

TO CAM 4/9

Intensified      Reticon

Spectrograph ECHELLE      Log Sheet      RAW/RET 17

Grating 300      Observer RAM

Telescope 61" WYETH      Date APR 9-10 1987      Disk ORU 1526

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	5187A 80μ SLIT
	SKYVIEW		0 <sup>h</sup> 00 <sup>m</sup> HA	+30°		2 <sup>m</sup>	(MOSTLY CLOUD)
		3			↑	90 <sup>s</sup>	
	TH-AR		4 <sup>h</sup> 45 <sup>m</sup> W HA	→	↓	90 <sup>s</sup>	
	SKYVIEW		4 <sup>h</sup> 45 <sup>m</sup> W HA	+30°		2 <sup>m</sup>	
		6			↑	90 <sup>s</sup>	6563A
	TH-AR				↓	90 <sup>s</sup>	6563 SALLY
	α ORI		5 52 28	07 24		13 <sup>s</sup>	ND=2.0 FILTER
		9			↑	90 <sup>s</sup>	
	TH-AR				↓	30 <sup>s</sup>	5187
	VX PER		2 04 18	58 12		10 <sup>m</sup>	CEPH
		12			↑	30 <sup>s</sup>	
	TH-AR				↓	30 <sup>s</sup>	
	HD37148		5 34 01	09 51		6 <sup>m</sup>	LAMORI
		15			↑	30 <sup>s</sup>	
	TH-AR				↓	30 <sup>s</sup>	
	UV AUR		5 18 33	32 28		4 <sup>m</sup>	KELSON
		18			↑	30 <sup>s</sup>	
	TH-AR				↓	30 <sup>s</sup>	
	TXCVEN		12 42 18	37 02		5 <sup>m</sup>	"
		21			↑	30 <sup>s</sup>	
	TH-AR				↓	30 <sup>s</sup>	
	G59-32		12 37 37	21 05		5 <sup>m</sup>	
		24			↑	30 <sup>s</sup>	
	TH-AR				↓	30 <sup>s</sup>	
	S137715		12 27 10	-03 03		2½	
		27			↑	30 <sup>s</sup>	
	TH-AR				↓	30 <sup>s</sup>	
	G178-56		14 53 12	43 14		18 <sup>m</sup>	
		30			↑	30 <sup>s</sup>	
	TH-AR						
		31					
		32					

Spectrograph ECHELLE

Intensified Reticon

TO CAM 4/9

Grating 300

Log Sheet

RAW RET 17

Telescope SHDate 4/9-10/87Observer AMDisk ORU 1527

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	30 <sup>s</sup>	5127A
		2	15 05 06	17 38		7 <sup>m</sup>	HALO
		3			↑	30 <sup>s</sup>	
		4			↓	30 <sup>s</sup>	
		5	11 00 37	26 12		2 <sup>m</sup>	NEARBY
		6			↑	30 <sup>s</sup>	
		7			↓	30 <sup>s</sup>	
		8	10 16 54	20 07		3 <sup>m</sup>	
		9			↑	30 <sup>s</sup>	
		10			↓	30 <sup>s</sup>	
		11	11:45:09	01:06:00		10 MIN	11.1/
		12			↑	30 <sup>s</sup>	
		13			↓	30 <sup>s</sup>	
		14	+252465	12:05:59	25:04:42	2 1/2 MIN	9.1/ CNRP
		15			↑	30 <sup>s</sup>	
		16	+252466	12:06:24	24:58:45	2 1/2 MIN	9.3/
		17			↑	30 <sup>s</sup>	
		18			↓	30 <sup>s</sup>	
		19	+252530	12:33:26	25:03:08	4 MIN	10.5/
		20			↑	30 <sup>s</sup>	
		21	+252544	12:37:36	25:15:47	2 1/2 MIN	9.5/
		22			↑	30 <sup>s</sup>	
		23	+252555	12:41:55	25:01:52	2 MIN	9.1/
		24			↑	30 <sup>s</sup>	
		25	+252556	12:43:06	25:11:42	2 1/2 MIN	9.5/
		26			↑	30 <sup>s</sup>	
		27	+252564	12:45:50	25:24:31	2 1/2 MIN	9.6/
		28			↑	30 <sup>s</sup>	
		29	+262355	12:27:17	25:31:26	4 MIN	10.7/ (LONG OFFSET)
		30			↑	30 <sup>s</sup>	
		31	+262378	12:37:49	25:55:15	4 MIN	10.0/
		32			↑	30 <sup>s</sup>	









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Spectrograph ECHELLE Intensified Reticon TO CAM  
 Log Sheet RAW/RET 17  
 Grating 300 Observer G<sup>s</sup> / RPS  
 Telescope 6" WYETH Date APR 9-10 1987 Disk ORD 1530

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	30 <sup>s</sup>	5187A 80 μ SLIT
		2	(2)	16:22:24	18:53:26	2 MIN	9.2 / ASTEROID
		3	TH-AR		↑	30 <sup>s</sup>	
		4	TH-AR		↓	30 <sup>s</sup>	
		5	H136202	15:16:45	01:57:11	2 MIN	5.1 / IAU STND STAR
		6	TH-AR		↑	30 <sup>s</sup>	
		7	TH-AR		↓	30 <sup>s</sup>	
		8	R50PH	17:47:31	-06:41:40	15 MIN	12.0 / SYMBIOTIC
		9	TH-AR		↑	30 <sup>s</sup>	
		10	TH-AR		↓	30 <sup>s</sup>	6563A 80 μ SLIT
		11	LAM AND	23:35:06	16:11:14	10 MIN	3.9/1000 (.3ND FILTER) H ALPHA
		12	TH-AR		↑	30 <sup>s</sup>	
		13	TH-AR		↓	30 <sup>s</sup>	5187A 80 μ SLIT
		14	SKYDWN E	4 HRS HA	+35	2 MIN	CLEAR
		15	TH-AR		↑	30 <sup>s</sup>	
		16	TH-AR		↓	30 <sup>s</sup>	
		17	SKYDWN M	0 HRS HA	+35	2 MIN	
		18	TH-AR		↑	30 <sup>s</sup>	
		19	INCANS			120m	
		20	INCANS			120m	
		21	INCANS			65m	
10-11 APR		22	TH-AR		↓	90s	5187A 80 μ slit
		23	SKY-EVE	φ hrs	+35°	2m	
		24	TH-AR		↑	90s	
		25	TH-AR		↓	90s	
		26	SKY-EVE	4.5 <sup>h</sup> W	+35°	2m	(1500cts) - 90s
		27	TH-AR		↑	90s	
		28	TH-AR		↓	30s	
		29	SKY-EVE	4.5 <sup>h</sup> W	+35°	2m	(1500cts) - 30s
		30	TH-AR		↑	30s	
		31	/				
		32	/				

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Intensified Reticon TO CAM  
 Spectrograph ECHELLE Log Sheet  
 Grating 3002 Observer RPS  
 Telescope 61" Wyeth Date 10-11 April 1987 Disk ORO 1531  
RAW RET 17

Change....	File	ID	RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	P1540	05:32:12	-05:26:23		20m 11.4 Trapezium
		3	Th-Ar		↓	60s	
		4	P1540	"	"	10m	"
		5	Th-Ar		↑	60s	
		6	Th-Ar		↓	30s	
		7	T MON	06:22:31	07:06:53		2m 6.6 Cepheid
		8	Th-Ar		↑	30s	
		9	Th-Ar		↓	30s	
		10	(15)	09:56:41.9	-01:06:38		3m 10.8 Asteroid - Many candidates in field. ID?
		11	Th-Ar		↑	30s	
		12	Th-Ar		↓	30s	
		13	H 81797	09:25:08	-08:26:28		2m 2.0 IAU Standard 0.1 ND
		14	Th-Ar		↑	30s	
		15	Th-Ar		↓	30s	
		16	G191-55	05:53:04	58:40:24		10 1/2 m 10.5/40 HALO
		17	Th-Ar		↑	30s	
		18	Th-Ar		↓	30s	
		19	G249-37	06:01:35	63:50:36		2m 9.2 "
		20	Th-Ar		↑	30s	
		21	Th-Ar		↓	30s	
		22	G192-18	06:02:23	56:27:30		8 1/2 m 12.1 "
		23	Th-Ar		↑	30s	
		24	Th-Ar		↓	30s	
		25	G53-30	10:09:56	-00:23:12		4m 10.3/15 "
		26	Th-Ar		↑	30s	
		27	Th-Ar		↓	30s	
		28	H97916	11:13:19	02:21:36		8.5m 9.3/100 "
		29	Th-Ar		↑	90s	
		30	/				
		31	/				
		32	/				





Intensified Reticon

TO CAM 4/10

Spectrograph ECHELLE

Log Sheet

RAW RET 17

Grating 300L

Observer RPS

Telescope 61" Wyeth

Date 10-11 April 1987

Disk ORO 1533

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	30sec	
	LAM-VIR	2	14:16:24	-13:08:31		10m	4.6/700 M stars 0.1 ND
	Th-Ar	3			↑	30s	
	Th-Ar	4			↓	30s	
	Sφ15472	5	11:16:067	62:27:22		2m	7.0/100 "
	Th-Ar	6			↑	30s	
	Th-Ar	7			↓	30s	
	GRS 430	8	11:28:22	63:26:00		10m	9.0/40 "
	Th-Ar	9			↑	30s	
	Th-Ar	10			↓	30s	
	GRS 600	11	15:49:46	11:01:25		4.5 m	9.4/30 "
	Th-Ar	12			↑	30s	
	Th-Ar	13			↓	30s	
	S101758	14	15:47:13	12:42:34		2 1/4 m	6.7/100 "
	Th-Ar	15			↑	30s	
	Th-Ar	16			↓	30s	
	Sφ65595	17	16:48:50	32:38:14		2m	6.3/100 "
	Th-Ar	18			↑	30s	
	Th-Ar	19			↓	30s	
	GRS 638	20	16:43:14	33:35:54		2m	8.1/50 "
	Th-Ar	21			↑	30s	
	Th-Ar	22			↓	30s	
	G169-13	23	16:27:49	30:48:06		3m	10.2/15 HALOS
	Th-Ar	24			↑	30s	
	Th-Ar	25			↓	30s	
	(2)	26	16:22:09	19:08:26		2 <del>4</del> m	9.2 Asteroid
	Th-Ar	27			↑	30s	
	Th-Ar	28			↓	30s	
	H146051	29	16:11:43	-03:34:01		2m	2.7 IAU standard 0.1 ND
	Th-Ar	30			↑	30s	
		31					
		32					



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Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET 17

Grating 3000

Observer RPS

Telescope 61" Wyeth

Date 10-11 April 1987

Disk ORO 1534

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

Change....	File	ID	RA	Dec	L/R	Exposure	Comments
		Th-Ar			↓	30s	
	G182-7		17:23:01	38:04:54		4m	8.1/100 HALOS
		Th-Ar			↑	30s	
		Th-Ar			↓	30s	
	G85643		16:52:43	-08:14:30		20m	11.7/15 M stars
		Th-Ar			↕	30s	
	G85644A		16:52:46	-08:15:17		7m	9.1/50 "
		Th-Ar			↑	30s	
		Th-Ar			↓	30s	
	H182572		19:22:35	11:50:09		2m	5.2 IAU standard - 30sec
		Th-Ar			↑	30s	
		Th-Ar			↓	90s	
	H182572		"	"		2m	IAU standard - 90sec
		Th-Ar			↑	90s	
		Th-Ar			↓	30s	
	SKY-DWN		4hrs E	+30°		2m	
		Th-Ar			↑	30s	
		Th-Ar			↓	30s	
	SKY-DWN		φhrs	+30°		2m	
		Th-Ar			↑	30s	
		INCANDS				120 <sup>MIN</sup>	
		INCANDS				120 <sup>MIN</sup>	
		Th-Ar			↓	60s	
	SKY		0	+35		2m	
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	SKY		4W	+35		2m	
		Th-Ar			↑	60s	
		Th-Ar			↓	60s	
	G-175-39		04:31:59	55:18:52		2m	
		Th-Ar			↑	60s	

11-12 April 1987

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Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET 17

Grating 300x

Observer D.W. Latham

Telescope Wyeth

Date 11-12 Apr. '87

Disk ORO 1535

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

Susan:  
Hour 12 hours  
too small  
phase fix

Change....	File	ID	RA	Dec	L/R	Exposure	Comments
		1			↓	60s	
		2	T Mon	06:22:31	07:06:53	2m	6.6 Cepheid
		3				60s	hole in heavy clouds
		4	SV Mon	06:18:45	06:29:41	4m	8.9 "
		5			↑	60s	
		6			↓	60s	
		7	1022+11	10:22:37	11:21:27	16m	10.6 CVNS clouds
		8			↑	60s	lots of moon on clouds
		9			↓	60s	
		10	G88-5	07:03:12	18:42:54	6m	10.2/20 Halo clouds
		11			↑	60s	
		12			↓	60s	
		13	+251981	08:41:27.9	24:59:00	9m	9.3/100 Halo
		14			↑	60s	
		15			↓	60s	
		16	G114-48	09:11:12	-03:41:18	6m	10.7/15 Halo
		17			↑	60s	
		18			↓	60s	
		19	G44-45	10:05:48	10:00:24	7m	10.2/ Halo
		20			↑	60s	
		21			↓	60s	
		22	S138815	12:27:09.6	-03:02:57	2m	9.0/15 Halo
		23			↑	60s	
		24			↓	60s	
		25	G59-32	12:37:37	21:05:12	6m	9.0/60 Halo
		26			↑	60s	
		27			↓	60s	
		28	G59-5	12:10:56	23:32:36	2.5m	9.4/ Halo
		29			↑	60s	
		30			↓	60s	
		31	H89449	10:17:01	19:43:31	3m	4.8 IAU
		32			↑	60s	



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Intensified Reticon TO CAMI  
 Spectrograph ECHELLE Log Sheet RAW/RET 17  
 Grating 300L Observer D. W. Latham  
 Telescope Wyeth Date 11-12 April 1987 Disk ORD 1536

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	GL5338A	09:10:52	52:53:43		4m clouds
		3			↓	60s	MSTAR
		4	GL5338B	09:10:54	52:53:46		12m many halts for clouds
		5			↑	60s	
		6			↓	60s	GNGP
		7	H117203	13:26:01	31:24:28		2m 7.1 (Croswell)
		8			↓	90s	
		9	H116287	13:19:55	30:33:13		2m 6.9 clouds
		10			↑	60s	
		11			↓	60s	
		12	H116232	13:19:35	26:15:34		2m 7.5 clouds
		13			↑	60s	
		14			↓	60s	
		15	H115381	13:14:10.5	19:10:00		1m 6.8 clouds
		16			↓	60s	
		17	H115364	13:14:06	20:21:40		3m 8.9 ~ 70% moon
		18			↓	60s	
		19	H115166	13:12:44	19:10:57		3m 6.6 heavy clouds
		20			↑	60s	
		21			↓	60s	
		22	H113380	13:00:36.6	23:28:18		2m 7.5
		23			↑	60s	
		24			↓	60s	
		25	H112754	12:56:18	27:23:20		2m 8.6
		26			↓	60s	
		27	H112754B	12:56:19	27:23:20		8m fainter companion ~ 6" E
		28			↓	60s	
		29	H111919	12:49:60	29:06:41		2m 8.8
		30			↓	60s	
		31	H111318	12:45:50	30:40:08		1m 7.6
		32			↑	90s	





Intensified Reticon

TO CAM 4/13

Spectrograph ECHELLE

Log Sheet

RAWRET 17

Grating 300L

Observer NM

Telescope 61 WYETI

Date 4/13-14/87

Disk ORO 1538

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	60 <sup>s</sup>	5187 A
		2	SV MON	06 12 45	06 30		9 <sup>m</sup> CEPH
		3	TH-AR		↑	60 <sup>s</sup>	
		4	TH-AR		↓	60 <sup>s</sup>	
		5	37395	05 37 12	52 09		20 <sup>m</sup> FSTAR
		6	TH-AR		↑	60 <sup>s</sup>	
		7	TH-AR		↓	60 <sup>s</sup>	
		8	39166	05 49 47	57 02		5 <sup>m</sup>
		9	TH-AR		↑	60 <sup>s</sup>	
		10	TH-AR		↓	60 <sup>s</sup>	
		11	51232	06 57 20	61 23		13 <sup>m</sup>
		12	TH-AR		↑	60 <sup>s</sup>	
		13	TH-AR		↓	60 <sup>s</sup>	
		14	63795	07 48 51	33 59		20 <sup>m</sup>
		15	TH-AR		↑	60 <sup>s</sup>	
		16	TH-AR		↓	60 <sup>s</sup>	
		17	72984	08 33 33	16 30		20 <sup>m</sup>
		18	TH-AR		↑	60 <sup>s</sup>	
		19	TH-AR		↓	60 <sup>s</sup>	
		20	85030	09 47 03	33 50		17 MIN
		21	TH-AR		↑	60 <sup>s</sup>	
		22	TH-AR		↓	60 <sup>s</sup>	
		23	H107634	12:19:31	33:22:04		2 MIN 7.4/ CNGP
		24	TH-AR		↑	60 <sup>s</sup>	
		25	TH-AR		↓	60 <sup>s</sup>	
		26	+332247	12:30:03	33:00:14		7 MIN 10.4/
		27	TH-AR		↑	60 <sup>s</sup>	
		28	+332254	12:34:06	32:37:54		6 MIN 10.5/
		29	TH-AR		↓	60 <sup>s</sup>	
		30	+332255	12:34:18	33:11:05		3 MIN 9.5/
		31	TH-AR		↑	60 <sup>s</sup>	
		32					

Intensified Reticon

TO CAM 4/13

Spectrograph ECHELLE

Log Sheet

RAW RET 17

Grating 300P

Observer GS

Telescope 61" WYETH

Date APR 13-14 1987

Disk ORD 1539

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	5187A .80μ slit
	+322267	12:37:19	32:15:11			4 MIN	9.8/ CNRP
		3			↑	60 <sup>s</sup>	
	+322273	12:43:13	32:27:09			4 1/2 MIN	9.9/
		5			↑	60 <sup>s</sup>	
	+332267	12:44:03	33:20:13			3 MIN	9.2/
		7			↑	60 <sup>s</sup>	
	+332271	12:45:10	33:07:00			2 1/2 MIN	9.0/
		9			↑	60 <sup>s</sup>	
		10			↓	60 <sup>s</sup>	
	H108201	12:23:08	23:37:40			2 MIN	7.6/
		12			↑	60 <sup>s</sup>	
	H108834	12:27:45	27:50:09			2 1/2 MIN	9.2/
		14			↑	60 <sup>s</sup>	
	H109281	12:31:01	30:18:57			2 MIN	8.6/
		16			↑	60 <sup>s</sup>	
	H109626	12:33:29	30:12:07			2 1/2 MIN	8.9/
		18			↑	60 <sup>s</sup>	
	H110135	12:37:25	26:46:35			3 MIN	9.3/
		20			↑	60 <sup>s</sup>	
	H111284	12:45:36	27:22:45			2 MIN	8.1/
		22			↑	60 <sup>s</sup>	
	H112115	12:51:28	24:54:26			2 MIN	8.1/
		24			↑	60 <sup>s</sup>	
	H112234	12:52:37	19:53:11			2 MIN	6.7/
		26			↑	60 <sup>s</sup>	
		27			↓	60 <sup>s</sup>	
	+302274	12:25:34	30:04:23			8 MIN	10.7/
		29			↑	60 <sup>s</sup>	
	+312381	12:30:55	31:22:24			3 MIN	9.1/
		31			↑	60 <sup>s</sup>	
		32					



Intensified Reticon

TO CAM 4/13

Spectrograph ECHELLE

Log Sheet

RAW/RET 17

Grating 300

Observer GS

Telescope 6" WYETH

Date APR 13-14 1987

Disk ORO 1540

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
					↓	60 <sup>s</sup>	5187A 80μSLIT
	+312394		12:37:27	31:01:27		6 MIN	10.2/ C NGP
					↑	60 <sup>s</sup>	
	+302309		12:36:09	29:35:52		6 MIN	10.3/
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	+302315		12:39:45	30:01:45		5 MIN	9.9/
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	+322247		12:25:57	32:12:27		5 MIN	10.0/
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	H108022		12:22:04	18:56:43		2 1/2 MIN	8.0/
					↑	60 <sup>s</sup>	
	H108547		12:25:34	18:36:25		3 MIN	7.9/
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	+242554		13:24:32	23:44:52		3 1/2 MIN	8.9/
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	5082651		13:03:56	22:53:00		2 MIN	5.9/100 M STARS
					↑	60 <sup>s</sup>	
	GLS 499		13:03:49	20:59:42		5 MIN	9.4/20
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	5063499		13:19:54	30:33:12		2 MIN	6.9/100
					↑	60 <sup>s</sup>	
	GLS 509A		13:21:13	29:29:52		4 1/2 MIN	8.9/30
					↑	60 <sup>s</sup>	
					↓	60 <sup>s</sup>	
	GLS 508		13:17:36	48:02:24		4 MIN	9.0/50
					↑	60 <sup>s</sup>	

Intensified Reticon

TO CAM 4/14  
RAW RET 17

Spectrograph ECHELLE

Log Sheet

Grating 300

Observer GS

Telescope 61" WYETH

Date APR 13-14 1987

Disk ORD 1541

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60"	5187A 80μ SLIT
		2	GLS 572	14:59:10 45:37:21		5 1/2"	9.1/30 M STAR
		3			↑	60"	
		4			↓	60"	
		5	S101380	15:05:06 17:38:30		8 MIN	9.2/50 HALO
		6			↑	60"	
		7			↓	60"	
		8	H136202	15:16:45 01:57:11		2 MIN	5.1/ IAV STD STAR
		9			↑	60"	
		10			↓	60"	
		11	(2)	16:21:12 19:53:32		2 1/2 MIN	9.2/ ASTEROID
		12			↑	60"	
		13			↓	60"	
		14	G141-47	18:50:55 10:33:48		10 MIN	10.5/30 HALOS
		15			↑	60"	
		16			↓	60"	
		17	G25-15	21:01:37 02:48:00		3 MIN	7.3/50
		18			↑	60"	
		19			↓	60"	6563A 80μ SLIT
		20	LAM AND	23:35:06 46:11:14		10 MIN	3.9/ (3ND FILTER) H. ALPHA
		21			↑	60"	
		22			↓	60"	
		23	SKYDWN E	4 HRS HA +30		2 MIN	
		24			↑	60"	
		25			↓	60"	
		26	SKYDWN M	0 HRS HA +30		2 MIN	
		27			↑	60"	
		28				120 MIN	
		29				120	
		30					
		31					
		32					





Intensified Reticon

TO CAM 4/14

Spectrograph ECHELLE

Log Sheet

RAW RET 17

Grating 2000

Observer AR

Telescope CH

Date 4/14-15/77

Disk ORU 1543

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	5187
		2	120163	11 43 15 29 42		5 <sup>m</sup>	NGP ANDERSEN
		3			↑	60 <sup>s</sup>	
		4	29-2204	11 43 12 28 53		2 <sup>1/2</sup>	
		5			↑	60 <sup>s</sup>	
		6	29066	11 46 46 27 27		4 <sup>m</sup>	
		7			↑	60 <sup>s</sup>	
		8	29059	11 45 27 26 58		2 <sup>1/2</sup> m	
		9			↑	60 <sup>s</sup>	
		10			↓	60 <sup>s</sup>	
		11	143155	11 47 24 42 56		3 <sup>m</sup>	
		12			↑	60 <sup>s</sup>	
		13	43-2155	11 49 28 42 00		2 <sup>m</sup>	
		14			↑	60 <sup>s</sup>	
		15	143161	11 49 53 42 52		10 <sup>m</sup>	
		16			↑	60 <sup>s</sup>	
		17	43-2162	11 50 06 42 47		2 <sup>m</sup>	
		18			↑	60 <sup>s</sup>	
		19	41-2242	11 50 23 40 35		10 <sup>m</sup>	
		20			↑	60 <sup>s</sup>	
		21	43-2165	11 51 02 43 12		2 <sup>m</sup>	
		22			↑	60 <sup>s</sup>	
		23			↓	60 <sup>s</sup>	
		24	1127-15	11 27 55 - 15 03		13 <sup>m</sup>	9.4/100 CUNS
		25			↑	60 <sup>s</sup>	
		26			↓	60 <sup>s</sup>	
		27	5128815	12 27 09 - 02 02 00		2 <sup>m</sup>	9.0/15 HALO
		28			↑	60 <sup>s</sup>	
		29			↓	60 <sup>s</sup>	
		30	659-37	12 27 37 21 05 12		2 <sup>1/2</sup> m	9.0/60
		31			↑	60 <sup>s</sup>	
		32					



Intensified Reticon

TO CAM 4/15

Spectrograph ECHELLE

Log Sheet

RAW/RET 17

Grating 300P

Observer CS

Telescope 61" WYKTI

Date APR 14-15 1967

Disk ORD 1544

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	SIRTA 80μ slit
	15396	2	11:53:11	15:20:16		12 <sup>min</sup>	10.9/ ANGP
		3			↑	60 <sup>s</sup>	
		4			↓	60 <sup>s</sup>	
	41-2251	5	11:54:19	40:28:03		3 <sup>min</sup>	8.6/
		6			↑	60 <sup>s</sup>	
	40-2482	7	11:54:30	39:38:19		5 <sup>min</sup>	9.9/
		8			↑	60 <sup>s</sup>	
	37-2233	9	11:54:57	39:26:28		20 <sup>min</sup>	9.2/
		10			↑	60 <sup>s</sup>	
		11			↓	60 <sup>s</sup>	
	H10001B	12	11:28:07	41:33:50		6 <sup>min</sup>	7.0/200 (INCREAS CLDS) M STAR
		13			↑	60 <sup>s</sup>	
		14			↓	60 <sup>s</sup>	
	33-2178	15	11:57:36	32:31:10		5 <sup>min</sup>	8.3/ ANGP
		16			↑	60 <sup>s</sup>	
	33-2181	17	11:58:18	33:14:33		6 <sup>min</sup>	7.5/
		18			↑	60 <sup>s</sup>	HOLD FOR CLDS
	INCAN	19				120 <sup>h</sup>	
	"	20				120 <sup>h</sup>	
	"	21				120 <sup>h</sup>	
4/15-16		22			↓	60 <sup>s</sup>	
	SKYEVA	23	oh	-15		2 <sup>h</sup>	
		24			↑	60 <sup>s</sup>	
		25			↓	60 <sup>s</sup>	
	26-2330	26	12:18:14	26:07:36		4 <sup>min</sup>	9.1/ ANGP
		27			↑	60 <sup>s</sup>	
	28-2109	28	12:19:25	27:35:13		4 1/2 <sup>min</sup>	8.5/
		29			↑	60 <sup>s</sup>	(CRASH NOVA)
		30			↓	60 <sup>s</sup>	
	27-2133	31	12:24:17	27:06:09		3 <sup>min</sup>	8.8/
		32			↑	60 <sup>s</sup>	

Intensified Reticon

TO CAM 4/21

Spectrograph ECHELLE

Log Sheet

RAW/RET 17

Grating 300P

Observer GS

Telescope 61" WYETH

Date APR 15-16 1987

Disk ORO 1545

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	60 <sup>s</sup>	5187A 80μ SLIT
		2	25-2510	12:25:43 25:18:39		6 <sup>min</sup>	2.0/ A NGP
		3	TH-AR		↑	60 <sup>s</sup>	
		4	25-2513	12:27:26 24:36:56		3 1/2 <sup>min</sup>	7.9/
		5	TH-AR		↑	60 <sup>s</sup>	OVERCAST
		6	INCANDS			120 <sup>min</sup>	
		7	INCANDS			120 <sup>min</sup>	
		8	INCANDS			120 <sup>min</sup>	
		9	INCANDS			120 <sup>min</sup>	
APR 19/20		10	TH-AR		↓	30s	
		11	SKY-EVEN	φ hrs +3°		3m	≈ 50 cts (late!!) Wet mirrors; several bad problems
		12	TH-AR		↑	30s	
APR 20/21		13	TH-AR		↓	60 <sup>s</sup>	5187A 80μ SLIT
		14	SKYEVEN	0 <sup>hrs</sup> HA 0°		2 <sup>min</sup>	OVERCAST
		15	TH-AR		↑	60 <sup>s</sup>	
4/21-22		16	TH-AR		↓	60 <sup>s</sup>	
		17	SKYEVEN	0 <sup>h</sup> +20		2 <sup>h</sup>	
		18	TH-AR		↑	60 <sup>s</sup>	
		19	TH-AR		↓	60 <sup>s</sup>	
		20	SKYEVEN	4 <sup>h</sup> W +20		2 <sup>h</sup>	
		21	TH-AR		↑	60 <sup>s</sup>	
		22	TH-AR		↓	60 <sup>s</sup>	
		23	36643	5 31 14 27 18		20 <sup>min</sup>	TEMPLATE F-STAR
		24	TH-AR		↑	60 <sup>s</sup>	
		25	36643	" "		20 <sup>min</sup>	
		26	TH-AR		↓	60 <sup>s</sup>	
		27	36643	" "		20 <sup>min</sup>	
		28	TH-AR		↑	60 <sup>s</sup>	
		29	TH-AR		↓	60 <sup>s</sup>	
		30	GL273	07 24 43 05.23		10 <sup>min</sup>	NEARBY + UPGRN
		31	TH-AR		↑	60 <sup>s</sup>	
		32					



Intensified      Reticon

TO CAM 4/21

Spectrograph ECHELLE      Log Sheet      RAW RET 17

Grating 300L      Observer RM

Telescope SH      Date 4/21-22/87      Disk ORD 1546

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	5187A
		2	GL 380	10 08 19	49 42	2 <sup>m</sup>	
		3	TH-AR			↑	60 <sup>s</sup>
		4	TH-AR			↓	60 <sup>s</sup>
		5	36302	11 53 50	30 06	10 <sup>m</sup>	ANGLO
		6	TH-AR			↑	60 <sup>s</sup>
		7	39-2270	11 53 37	33 29	2 <sup>m</sup>	
		8	TH-AR			↑	60 <sup>s</sup>
		9	36-2223	11 53 25	35 37	2 <sup>m</sup>	
		10	TH-AR			↑	60 <sup>s</sup>
		11	36221	11 52 36	36 10	8 <sup>m</sup>	
		12	TH-AR			↑	60 <sup>s</sup>
		13	139476	1 52 01	37 32	8 <sup>m</sup>	
		14	TH-AR			↑	60 <sup>s</sup>
		15	138290	11 54 07	37 11	16 <sup>m</sup>	
		16	TH-AR			↑	60 <sup>s</sup>
		17	46484	1 55 30	37 58	5 <sup>m</sup>	
		18	TH-AR			↑	60 <sup>s</sup>
		19	39481	11 57 33	39 08	3 <sup>m</sup>	
		20	TH-AR			↑	60 <sup>s</sup>
		21	58292	11 55 42	37 51	5 <sup>m</sup>	
		22	TH-AR			↑	60 <sup>s</sup>
		23	TH-AR			↓	60 <sup>s</sup>
		24	37237	11 57 12	36 48	6 <sup>m</sup>	
		25	TH-AR			↑	60 <sup>s</sup>
		26	TH-AR			↓	60 <sup>s</sup>
		27	12-2413	11:58:48	11:36:11	6 <sup>MIN</sup>	7.7/
		28	TH-AR			↓	60 <sup>s</sup>
		29	11423	12:02:43	10:51:27	4 1/2 <sup>MIN</sup>	10.2/
		30	TH-AR			↓	60 <sup>s</sup>
		31	11424	12:03:10	11:08:13	8 <sup>MIN</sup>	10.9/
		32	TH-AR			↑	60 <sup>s</sup>

Intensified Reticon

TO CAM 4/21

Spectrograph ECHELLE

Log Sheet

RAW/RET 17

Grating 300L

Observer GS

Telescope 61" WYKTH

Date APR 21-22 1987

Disk ORO 1547

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	5187A 80 μ SLIT
	11422		12:07:16	11:06:40		4 1/2 MIN	10.3/ A NGP
		3			↑	60 <sup>s</sup>	
	13-2494		12:05:02	12:55:38		6 MIN	8.8/
		5			↑	60 <sup>s</sup>	
	12427		12:06:10	12:04:40		3 1/2 MIN	10.1/
		7			↑	60 <sup>s</sup>	
	12-2428		12:06:44	11:34:14		5 MIN	8.5/
		9			↑	60 <sup>s</sup>	
	13500		12:07:46	12:51:50		6 MIN	10.6/
		11			↑	60 <sup>s</sup>	
	13-2502		12:08:35	12:44:58		5 MIN	8.7/
		13			↑	60 <sup>s</sup>	
	13-2503		12:09:24	13:16:41		5 MIN	8.5/
		15			↑	60 <sup>s</sup>	
	14481		12:09:29	13:33:02		4 MIN	10.1/
		17			↑	60 <sup>s</sup>	
	510394		12:12:28	10:15:57		2 1/2 MIN	9.4/ SW ON TV SCREEN
		19			↑	60 <sup>s</sup>	
	410394		12:22:30	10:16:08		2 1/2 MIN	9.4/ NE ON TV SCREEN
		21			↑	60 <sup>s</sup>	
	10-2405		12:16:14	10:22:55		2 1/2 MIN	9.3/
		23			↑	60 <sup>s</sup>	
	111450		12:17:06	10:39:21		6 1/2 MIN	10.8/
		25			↑	60 <sup>s</sup>	
	102408		12:17:07	10:18:10		2 1/2 MIN	8.5/
		27			↑	60 <sup>s</sup>	
		28			↓	60 <sup>s</sup>	
	11-2450		12:17:22	10:45:45		2 MIN	8.4/
		30			↑	60 <sup>s</sup>	
	211450		12:17:28	10:47:42		10 MIN	11.0/ WEST OF PAIR
		32			↑	60 <sup>s</sup>	



Intensified Reticon

TO CAM 4/21

Spectrograph ECHELLE

Log Sheet

RAW RET 17

Grating 300R

Observer GS

Telescope 6" WYTH

Date APR 21-22 1987

Disk 000 1548

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	5187A. 80μ slit
	10419	2	12:21:45	09:34:56		7 MIN	10.6   A NGP
	TH-AR	3			↑	60 <sup>s</sup>	
	112454	4	12:21:56	11:26:42		2 1/2 MIN	9.1
	TH-AR	5			↑	60 <sup>s</sup>	
	13528	6	12:20:49	12:56:43		5 MIN	10.0
	TH-AR	7			↑	60 <sup>s</sup>	
	9-2627	8	12:24:59	09:24:50		5 MIN	9.9
	TH-AR	9			↑	60 <sup>s</sup>	
	10-2427	10	12:25:27	09:37:45		5 MIN	9.5
	TH-AR	11			↑	60 <sup>s</sup>	
	8-2605	12	12:25:30	08:12:53		5 MIN	9.7
	TH-AR	13			↑	60 <sup>s</sup>	
	12-2476	14	12:25:58	12:02:27		5 MIN	9.8
	TH-AR	15			↑	60 <sup>s</sup>	
	13-2540	16	12:26:16	13:21:54		4 1/2 MIN	9.4
	TH-AR	17			↑	60 <sup>s</sup>	
	12481	18	12:27:23	12:13:50		3 MIN	9.2
	TH-AR	19			↑	60 <sup>s</sup>	
	110430	20	12:27:36	10:12:47		18 MIN	11.0
	TH-AR	21			↑	60 <sup>s</sup>	
	10-2432	22	12:28:01	09:59:35		2 MIN	7.4
	TH-AR	23			↑	60 <sup>s</sup>	
	TH-AR	24			↓	60 <sup>s</sup>	
	(2)	25	16:17:39	21:45:32		3 MIN	9.2   ASTEROID
	TH-AR	26			↑	60 <sup>s</sup>	
	TH-AR	27			↓	60 <sup>s</sup>	
	V433HER	28	18:20:03	23:25:47		20 MIN	10.5   SYMBIOTIC
	TH-AR	29			↑	60 <sup>s</sup>	
	TH-AR	30			↓	60 <sup>s</sup>	
	CH CYG	31	19:23:14	50:08:31		3 MIN	7.0
	TH-AR	32			↑	60 <sup>s</sup>	

TO CAM 4/22

Intensified      Reticon

Spectrograph ECHELLE      Log Sheet      RAW/RET 17

Grating 300X      Observer GS

Telescope 61" WYETH      Date APR 21-22 1967      Disk ORO 1549

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 <sup>s</sup>	5187A. 80μ SLIT
		2	19:48:21	35:33:24		20 <sup>MIN</sup>	11.0/ (CLDS) SYMBIOTIC
		3			↑	60 <sup>s</sup>	
		4			↓	60 <sup>s</sup>	
		5	20:41:27	35:24:24		3 <sup>MIN</sup>	6.4/ CEPH
		6			↑	60 <sup>s</sup>	
		7			↓	60 <sup>s</sup>	
		8	19:22:35	11:50:09		2 1/2 <sup>MIN</sup>	5.2/ (NY CLDS) IAU STANDARD
		9			↑	60 <sup>s</sup>	
		10			↓	60 <sup>s</sup>	
		11	21:01:37	02:48:00		4 <sup>MIN</sup>	7.3/50 (SOME CLDS) HALOS
		12			↑	60 <sup>s</sup>	
		13			↓	60 <sup>s</sup>	
		14	4 <sup>HRS</sup> HA	+30°		2 <sup>MIN</sup>	OVERCAST
		15			↑	60 <sup>s</sup>	
		16			↓	60 <sup>s</sup>	
		17	0 <sup>HRS</sup> HA	+30		2 <sup>MIN</sup>	
		18			↑	60 <sup>s</sup>	
		19				120 <sup>MIN</sup>	
4/22-23		20			↓	60 <sup>s</sup>	5187A
		21	0 <sup>h</sup>	+20		2 <sup>h</sup>	
		22			↑	60 <sup>s</sup>	
		23			↑	60 <sup>s</sup>	
		24	4 <sup>h</sup> W	+20		2 <sup>h</sup>	
		25			↑	60 <sup>s</sup>	
		26			↓	60 <sup>s</sup>	6563A
		27	05 52 28	07 24		8 <sup>h</sup>	NO ≈ 2.0 FILTER JALLEY
		28			↑	60 <sup>s</sup>	
		29			↓	60 <sup>s</sup>	5887A
		30	06 22 31	07 07		3 <sup>h</sup>	
		31			↑	60 <sup>s</sup>	
		32					



Spectrograph ECHELLE Intensified Reticon TO CAM 4/22  
 Grating 300L Log Sheet RAW/RET 17  
 Telescope SH Date 4/22-23/87 Observer na  
 Disk ORU 1550

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments	
		1	TH-AR		↓	60 <sup>s</sup>	5187A	
		2	39 968	05 54 21	40 48	↓	20 <sup>m</sup>	FSTAR
		3	TH-AR		↑↓	60 <sup>s</sup>		
		4	39 968	"	"	↓	20 <sup>m</sup>	
		5	TH-AR		↑	60 <sup>s</sup>		
		6	TH-AR		↓	60 <sup>s</sup>		
		7	88829	10 12 25	19 22	↓	20 <sup>m</sup>	
		8	TH-AR		↑↓	60 <sup>s</sup>		
		9	88829	"	"	↓	20 <sup>m</sup>	
		10	TH-AR		↑	60 <sup>s</sup>		
		11	TH-AR		↓	60 <sup>s</sup>		
		12	104636	12 00 27	41 21	↓	15 <sup>m</sup>	
		13	TH-AR		↑	60 <sup>s</sup>		
		14	TH-AR		↓	60 <sup>s</sup>		
		15	112929	12 57 25	40 45	↓	20 <sup>m</sup>	
		16	TH-AR		↑	60 <sup>s</sup>		
		17	TH-AR		↓	60 <sup>s</sup>		
		18	124399	14 10 16	44 25	↓	10 <sup>m</sup>	
		19	TH-AR		↑	60 <sup>s</sup>		
		20	TH-AR		↓	60 <sup>s</sup>		
		21	111271	12 45 23	29 48	↓	7 <sup>2</sup>	
		22	TH-AR		↑	60 <sup>s</sup>		
		23	TH-AR		↓	60 <sup>s</sup>		
		24	114538	13 08 37	14 10	↓	11 <sup>m</sup>	
		25	TH-AR		↑	60 <sup>s</sup>		
		26	TH-AR		↓	60 <sup>s</sup>		
		27	118245	13:32:54	15:08:45	↓	9 <sup>MW</sup>	7.5/300
		28	TH-AR		↑	60 <sup>s</sup>		
		29	TH-AR		↓	60 <sup>s</sup>		
		30	121648	13:53:51	26:09:43	↓	5 <sup>MIN</sup>	6.4/300
		31	TH-AR		↑	60 <sup>s</sup>		
		32						

