑	90s	
		22	TH-AR		↓	90s	
		23	X CYG	20:41:27	35:24:24	2m	6.4/100 "
		24	TH-AR		↑	90s	- overcast -
		25	TH-AR		↓	90s	
		26	G 208-29	19:30:32	48:28:54	16m	8.5/200 HALOS
		27	TH-AR		↑	90s	- stopped by clouds -
		28	TH-AR		↓	90s	
		29	S 165532	23:07:48	-13:34:54	7m	8.4/100 HALOS
		30	TH-AR		↑	90s	
		31	/				
		32	/				

11/14

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET 14

Grating 3002

Observer RPS

Telescope 61" Wyeth

Date 14-15 NOV 1986

Disk ARO 1278

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
		2	H213014	22:25:46	17:00:28	3m	7.7 IAU standard
		3			↑	90s	
		4	213014B	22:25:46	17:00:28	8m	"
		5	TR-Ar		↑	90s	
		6	TR-Ar		↓	90s	
		7	(4)	φ4:23:58	-φ8:32:15	3m	Asteroid
		8	TR-Ar		↑	90s	
		9	TR-Ar		↓	90s	
		10	G29-25	23:17:46	11:53:φ6	7m	10.8/15 HALOS
		11	TR-Ar		↑	90s	
		12	TR-Ar		↓	90s	
		13	7 LAC	22:38:53	56:34:05	6.5m	Cepheids
		14	TR-Ar		↑	90s	
		15	TR-Ar		↓	90s	
		16	G175-39	φ4:31:59	55:18:52	12.5m	8.3/20 HALOS
		17	TR-Ar		↑	90s	
		18	TR-Ar		↓	90s	
		19	G37-26	φ3:05:28	26:09:06	3.5m	8.4/50 HALOS
		20	TR-Ar		↑	90s	
		21	TR-Ar		↓	90s	
		22	G8-36	φ4:24:50	24:20:φφ	4.25m	9.4/30 "
		23	TR-Ar		↑	90s	
		24	TR-Ar		↓	90s	
		25	H448	φ4:26:08	16:03:00	4.5m	HYADES BINARY
		26	TR-Ar		↑	90s	
		27	TR-Ar		↓	90s	
		28	VB24	φ4:15:25	21:27:31	4m	"
		29	TR-Ar		↑	90s	
		30	/				
		31	/				
		32	/				

11/14

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAWRET 14

Grating 6002

Observer RPS

Telescope 61" Wyeth

Date 14-15 NOV 1986

Disk ORO 1279

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	-thin overcast -
		2	H544	04:29:58	15:54:05		3m Hyades Binary
		3			↑	90s	
		4			↓	90s	
		5	H361	04:22:54	17:54:18		2.5m "
		6			↑	90s	
		7			↓	90s	
		8	G15	03:45:18	46:58:00		8m 10.9 "
		9			↑	90s	
		10			↓	90s	
		11	H417	04:24:57	14:18:27		4m "
		12			↑	90s	
		13			↓	90s	
		14	L81	04:38:41	13:07:31		16m "
		15			↑	90s	
		16			↓	90s	
		17	DL CAS	04:27:11	59:56:12		7m Cepheids
		18			↑	90s	
		19			↓	90s	
		20	VX PER	02:04:18	58:12:22		9m "
		21			↑	90s	-clouds-
		22			↓	90s	
		23	G102-20	05:37:21	12:09:12		8.5m 10.2/15 HALOS
		24			↑	90s	
		25			↓	90s	
		26	G103-58	06:43:09	35:55:48		7m 10.0/15 "
		27			↓	90s	Questionable Exposure - clouds
		28	G103-58	"	"		5m
		29			↑	90s	
		30					
		31					
		32					

11/14

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET 14

Grating 300R

Observer RPS

Telescope 61" Wye

Date 14-15 NOV 1986

Disk ORO 1280

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		Th-Ar			↓	90s	
	-191422	06:19:00	-19:14:06			6m	9.7/15 HALOS
		Th-Ar			↑	90s	
		Th-Ar			↓	90s	
	RX AUR	04:57:55	39:53:17			4.5m	Cepheids
		Th-Ar			↑	90s	
		Th-Ar			↓	90s	
	SU MON	06:18:45	06:29:41			5 1/2 m	
		Th-Ar			↑	90s	
		Th-Ar			↓	90s	
	T MON	06:22:31	07:06:58			3 1/2 m	
		Th-Ar			↑	90s	
		Th-Ar			↓	90s	
	G107-59	07:12:14	45:07:54			2m	8.7/15 HALOS
		Th-Ar			↑	90s	
		Th-Ar			↓	90s	
	H66141	07:59:40	02:28:24			2m	IAU standard
		Th-Ar			↑	90s	
		Th-Ar			↓	90s	
	G9-14	08:37:49	13:44:06			5m	10.2/15 HALOS
		Th-Ar			↑	90s	
		Th-Ar			↓	90s	
	G9526	08:14:47	-05:12:49			4m	7.7 F stars
		Th-Ar			↑	90s	
		Th-Ar			↓	90s	
	72746	08:31:45	-09:46:49			5m	7.6
		Th-Ar			↑	90s	
		Th-Ar			↓	90s	
	75320	08:46:39	-06:49:18			4m	
		Th-Ar			↑	90s	
		/					
		/					

11/16

TO CAM

Spectrograph ECHELLE Intensified Reticon  
Log Sheet

Grating 6002

Observer RPS / LAM  
RAW RET 14

Telescope 61" Wyoth

Date 14-15 NOV 1986  
16-17 NOV 1986

Disk ORO 1281

Change....	File	ID	1950.0	RA	Dec	L/R	↑/↓	Exposure	Comments
		1					↓	90s	
		2						10m	10.0/20 HALOS
		3					↑	90s	
		4					↓	90s	
		5						425m	10.7/15    Exposure cut short by clouds
		6					↑	90s	
		7					↓	90s	
		8						2 1/2 m	δ = +20°
		9					↑	90s	
		10					↓	90s	
		11						2m	δ = +20°
		12					↑	90s	
		13						120 MIN	
		14						120 MIN	
11/15-16/86		15					↓	90s	
		16						2m	δ = +35°
		17						90s	
11/16-17/86		18					↓	90s	
		19						2m	δ = +35°
		20					↑	90s	
		21					↓	90s	
		22						2m	δ = -10
		23					↑	90s	
		24					↓	90s	
		25						14m	HALOS
		26					↑	90s	
		27					↓	90s	
		28						7m	F STARS
		29					↑	90s	
		30					↓	90s	
		31						3m	
		32					↑	90s	SEE NEXT PAGE





Spectrograph ECHELLE Intensified Reticon  
 Grating 300 Log Sheet  
 Telescope 6" Date NOV 17-18 1986

TO CAM 11/17  
RAW/RET 14

Observer GS  
 Disk ORO 1284

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90°	6563A 80μ SLIT
		2	LAMBDA	23:35:06	46:11:14	6 MIN	3.9/ (H CLDS) H ALPHA PROFILES
		3	TH-AR		↑	90°	
		4	TH-AR		↓	90°	
		5	ALPHORI	05:52:28	07:33:35	15 MIN	0.8/ (2.0ND FILT)
		6	TH-AR		↑	90°	
		7	TH-AR		↓	90°	5187A 80μ SLIT
		8	GLS 338A	09:10:52	52:53:43	10 MIN	7.6/100 (END IN OVERCAST) M STARS
		9	TH-AR		↑	90°	
		10	TH-AR		↓	90°	
		11	GLS 338B	09:10:54	52:53:46	11 MIN	7.7/100
		12	TH-AR		↑	90°	
		13	TH-AR		↓	90°	
		14	S043255	10:16:21	48:38:30	5 MIN	6.1/100
		15	TH-AR		↑	90°	
		16	TH-AR		↓	90°	
		17	GLS 380	10:08:13	49:42:09	12 MIN	6.6/100 (END IN OVERCAST)
		18	TH-AR		↑	90°	
		19	TH-AR		↓	90°	
		20	UX PHX	02:04:18	58:12:22	10 MIN	9.7/ (CLEARING) CEPHEIDS
		21	TH-AR		↑	90°	
		22	TH-AR		↓	90°	
		23	RX AUR	09:57:55	39:53:17	5 MIN	9.2/
		24	TH-AR		↑	90°	
		25	TH-AR		↓	90°	
		26	SV MON	06:18:45	06:29:41	3 MIN	8.9/
		27	TH-AR		↑	90°	
		28	TH-AR		↓	90°	
		29	77999	09:02:52	-23:59:18	10 MIN	8.4/ F STARS
		30	TH-AR		↑	90°	
		31	78257	09:04:18	-23:57:18	11 MIN	8.1/
		32	TH-AR		↑	90°	

Intensified Reticon

TO CAM 11/18

Spectrograph ECHELLE

Log Sheet

RAW/RET 14

Grating 300

Observer GS

Telescope 61" WYETH

Date NOV 17-18 1986

Disk ORO 1285

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90°	5187A, 90μ SLIT
		2	80618	09:17:54 -23:16:00		6 MIN	7.7/ F STARS
		3	TH-AR		↑	90°	
		4	TH-AR		↓	90°	
		5	80971	09:20:09 -17:40:42		2 MIN	6.9/
		6	TH-AR		↑	90°	
		7	TH-AR		↓	90°	
		8	80550	09:17:55 -09:23:48		2 MIN	6.9/
		9	TH-AR		↑	90°	
		10	TH-AR		↓	90°	
		11	87810	10:04:46 -21:00:36		2 MIN	6.6/
		12	TH-AR		↑	90°	
		13	TH-AR		↓	90°	
		14	H81797	09:25:07 -08:26:28		4 MIN	2.0/ 2.0 ND FILTER 1 AU STD
		15	TH-AR		↑	90°	
		16	TH-AR		↓	90°	
		17	SKYDOWN	4" EAST +35°		2 1/2 MIN	
		18	TH-AR		↑	90°	
		19	TH-AR		↓	90°	
		20	SKYDOWN M	0" HA +35°		2 MIN	
		21	TH-AR		↑	90°	
		22	INCANDS			120 MIN	
		23	INCANDS			120 MIN	
		24	INCANDS			120 MIN	
		25	TH-AR		↓	90°	
		26	SKYDOWN	0" HA +35°		2 MIN	
		27	TH-AR		↑	90°	
		28	TH-AR		↓	90°	
		29	SKYDOWN	4" HA +35°		2 MIN	
		30	TH-AR		↑	90°	
		31					
		32					

11/18-19

Spectrograph ECHELLE Intensified Reticon TO CAM 4/17  
 Grating 3005 Log Sheet RAWRET 14  
 Telescope SH Date 11/18-19/86 Observer na  
 Disk ORO 1226

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90 <sup>s</sup>	6563A
		2	R AQR	21 27 56	-05 48	2 2 <sup>h</sup>	H <sub>2</sub> SALLY
		3	TH-AR		↑	90 <sup>s</sup>	
		4	TH-AR		↓	90 <sup>s</sup>	
		5	L AQR	22 05 03	-00 23	12 <sup>h</sup>	
		6	TH-AR		↑	90 <sup>s</sup>	
		7	TH-AR			90 <sup>s</sup>	
		8	H200776	21 02 07	46 02	10 <sup>h</sup>	THICK DUST H <sub>2</sub> M'CRACKY
		9	TH-AR			90 <sup>s</sup>	
11/19-20		10	TH-AR		↓	90 <sup>s</sup>	5187
		11	SKYEVEN	0 <sup>h</sup> HA	+35	2 <sup>h</sup>	
		12	TH-AR		↑	90 <sup>s</sup>	
		13	TH-AR		↓	90 <sup>s</sup>	
		14	SKYEVEN	4 <sup>h</sup> HA	+35	2 <sup>h</sup>	
		15	TH-AR		↑	90 <sup>s</sup>	
		16	TH-AR		↓	90 <sup>s</sup>	
		17	H122572	19 22 35	11 50 07	2 <sup>h</sup>	IAN
		18	TH-AR		↑	90 <sup>s</sup>	
		19	TH-AR		↓	90 <sup>s</sup>	
		20	X CYG	20 41 27	35 24	2 <sup>h</sup>	CEPH
		21	TH-AR		↑	90 <sup>s</sup>	
		22	TH-AR		↓	90 <sup>s</sup>	
		23	SV VUL	19 49 20	27 24	3 <sup>h</sup>	CEPH
		24	TH-AR		↑	90 <sup>s</sup>	
		25	TH-AR		↓	90 <sup>s</sup>	6563A
		26	FF AQR	21 58 01	-02 59	20 <sup>h</sup>	H <sub>2</sub> SALLY
		27	TH-AR		↑	90 <sup>s</sup>	
		28	TH-AR		↓	90 <sup>s</sup>	
4.01		29	H200776	21 02 07	46 02	12 <sup>h</sup>	H <sub>2</sub> M'CRACKY
		30	TH-AR		↑	90 <sup>s</sup>	
		31					
		32					

TO CAM 11/19

RAW/RET 14

Spectrograph ECHELLE

Intensified Reticon

Grating 300L

Log Sheet

Observer NA

Telescope 5H

Date 11/19-20/76

Disk ORO 1227

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	5893A MC NAD
7502		2	H200776	21 02 49	46 08	20 <sup>m</sup>	
		3			↑	90 <sup>s</sup>	5127A
		4			↓	90 <sup>s</sup>	<del>4861A</del> MC HS
		5	H200776	00 49 06	-23 11	5 <sup>m</sup>	UP 618 HL
		6	U014			↑	90 <sup>s</sup>
		7			↓	90 <sup>s</sup>	
		8	U012	00 48 36	17 31	3 <sup>m</sup>	
		9			↑↓	90 <sup>s</sup>	
		10	U013	00 47 43	18 28	5 <sup>m</sup>	
		11			↑	90 <sup>s</sup>	
		12			↓	90 <sup>s</sup>	
		13	U030	01 22 50	11 54	12 <sup>m</sup>	
		14			↑	90 <sup>s</sup>	
		15			↓	90 <sup>s</sup>	20.45 0-285°
7503		16	H2472	03 52 55	-12 14	45 <sup>s</sup>	
4		17	"			"	
5		18	"			"	
6		19	"			"	
7		20	"			"	
8		21	"			"	
9		22	"			"	
7510		23	"			"	
		24			↑	90 <sup>s</sup>	20:53
1		25	H2472			45 <sup>s</sup>	
2		26	"			"	
3		27	"			"	
4		28	"			"	
5		29	"			"	
6		30	"			"	
7		31	"			"	
		32					

Intensified Reticon

TO CAM 11/19

Spectrograph ECHELLE

Log Sheet

RAW/RET 14

Grating \_\_\_\_\_

Observer \_\_\_\_\_

Telescope \_\_\_\_\_

Date NOV 19-20 86

Disk ORO 1288

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
7518	1	H24712				45 <sup>s</sup>	
	2	THAR			↑	90 <sup>s</sup>	
	3	THAR			↓	90 <sup>s</sup>	21.05
8	4	H24712				45 <sup>s</sup>	
20	5	"				"	
20	6	"				"	
2	7	"				"	
3	8	"				"	
4	9	"				"	
5	10	"				"	
6	11	"				"	
7	12	"				"	
8	13	"				"	
	14	<del>THAR</del>			↑	90 <sup>s</sup>	21.14 GARBAGE FILE
	15	THAR			↓	90 <sup>s</sup>	
	16	THAR				45 <sup>s</sup>	
9	17	"				"	
30	18	"				"	
1	19	"				"	
2	20	"				"	
3	21	"				"	
4	22	"				"	
5	23	"				"	
6	24	"				"	
7	25	"				"	
8	26	THAR H24712			↑	90 <sup>s</sup>	
	27	H24712 THAR				45 <sup>s</sup>	
9	28	"				"	
40	29	"				"	
1	30	"				"	
2	31	"				"	
3	32	"				"	

7544 → SEE ORO 1291

11/19

Spectrograph ECHELLE

Intensified Reticon

TO CAM

Grating 2000

Log Sheet

RAW RET 14

Telescope SH

Date 11/19-20/86

Observer RA

Disk ORO 1289

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
7542	1	H24712				45 <sup>s</sup>	5187A 7545
3	2	"				"	
4	3	"				"	
5	4	"				"	
6	5	"				"	
	6	TH-AR			↑	90 <sup>s</sup>	
7	7	H24712				45	
8	8	"				"	
9	9	"				"	
50	10	"				"	
1	11	"				"	
2	12	"				"	
3	13	"				"	
4	14	"				"	
5	15	"				"	
6	16	"				"	
7	17	"				"	
	18	TH-AR			↑	90 <sup>s</sup>	
8	19	H24712				45	
9	20	"				"	
60	21	"				"	
1	22	"				"	
2	23	"				"	
3	24	"				51	
4	25	"				45	
5	26	"				"	
6	27	"				"	
7	28	TH-AR			↑	90 <sup>s</sup>	
17	29	H24712				45 <sup>s</sup>	
8	30	"				"	
9	31	"				"	7572
	32						

+3

11/19

Spectrograph ECHELLE

Intensified Reticon

TO CAM

Grating 300Q

Log Sheet

RAWRET 14

Telescope 61 WYETH

Date NOV 19/30 1986

Observer GS

Disk ORO 1290

Change...	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
7570	1	H24712				45°	5187A 7573
1	2	"				"	
2	3	"				"	
3	4	"				"	
4	5	"				"	
5	6	"				"	
6	7	TH AR			↕	90°	2206
	8	H24712				45°	
7	9	"				"	
8	10	"				"	(CLK SET. UP 5°
9	11	"				"	(WAS 5° SLOW)
80	12	"				"	
1	13	"				"	
2	14	"				"	
3	15	"				"	
4	16	"				"	
5	17	"				"	
6	18	"				"	
7	19	TH AR			↕	90°	2217
8	20	H24712				45°	
9	21	"				"	
90	22	"				"	
1	23	"				"	
2	24	"				"	
3	25	"				"	
4	26	"				"	
5	27	"				"	
6	28	"				"	
7	29	"				"	
	30	TH-AR			↕	90°	2227
	31	H24712				45°	7600
	32						

Intensified Reticon

TO CAM 11/19

Spectrograph ECHELLE

Log Sheet

RAWRET 14

Grating 3000

Observer GS

Telescope 61" WYEM

Date NOV 19/20 1966

Disk OKO 1294

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
	1	H24712				45	1874
	2	"				"	OUT-OF-SEQUENC
7544	3	"				"	7601
9	4	"				"	
7600	5	"				"	
1	6	"				"	
2	7	"				"	
3	8	"				"	
4	9	"				"	
5	10	"				"	
6	11	TH-AR			↑	70	2237
7	12	TH-AR			↓	90	
8	13	H24712				45	
9	14	"				"	
10	15	"				"	
1	16	"				"	
2	17	"				"	
3	18	"				"	
	19	TH-AR			↑	70	
4	20	H24712				45	
5	21	"				"	
6	22	"				"	
7	23	"				"	
8	24	"				"	
9	25	"				"	
20	26	"				"	
1	27	"				"	
2	28	"				"	
3	29	"				"	
	30	TH-AR			↑	70	
4	31	H24712				45	7626
	32						

11/19

Spectrograph ECHELLE

Intensified Reticon

TO CAM

Grating 3000

Log Sheet

RAW/RET 14

Telescope SH

Date 11/19-20/86

Observer \_\_\_\_\_

Disk ORO 1292

Change...	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
J 7625	1	H24712				45 <sup>s</sup>	76287
	2	"				"	
+2	3	"				"	
	4	"				"	
	5	"				"	
30	6	"				"	
1	7	"				"	
2	8	"				"	
3	9	"				"	
	10	TH-AR			1h	90 <sup>s</sup>	
4	11	H24712				45 <sup>s</sup>	
5	12	"				"	
6	13	"				"	
7	14	"				"	
8	15	"				"	
9	16	"				"	
40	17	"				"	
1	18	"				"	
2	19	"				"	
3	20	"				"	
	21	TH-AR			1h	90 <sup>s</sup>	
4	22	H24712				45 <sup>s</sup>	
5	23	"				"	
6	24	"				"	
7	25	"				"	
8	26	"				"	
9	27	"				"	
50	28	"				"	
1	29	"				"	
2	30	"				"	
3	31	"				"	7655
	32						

Spectrograph ECHELLE

Intensified Reticon

TO CAM 11/19

Grating 300L

Log Sheet

RAW RET 14

Telescope S14

Date 11/19-20/86

Observer RC

Disk OKU 1293

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

↓ 17654 +2	1	TH-AR			↑	90 <sup>s</sup>	
	2	H24712				45	7656
	3	"				"	
	4	"				"	
	5	"				"	
	6	"				"	
	7	"				"	
	8	"				"	
	9	"				"	
	60	8	"			"	
	1	9	"			"	
	2	10	"			"	
3	11	"			"		
4	12	TH-AR			↑	90 <sup>s</sup>	
5	13	H24712				45	
6	14	"				"	
7	15	"				"	
8	16	"				"	
9	17	"				"	
70	18	"				"	
1	19	"				"	
2	20	"				"	
3	21	"				"	
4	22	"				"	
5	23	TH-AR			↑	90 <sup>s</sup>	
6	24	H24712				45	
7	25	"				"	
8	26	"				"	
9	27	"				"	
80	28	"				"	
1	29	"				"	
	30	"				"	
	31	"				"	7683
	32						

Spectrograph ECHELLE Intensified Reticon TO CAM 4/20  
 Grating 300L Log Sheet RAWRET 14  
 Telescope SH Date 11/19-20/86 Observer DL  
 Disk OKO 1294

Change...	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
7682	1	H24712				45 <sup>s</sup>	7684
+2	3	"				"	
	3	TH-AR			↑↓	90 <sup>s</sup>	
4	4	H24712				45 <sup>s</sup>	
5	5	"				"	
6	6	"				"	
7	7	"				"	
8	8	"				"	
9	9	"				"	
90	10	"				"	
1	11	"				"	
2	12	"				"	
3	13	"				"	
	14	TH-AR			↑↓	90 <sup>s</sup>	
4	15	H24712				45 <sup>s</sup>	
5	16	"				"	
6	17	"				"	
7	18	"				"	
8	19	"				"	
9	20	"				"	
7700	21	"				"	
1	22	"				"	
2	23	"				"	
3	24	"				"	
	25	TH-AR			↑↓	90 <sup>s</sup>	
4	26	H24712				45 <sup>s</sup>	
5	27	"				"	
6	28	"				"	
7	29	"				"	
8	30	"				"	
9	31	"				"	7711
	32						

Spectrograph ECHELLE  
 Grating 300L  
 Telescope SM

Intensified Reticon  
 Log Sheet  
 Date 11/19-20/76

TO CAM 11/20  
RAWRET 14  
 Observer [Signature]  
 Disk ORO 1295

Change...	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
7710	1	H24712				45 <sup>s</sup>	7712
	2	"				"	
+2	3	"				"	
	4	"				"	
	5	TH-AR			↑	90 <sup>s</sup>	
	6	H24712				45 <sup>s</sup>	
	7	"				"	
	8	"				"	
	9	"				"	
	10	"				"	
	11	"				"	
20	12	"				"	
1	13	"				"	
2	14	"				"	
3	15	"				"	
	16	TH-AR			↑	90 <sup>s</sup>	
	17	TH-AR			↓	90 <sup>s</sup>	
	18	H24712				45 <sup>s</sup>	
	19	"				"	
	20	"				"	
	21	"				"	
	22	"				"	
	23	"				"	
30	24	"				"	
	25	TH-AR				90 <sup>s</sup>	
1	26	FILMIL				45 <sup>s</sup>	
2	27	"				"	
3	28	"				"	
4	29	"				"	
5	30	"				"	
6	31	"				"	7738
	32						

Spectrograph ECHELLE

Intensified Reticon

TO CAM 11/20

Grating 300L

Log Sheet

RAWRET 14

Telescope SH

Date 11/19-20/86

Observer Jan

Disk ORO 1296

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
7739	1	H24712				90 <sup>s</sup>	7739
40	2	"				45 <sup>s</sup>	
+2	3	"				45 <sup>s</sup>	
1	4	TH-AR			TH	90 <sup>s</sup>	
2	5	H24712				45 <sup>s</sup>	
3	6	"				"	CLK SET FORWARD
4	7	"				"	5 <sup>sec</sup>
5	8	"				"	
6	9	"				"	
7	10	"				"	
8	11	"				"	
9	12	"				"	
50	13	"				"	
1	14	"				"	
	15	TH-AR			TH	90 <sup>s</sup>	
2	16	H24712				45 <sup>s</sup>	
3	17	"				"	
4	18	"				"	
5	19	"				"	
6	20	"				"	
7	21	"				"	
8	22	"				"	
	23	TH-AR				90 <sup>s</sup>	
9	24	H24712				45 <sup>s</sup>	
60	25	"				"	
1	26	"				"	
2	27	"				"	
3	28	"				"	
4	29	"				"	
5	30	"				"	
6	31	"				"	77
	32						



Spectrograph ECHELLE

Intensified Reticon

TO CAM 4/20

Grating 300

Log Sheet

RAW RET 17

Telescope SM

Date 4/19-20/86

Observer JLW

Disk ORD 1298

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

7795	1	H24712				45 <sup>s</sup>	
6	2	"				"	
	3	TH-AR			↑↓	90 <sup>s</sup>	
7	4	H24712				45 <sup>s</sup>	
8	5	"				"	
9	6	"				"	
7800	7	"				"	
1	8	"				"	
2	9	"				"	
3	10	"				"	
4	11	"				"	
5	12	"				"	
6	13	"				"	
	14	TH-AR			↑↓	90 <sup>s</sup>	
7	15	H24712				45 <sup>s</sup>	
8	16	"				"	
9	17	"				"	
10	18	"				"	
1	19	"				"	
2	20	"				"	
3	21	"				"	
4	22	"				"	
5	23	"				"	
6	24	"				"	
	25	TH-AR			↑↓	90 <sup>s</sup>	
7	26	H24712				45	
8	27	"				"	
9	28	"				"	
20	29	"				"	
1	30	"				"	
2	31	"				"	
	32						

Spectrograph ECHELLE

Intensified Reticon

TO CAM 11/20

Grating 3000

Log Sheet

RAW RET 14

Telescope SH

Date 11/19-20/86

Observer JR

Disk OKO 1299

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
7823	1	H24712				45 <sup>s</sup>	
4	2	"				"	
5	3	"				"	
6	4	"				"	
	5	TH-AR			RL	90 <sup>s</sup>	
7	6	H24712				45 <sup>s</sup>	
8	7	"				"	
9	8	"				"	
30	9	"				"	
1	10	"				"	
2	11	"				"	
3	12	"				"	
4	13	"				"	
5	14	"				"	
6	15	"				"	
	16	TH-AR			TL	90 <sup>s</sup>	
7	17	H24712				45 <sup>s</sup>	CHK SET FORWARD
8	18	"				"	5 <sup>s</sup>
9	19	"				"	
40	20	"				"	
1	21	"				"	
2	22	"				"	
3	23	"				"	
4	24	"				"	
	25	TH-AR			TL	90 <sup>s</sup>	
5	26	H24712				45 <sup>s</sup>	
6	27	"				"	
7	28	"				"	
8	29	"				"	
9	30	"				"	
50	31	"				"	
	32						

Intensified Reticon

TO CAM 11/19

Spectrograph ECHELLE

Log Sheet

RAWRET 14

Grating 3009

Observer GS

Telescope 6" WYETH

Date NOV 19-20 1986

Disk ORO 1300

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
7851	1	H24712				45°	5187A
2	2	"				"	
3	3	"				"	
	4	TH-AR			↑	90°	
<del>GAR</del> 4	5	<del>H24712</del> TH-AR			↓	45°	7854 = GARBAGE
5	6	"				"	
6	7	"				"	
7	8	"				"	
8	9	"				"	
9	10	"				"	
60	11	"				"	
1	12	"				"	
2	13	"				"	
3	14	"				"	
4	15	TH-AR			↑	90°	
4	16	H24712				45°	
5	17	"				"	
6	18	"				"	
7	19	"				"	
8	20	"				"	
9	21	"				"	
70	22	"				"	
1	23	"				"	
2	24	"				"	
3	25	"				"	
4	26	TH-AR			↑	90°	
4	27	H24712				45°	
5	28	"				"	
6	29	"				"	
7	30	"				"	
8	31	"				"	
	32						

TO CAM 11/19

RAW RET 14

Spectrograph ECHELLE      Intensified      Reticon

Grating 3009      Log      Sheet

Telescope 61 WYETH      Date NOV 19 20 1986      Observer GS      Disk ORO 1301

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
17879	1	H24712				45 <sup>s</sup>	5187
80	2	"				"	
1	3	"				"	TREES IN PICTURE?
2	4	"				"	
3	5	"				"	
	6	TH-AR			↑	90 <sup>s</sup>	
4	7	H24712				45 <sup>s</sup>	DRIFTED OUT OF SLIT
5	8	"				"	
6	9	"				"	
7	10	"				"	
8	11	"				"	
9	12	"				"	
90	13	"				"	
1	14	"				"	
2	15	"				"	TREES ARE IN FIELD
3	16	"				"	
	17	TH-AR			↓	90 <sup>s</sup>	
4	18	H24712				45 <sup>s</sup>	
5	19	"				"	
6	20	"				"	
7	21	"				"	
	22	TH-AR			↑	90 <sup>s</sup>	
	23	TH-AR			↓	90 <sup>s</sup>	
	24	VX PER	02:04:19	58:12:22		9 MIN	9.7/      CEPH
	25	TH-AR			↑	90 <sup>s</sup>	
	26	TH-AR			↓	90 <sup>s</sup>	
	27	RX AUR	04:57:55	39:53:17		2 1/2 MIN	9.2/
	28	TH-AR			↑	90 <sup>s</sup>	
	29	TH-AR			↓	90 <sup>s</sup>	
	30	SU MON	06:18:45	06:29:41		4 1/2 MIN	8.9/
	31	TH-AR			↑	90 <sup>s</sup>	
	32						

11/21

Spectrograph ECHELLE Intensified Reticon TO CAM  
 Log Sheet RAW RET 19  
 Grating 3000 Observer GG  
 Telescope 6" WYETH Date NOV 19-20 1986 Disk ORD 1302

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90 <sup>s</sup>	5187A 50μ SUT
		2	T MON	06:22:31	07:06:53	2 MIN	6.6/ CENOID
		3	TH-AR		↑	90 <sup>s</sup>	
		4	TH-AR		↓	90 <sup>s</sup>	
		5	5043396	10:32:32	45:54:46	2 MIN	7.5/100 M STARS
		6	TH-AR		↕	90 <sup>s</sup>	
		7	GLS 397	10:28:25	45:47:01	4 MIN	8.9/40
		8	TH-AR		↑	90 <sup>s</sup>	
		9	TH-AR		↓	90 <sup>s</sup>	
		10	5043627	11:06:51	43:28:44	2 MIN	6.0/100
		11	TH-AR		↕	90 <sup>s</sup>	
		12	GLS 412A	11:02:43	43:47:39	4 1/2 MIN	8.8/40
		13	TH-AR		↑	90 <sup>s</sup>	
		14	TH-AR		↓	90 <sup>s</sup>	
		15	+ 222411	11:48:59	22:23:36	9 MIN	9.3/30 HMLOS
		16	TH-AR		↑	90 <sup>s</sup>	
		17	TH-AR		↓	90 <sup>s</sup>	
		18	GS9-5	12:10:56	23:32:36	3 MIN	9.4/15
		19	TH-AR		↑	90 <sup>s</sup>	
		20	TH-AR		↓	90 <sup>s</sup>	
		21	563020	12:26:38	31:40:00	5 MIN	7.9/50 (FOG ROLLED IN)
		22	TH-AR		↑	90 <sup>s</sup>	
		23	TH-AR		↓	90 <sup>s</sup>	
		24	H89449	10:17:01	19:43:31	2 MIN	4.8/ IAU STD
		25	TH-AR		↑	90 <sup>s</sup>	
		26	TH-AR		↓	90 <sup>s</sup>	
		27	SKYDWN E	4 1/2 HR E	+35°	2 MIN	MOSTLY CLDY
		28	TH-AR		↑	90 <sup>s</sup>	
		29	TH-AR		↓	90 <sup>s</sup>	
		30	SKYDWN M	0 HR HA	+35°	2 MIN	
		31	TH-AR		↑	90 <sup>s</sup>	
		32	INLANDS			120 <sup>min</sup>	

11/22

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET 14

Grating 300

Observer CS

Telescope 6" WYEM

Date NOV 19-20 1986

Disk ORO 1303

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1				120 MIN	
		2				120 MIN	
		3				120 MIN	
NOV 21/22		4			↓	90"	5187A 80μ SLIT
<del>NOV 21/22</del>		5	0 <sup>h</sup> HA	0 <sup>h</sup> DEC		2 1/2 MIN	PRIMARY A LITTLE WET
		6			↑	90"	
		7			↑	90	6563
		8	21 2256	-05 48		4"	0.3 = NO H <sub>2</sub> SPECT
		9			↑	90	
		10			↓	90	
		11	22 0313	-00 33		8"	
		12			↑	90"	
21-22 NOV		13			↓	90s	5187A - cloudy -
		14	H 8779	04:23:54	-04:39:29	4m	6.4 IAU standard
		15			↑	90s	
		16			↓	90s	
		17	H 26162	04:06:15	19:28:43	10m	IAU standard
		18			↑	90s	
		19			↓	90s	
		20	L 81	04:38:41	13:07:34	20m	Hyades Binary
		21			↑	90s	
		22			↓	90s	
		23	L 59	04:24:02	10:45:36	4m	
		24			↑	90s	
		25			↓	90s	
		26	H 411	04:24:36	14:09:00	7m	
		27			↑	90s	
		28			↓	90s	
		29	H 448	04:26:08	16:03:00	4m	
		30			↑	90s	
		31					
		32					

11/22

Spectrograph ECHELLE

Intensified Reticon

TO CAM

Grating 300 l

Log Sheet

RAW RET 14

Telescope 614

Observer RPS

Date 21-22 Nov 1986

Disk ORO 1304

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments	
		1			↓	90s		
		2	RX AUR	04:57:55	39:53:17		4m	- Problem with DEC Drive Cepheids - skip fixed -
		3			↑	90s		
		4			↓	90s		
		5	T MON	06:22:31	07:06:53		3m	
		6			↑	90s		
		7			↓	90s		
		8	SU MON	06:18:45	06:29:41		4m	
		9			↑	90s		
		10	E Th-Ar			↓	90s	
		11	GRS 268	07:46:37	38:36:48		20m	11.5/20 M stars
		12			↑	90s		
		13	GRS 268	"	"		12m	
		14			↑	90s		
		15			↓	90s		
		16	GRS 301	08:10:50	-13:45:48		15.5m	9.4/40
		17			↑	90s		
		18			↓	90s		
		19	GRS 319AB	08:40:02	09:44:18		12m	9.7/40 •• M stars
		20			↑	90s		
		21			↓	90s		
		22	G101-14	05:57:30	46:27:06		10m	11.3/15 HALOS
		23			↑	90s		
		24			↓	90s		
		25	G191-55	05:53:04	58:40:24		14m	10.5/40 (cut short by clouds) - clouds -
		26			↑	90s		
		27			↓	90s		
		28	SKY DOWN	4 hrs EAST			2 1/2 m	δ = +10°
		29			↑	90s		
		30						
		31						
		32						

Spectrograph ECHELLE

Intensified Reticon

TO CAM 11/22

Grating 300R

Log Sheet

RAW RET 14

Telescope 61"

Date 21-22 NOV. 1986

Observer RPS

Disk ORO 1305

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
		2		φ Hours		2m	+10° Dec
		3			↑	90s	
		4				120 MIN	
		5				120 MIN	
		6				32 MIN	
NOV 22-23		7			↓	90s	
		8		0 <sup>h</sup> 11 <sup>m</sup> +35		2m	
		9			↑	90s	
		10		4.5 <sup>h</sup> W +25	↓	90s	
		11				2m	
		12			↑	90s	
		13			↓	90s	RJD ↓
		14	H213014 22:25:45.8	17:40:28		2"	IAU Rad Vel Std.
		15			↑	90s	
		16			↓	90s	
		17	AG Peg 21:48:36	12:23:27		3m	Kenyon Symbiotics
		18			↑	90s	
		19			↓	90s	
		20	1016 Cyg 19:55:20	39:41:30		20m	
		21			↑	90s	
		22			↓	90s	
		23	HM-Sge 17:37:41	16:37:36		20m	
		24			↑	90s	
		25			↓	90s	
		26	-2316310 20:29:05	-23:42:48		25m	Halo Binaries
		27			↑	90s	
		28			↓	90s	
		29	G24-25 20:37:42	00:22:42		23m	
		30			↑	90s	
		31					
		32					

Intensified Reticon

TO CAM 11/22

Spectrograph ECHELLE

Log Sheet

RAWRET 19

Grating 300 L

Observer RJD

Telescope 61" Wyeth

Date 11/22-23/86

Disk ORO 1306

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Th Ar		↓	90 <sup>s</sup>	
	5191333	22:39:17	-21:02:48			6 <sup>m</sup>	Halo Binaries
		3	Th Ar		↑	90 <sup>s</sup>	
		4	Th Ar		↓	90 <sup>s</sup>	
	G25-15	21:01:37	02:08:00			2 <sup>m</sup>	
		6	Th Ar		↑	90 <sup>s</sup>	
		7	Th Ar		↓	90 <sup>s</sup>	
	(4)	00:23:17	-8:01:45			2 <sup>m</sup>	Asteroid
		9	Th Ar		↑	90 <sup>s</sup>	
		10	Th Ar		↓	90 <sup>s</sup>	
	H8779	01:23:53.6	-00:39:29			2 <sup>m</sup>	1AU Rad Vel Std.
		12	Th Ar		↑	90 <sup>s</sup>	
		13	Th Ar		↓	90 <sup>s</sup>	
	H2 6162	04:06:14.9	19:28:43			2 <sup>m</sup>	2AU Rad Vel Std.
		15	Th Ar		↑	90 <sup>s</sup>	
		16	Th Ar		↓	90 <sup>s</sup>	Halo Binaries ↓
	G227-37	18:34:48	63:39:18			2 <sup>m</sup>	
		18	Th Ar		↑↓	90 <sup>s</sup>	
	G227-38	18:34:49	63:39:18			12 <sup>m</sup>	
		20	Th Ar		↑	90 <sup>s</sup>	
		21	Th Ar		↓	90 <sup>s</sup>	
	G262-32	20:58:10	64:51:00			12 <sup>m</sup> 18 <sup>s</sup>	clouds interfering
		23	Th Ar		↑	90 <sup>s</sup>	
		24	Th Ar		↓	90 <sup>s</sup>	
	-10548	02:44:31	-10:20:18			8 <sup>m</sup>	Almost clear again
		26	Th Ar		↑	90 <sup>s</sup>	
		27	Th Ar		↓	90 <sup>s</sup>	
	G230-45	20:38:54	54:02:15			13 <sup>m</sup>	
		29	Th Ar		↑	90 <sup>s</sup>	
		30	Th Ar		↓	90 <sup>s</sup>	
	G262-14	20:27:35	61:50:57			15 <sup>m</sup>	
		32	Th Ar		↑	90 <sup>s</sup>	



Spectrograph ECHELLE  
 Grating 3000  
 Telescope 51" Wootch

Intensified Reticon  
 Log Sheet  
 Date 11/22-23/86

TO CAM 11/22  
RAWRET 14  
 Observer RJD  
 Disk ORO 13.08

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments	
		1	H244907	05:31:05.9	09:44:40		20 <sup>m</sup>	λ Ori
		2	Th Ar			↑↓	90 <sup>s</sup>	
		3	H245312	05:33:07.7	09:29:58		4 <sup>m</sup>	
		4	Th Ar			↑↓	90 <sup>s</sup>	
		5	H245141	05:33:54	09:26:06		20 <sup>m</sup>	
		6	Th Ar			↑	90 <sup>s</sup>	
		7	Th Ar			↓	90 <sup>s</sup>	
		8	HD36232	05:28:02.3	12:19:15		20 <sup>m</sup>	
		9	Th Ar			↑↓	90 <sup>s</sup>	
		10	HD35956	05:26:02.9	12:30:52		2 <sup>m</sup>	
		11	Th Ar			↑↓	90 <sup>s</sup>	
		12	Th Ar			↓	90 <sup>s</sup>	
		13	H244138	05:26:20.8	11:47:52		7 <sup>m</sup>	
		14	Th Ar			↑	90 <sup>s</sup>	
		15	Th Ar			↓	90 <sup>s</sup>	
		16	S015472	11:16:06.7	62:27:12		2 <sup>m</sup>	M Stars
		17	Th Ar			↑↓	90 <sup>s</sup>	
		18	Gl 430	11:28:22	63:26:00		9 <sup>m</sup>	
		19	Th Ar			↑	90 <sup>s</sup>	
		20	Th Ar			↓	90 <sup>s</sup>	
		21	H100018	11:28:07	41:33:50		2 <sup>m</sup>	
		22	Th Ar			↑	90 <sup>s</sup>	
		23	Th Ar			↓	90 <sup>s</sup>	
		24	H26162	04:06:14.9	17:28:43		2 <sup>m</sup>	<del>Star</del> IAU R.V. Std.
		25	Th Ar			↑	90 <sup>s</sup>	
		26	Th Ar			↓	90 <sup>s</sup>	
		27	H245457	05:33:47.8	09:50:04		2 <sup>m</sup>	λ Ori
		28	Th Ar			↑↓	90 <sup>s</sup>	
		29	H245458	05:33:49.6	10:01:56		5 <sup>m</sup>	
		30	Th Ar			↑↓	90 <sup>s</sup>	
		31	H245460	05:33:47.1	09:34:04		4 <sup>m</sup>	
		32						

Spectrograph ECHELLE Intensified Reticon TO CAM 11/22  
 Grating 300 l Log Sheet RAW/RET 14  
 Telescope 61" Wyeth Date 11/22-23/86 Observer RJD  
 Disk ORO 13-89

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		ThAr			↓	90 <sup>s</sup>	
	B		05:22:21.4	09:57:59		9 <sup>m</sup>	2 Ori
		ThAr			↑↓	90 <sup>s</sup>	
	L		05:33:29.7	09:59:57		5 <sup>m</sup>	
		ThAr			↑↓	90 <sup>s</sup>	
	M		05:30:58.8	09:39:10		6 <sup>m</sup>	
		ThAr			↑↓	90 <sup>s</sup>	
	H245042		05:31:44	09:23:54		7 <sup>m</sup>	
		ThAr			↑↓	90 <sup>s</sup>	
	H245299		05:32:59	10:22:04		15 <sup>m</sup>	
		ThAr			↑	90 <sup>s</sup>	
		ThAr			↓	90 <sup>s</sup>	
	H92588		10:38:51.5	-1:28:41		2 <sup>m</sup>	IAU Rad Vel Std
		ThAr			↑	90 <sup>s</sup>	
		ThAr			↓	90 <sup>s</sup>	
	G114-48		09:11:12	-3:41:18		5 <sup>m</sup>	Halo Binaries
		ThAr			↑	90 <sup>s</sup>	
		ThAr			↓	90 <sup>s</sup>	
	T Mon		06:22:31	07:06:53		2 <sup>m</sup>	Cepheids
		ThAr			↑	90 <sup>s</sup>	
		ThAr			↓	90 <sup>s</sup>	
	G191-55		05:53:04	58:40:24		11 <sup>m</sup>	Halo Binaries
		ThAr			↑	90 <sup>s</sup>	
		ThAr			↓	90 <sup>s</sup>	
	G53-30		10:09:56	-0:23:12		4 <sup>m</sup>	
		ThAr			↑	90 <sup>s</sup>	
		ThAr			↓	90 <sup>s</sup>	
	G43-3		09:46:12	13:58:18		2 <sup>m</sup>	
		ThAr			↑	90 <sup>s</sup>	
		ThAr			↓	90 <sup>s</sup>	
	H92588		10:38:51.5	-1:28:41		2 <sup>m</sup>	IAU Rad Vel Std
		ThAr			↑	90 <sup>s</sup>	

Spectrograph ECHELLE Intensified Reticon  
 Grating 300 l Log Sheet  
 Telescope 61" Wyeth Date 11/22-23/86

TO CAM 11/25  
 RAW/RET 14

Observer RJD  
 Disk ORO 1310

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	
		2				3 <sup>m</sup>	3 <sup>h</sup> E, -10°
		3			↑	90 <sup>s</sup>	
		4			↓	90 <sup>s</sup>	
		5				3 <sup>m</sup>	Meridian, +31 <sup>m</sup>
		6			↑	90 <sup>s</sup>	
		7				120 <sup>m</sup>	
		8				120	
23-24 NOV 1986		9			↓	90s	5187A - cloudy -
		10	4.5 hours	<u>EAST</u>		2m	+20° Dec
		11			↑	90s	
		12			↓	90s	
		13	4 Hours			2m	+20° Dec.
		14			↑	90s	
		15			↓	90s	
		16	4 hours	<u>WEST</u>		20m	+20° Dec. (low counts-late)
		17			↑	90s	
NOV 24-25		18			↓	90 <sup>s</sup>	5187A RAP SLIT CLEAR
		19	0 <sup>HR</sup> HA	+35°		2 <sup>m</sup> IN	
		20			↑	90 <sup>s</sup>	
		21			↓	90 <sup>s</sup>	
		22	4 <sup>HR</sup> W HA	+35°		2 <sup>m</sup> IN	
		23			↑	90 <sup>s</sup>	
		24			↓	90 <sup>s</sup>	
		25	H182572	19 24 18	11 55	3 <sup>m</sup>	1A 4
		26			↑	90 <sup>s</sup>	
		27	<del>G190-AR</del>		↓	90 <sup>s</sup>	
		28	G190-10	23 05 39	41 35	15 <sup>m</sup>	HALO
		29			↑	90 <sup>s</sup>	
		30			↓	90 <sup>s</sup>	
		31	VX PER	02 04 10	58 12	20 <sup>m</sup>	CEPH
		32				90 <sup>s</sup>	



Spectrograph ECHELLE Intensified Reticon  
 Log Sheet

TO CAM 11/25  
 RAW/RET 14

Grating 5000 Observer G<sup>s</sup>  
 Telescope 6" WYETH Date NOV 24/25 1986 Disk ORD 1312

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90 <sup>s</sup>	5187A. 80μSUT
		2	U483	22:26:12	57:26:42		12 <sup>MIN</sup> 9.6/
		3	TH-AR		↑	90 <sup>s</sup>	SPACE MOTIONS
		4	U484	22:26:23	57:27:20		16 <sup>MIN</sup> 10.5/
		5	TH-AR		↑	90 <sup>s</sup>	
		6	TH-AR		↓	90 <sup>s</sup>	
		7	U039	02:18:57	47:39:06		4 1/2 <sup>MIN</sup> 9.3/
		8	TH-AR		↑	90 <sup>s</sup>	
		9	TH-AR		↓	90 <sup>s</sup>	
		10	U046	02:39:34	48:45:18		6 <sup>MIN</sup> 9.8/
		11	TH-AR		↑	90 <sup>s</sup>	
		12	TH-AR		↓	90 <sup>s</sup>	
		13	U044	02:32:30	20:02:24		11 <sup>MIN</sup> 10.8/
		14	TH-AR		↑	90 <sup>s</sup>	
		15	U045	02:33:03	20:00:18		6 <sup>MIN</sup> 10.7/
		16	TH-AR		↑	90 <sup>s</sup>	
		17	TH-AR		↓	90 <sup>s</sup>	
		18	U048	02:43:20	25:26:30		3 <sup>MIN</sup> 7.8/
		19	TH-AR		↑	90 <sup>s</sup>	
		20	TH-AR		↓	90 <sup>s</sup>	
		21	U064	03:38:34	03:27:18		10 <sup>MIN</sup> 9.6/ (END IN OVERCAST)
		22	TH-AR		↑	90 <sup>s</sup>	
		23	TH-AR		↓	90 <sup>s</sup>	
		24	GLG 268	07:06:37	38:36:48		20 <sup>MIN</sup> 11.5/20 (CLEAR) 17 STARS
		25	TH-AR		↑	90 <sup>s</sup>	
		26	TH-AR		↓	90 <sup>s</sup>	
		27	G41-34	09:20:06	11:29:06		11 <sup>MIN</sup> 9.6/ (NO OVERCAST) HALOS
		28	TH-AR		↑	90 <sup>s</sup>	
		29	TH-AR		↓	90 <sup>s</sup>	
		30	H 87449	10:17:01	19:43:31		2 <sup>MIN</sup> 4.8/ IAU STND
		31	TH-AR		↑	90 <sup>s</sup>	
		32					

TO CAM 11/26

Intensified      Reticon

Spectrograph ECHELLE      Log Sheet      RAW RET 14

Grating 3002      Observer GS

Telescope 61" WYETH      Date NOV 24-25 1986      Disk OKO 1313

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90 <sup>s</sup>	5187A 80μ slit
		2	SKYDUNE	4 1/2 hr E	+30°	2 1/2 min	(SUNNING)
		3	TH-AR		↑	90 <sup>s</sup>	
		4	TH-AR		↓	90 <sup>s</sup>	
		5	SKYDUNA	0 hr HA	+30°	2 min	
		6	TH-AR		↑	90 <sup>s</sup>	
		7	INCANDS			120 min	
		8	INCANDS			120 min	
		9	INCANDS			58 min	
		10	TH-AR		↓	90 <sup>s</sup>	5187A 80μ slit
		11	SKYEVEN	0 hr HA	+30°	2 min	(SUNNING)
		12	TH-AR		↑	90 <sup>s</sup>	
		13	TH-AR		↓	90 <sup>s</sup>	
		14	SKYEVEN	4 hr W HA	+30°	2 1/2 min	
		15	TH-AR		↑	90 <sup>s</sup>	
		16	TH-AR		↓	90 <sup>s</sup>	
		17	H182572	19:22:35	11:50:09	2 min	5.2/ (2ND FIT) IAU STD
		18	TH-AR		↑	90 <sup>s</sup>	
		19	TH-AR		↓	90 <sup>s</sup>	
		20	J SGR	18:28:57	-19:09:40	3 1/2 min	7.1/ (IN TREES?) CCFH
		21	TH-AR		↑	90 <sup>s</sup>	
		22	TH-AR		↓	90 <sup>s</sup>	
		23	X CYG	20:41:27	35:24:24	2 min	6.1/
		24	TH-AR		↑	90 <sup>s</sup>	
		25	TH-AR		↓	90 <sup>s</sup>	
		26	VX PER	02:04:18	82:12:22	7 min	7.7/
		27	TH-AR		↑	90 <sup>s</sup>	
		28	TH-AR		↓	90 <sup>s</sup>	
		29	G189-30	21:53:03	32:24:24	14 min	11.1/30 HALOS
		30	TH-AR		↑	90 <sup>s</sup>	
		31					
		32					

WJONG  
DATE IN FILE  
NOV 25-26

Spectrograph ECHELLE Intensified Reticon  
 Grating 300 Log Sheet

TO CAM w/26  
RAW RET 14

Telescope 61" WYETH Date NOV 25-26 1986 Observer GS  
 Disk OR.O 1314

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90°	5187A 20μ slit
	214-18A	2	22:13:08	39:31:36		2 min	7.57/20 (186 same?) WALUS
		3	TH-AR		↑	90°	
		4	TH-AR		↓	90°	
	G128-45	5	23:15:33	31:15:30		14 min	11.5/15
		6	TH-AR		↑	90°	
		7	TH-AR		↓	90°	
	G141-47	8	18:50:55	10:33:48		14 min	10.5/30
		9	TH-AR		↑	90°	
		10	TH-AR		↓	90°	
	G26-38	11	21:56:12	00:34:18		5 min	10.3/15
		12	TH-AR		↑	90°	
		13	TH-AR		↓	90°	
	G18-28	14	22:03:14	12:08:18		4 min	9.5/30
		15	TH-AR		↑	90°	
		16	TH-AR		↓	90°	
	G27-79	17	22:25:20	-05:32:06		12 min	11.2/15
		18	TH-AR		↑	90°	
		19	TH-AR		↓	90°	
	G27-33	20	22:30:11	-06:12:42		16 min	11.5/15
		21	TH-AR		↑	90°	
		22	TH-AR		↓	90°	
	L3780	23	22:11:46	-08:59:09		20 min	11.2/15
		24	TH-AR		↑	90°	
		25	TH-AR		↓	90°	
	U 042	26	02:25:09	04:12:18		6 min	8.7 (WEAK LINES) SPACE MOTIONS
		27	TH-AR		↑	90°	
		28	TH-AR		↓	90°	
	U 051	29	03:03:50	01:47:06		4 min	9.1
		30	TH-AR		↑	90°	
		31					
		32					

TO CAM 11/26

Intensified      Reticon

Spectrograph ECHELLE      Log      Sheet

Grating 300      Observer GS

Telescope 6" WYETH      Date NOV 25-26 1986      Disk ORO 1315

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	90 <sup>s</sup>	5.87A - 80.4511
		2	U054	03:14:22	26:09:00	13 MIN	11.2/      SPACE MOTION
		3	TH-AR		↑	90 <sup>s</sup>	
		4	TH-AR		↓	90 <sup>s</sup>	
		5	U055	03:14:52	38:04:42	5 MIN	10.2/
		6	TH-AR		↑	90 <sup>s</sup>	
		7	TH-AR		↓	90 <sup>s</sup>	
		8	EX AUR	04:57:55	39:53:17	2 MIN	9.2/      CEPH
		9	TH-AR		↑	90 <sup>s</sup>	
		10	TH-AR		↓	90 <sup>s</sup>	
		11	U056	03:22:35	-05:31:18	3 MIN	7.8/      SPACE MOTION
		12	TH-AR		↑	90 <sup>s</sup>	
		13	TH-AR		↓	90 <sup>s</sup>	
		14	U069	03:52:09	-06:58:48	3 MIN	9.0/
		15	TH-AR		↑	90 <sup>s</sup>	
		16	TH-AR		↓	90 <sup>s</sup>	
		17	U089	04:56:59	01:42:36	11 MIN	10.0/30
		18	TH-AR		↑	90 <sup>s</sup>	
		19	TH-AR		↓	90 <sup>s</sup>	
		20	Z LAC	22:38:53	56:34:05	3 MIN	8.9/      CEPHEIDS
		21	TH-AR		↑	90 <sup>s</sup>	
		22	TH-AR		↓	90 <sup>s</sup>	
		23	DL CAS	00:27:11	59:56:12	4 MIN	10.6/
		24	TH-AR		↑	90 <sup>s</sup>	
		25	TH-AR		↓	90 <sup>s</sup>	
		26	U009	00 24 36	53 54	10 <sup>m</sup>	UPGREN
		27	TH-AR		↑	90 <sup>s</sup>	
		28	TH-AR		↓	90 <sup>s</sup>	
		29	U020	00 59 27	62 04	5 <sup>m</sup>	
		30	TH-AR		↑	90 <sup>s</sup>	
		31					
		32					

Spectrograph ECHELLE Intensified Reticon  
 Grating 300 Log Sheet  
 Telescope SFI Date 11/25-6/86

TO CAM 11/26  
RAWRET 14

Observer OKO-1316  
 Disk OKO-1316

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		TH-AR			↓	70 <sup>s</sup>	
		U023	01 03 04	63 35		5 <sup>m</sup>	11° CREW
		TH-AR			↑	70 <sup>s</sup>	
		U024	01 03 44	63 40		5 <sup>m</sup>	
		TH-AR			↑	70 <sup>s</sup>	
		TH-AR			↓	70 <sup>s</sup>	
		U032	01 40 12	63 35		2 <sup>m</sup>	
		TH-AR			↑	70 <sup>s</sup>	
		TH-AR			↓	70 <sup>s</sup>	
		U091	05 00 11	-21 11		20 <sup>s</sup>	
		TH-AR			↑	90 <sup>s</sup>	
		U093	05 00 22	-21 11		12 <sup>m</sup>	
		TH-AR			↑	90 <sup>s</sup>	
		U092	05 00 20	-21 19		2 <sup>m</sup>	
		TH-AR			↑	70 <sup>s</sup>	
		U097	05 16 40	-21 37		5 <sup>m</sup>	
		TH-AR			↑	90 <sup>s</sup>	
		TH-AR			↓	90 <sup>s</sup>	
		U101	05 25 56	-03 32		2 <sup>m</sup>	
		TH-AR			↑	90 <sup>s</sup>	
		U102	05 27 43	-03 28		20 <sup>s</sup>	
		TH-AR			↑	70 <sup>s</sup>	
		U103	05 27 34	-03 22		3 <sup>m</sup>	
		TH-AR			↑	90 <sup>s</sup>	
		TH-AR			↓	70 <sup>s</sup>	
		U104	05 27 55	-03 41		2 <sup>m</sup>	
		TH-AR			↑	90 <sup>s</sup>	
		TH-AR			↓	70 <sup>s</sup>	
		U107	04 17 55	42 15		7 <sup>m</sup>	
		TH-AR			↑	70 <sup>s</sup>	

