

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAWRET

Grating 300L

Observer R.J. Davis

Telescope 61" Wyeth

Date 9/29-30/85

Disk ORO 755

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

Change....	File	ID	1950.0	RA	Dec	L/R	+/+	Exposure	Comments
		1				ThAr	↓	90 <sup>s</sup>	
		2		02:23:36	44:44:20	S38029		9 <sup>1</sup> / <sub>2</sub> " <sup>m</sup>	
		3				ThAr	↑	90 <sup>s</sup>	
		4				ThAr	↓	90 <sup>s</sup>	
		5		07:50:22	30:45:40	G90-25		2" <sup>m</sup>	
		6				ThAr	↑	90 <sup>s</sup>	
		7				ThAr	↓	90 <sup>s</sup>	IAU std star
		8		04:06:15	19:28:43	H26162		2" <sup>m</sup>	
		9				ThAr	↑	90 <sup>s</sup>	
		10				Incm ds		120" <sup>m</sup>	
		11				INCAND		71" <sup>m</sup>	
OCT 5/6		12				Th-Ar	↓	90 <sup>s</sup>	5187A SPLIT
		13		22 25 46	17 06 28	H213014		5m	cloudy IAU standard
		14				Th-Ar	↑	90s	8" seeing
		15				Th-Ar	↓	90s	
		16		21 41 43	27 19 42	G188-22		16m	10.1/30 Th-Ar persistence on the Right
		17				Th-Ar	↑	90s	
		18				Th-Ar	↓	90s	
		19		23 32 31	25 07 30	G68-29		7m	10.9/15
		20				Th-Ar	↑	90s	
		21				Th-Ar	↓	90s	
		22		23 14 41	31 27 18	G128-43		8m	11.3/15
		23				Th-Ar	↑	90s	
		24		23 10 27	01 31 54	Th-Ar	↓	90 <sup>s</sup>	11.1/15
		25		23 10 27	01 31 54	G28-48	↑	8m	11.1/15
		26				Th-Ar	↑	90s	
		27				Th-Ar	↓	90s	
		28		23 35 30	45 55 24	G171-7		2m	6.5/15
		29				Th-Ar	↑	90s	
		30				Th-Ar	↓	90s	(Left/Right) = 1/10 on sky
		31				CRAP		10m	emission (noise?) on right
		32				- dark sky			- Mac says hardware problem.

1016

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAWRET 8

Grating 300L

Observer RPS

Telescope 61" Wegeth

Date 5-6 Oct 1985

Disk 756 ORO

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
		2	H8779	φ1 23 54 - φ 39 29		3m	IAU standard
		3			↑	90s	closing down until new hardware.
		4				120 <sup>min</sup>	
		5				120	
		6				120	
		7				8 <sup>min</sup>	
6-7 Oct ↓ RJD		8			↓	90s	
		9				10 <sup>m</sup>	
		10			↑	90s	
		11			↓	90s	Had to fix problems w/ tracking
		12	H182572	19:22:37 11:50:32		2 <sup>m</sup>	IAU Standard Star
		13			↑	90s	
		14			↓	90s	Halo Binaries ↓
		15	G210-46	20:58:01 40:03:42		3 <sup>m</sup>	
		16			↑	90s	
		17			↓	90s	
		18	S162774	19:31:23 -16:25:24		2 <sup>m</sup>	
		19			↑	90s	
		20			↓	90s	
		21	G27-29	22:25:20 -5:32:06		12 <sup>m</sup>	
		22			↑	90s	
		23			↓	90s	Observed
		24	214-14B	22:13:08 39:31:36		21 <sup>m</sup>	Faint companion 15" South
		25			↑	90s	of 7 <sup>th</sup> -mag star
		26	214-14A	22:13:08 39:31:36		2 <sup>m</sup>	This ← is bright * of pair
		27			↑	90s	
		28			↓	90s	
		29	G29-72	23:47:31 2:35:48		2 <sup>m</sup>	
		30			↑	90s	
		31					
		32					

Disk Space Ran out - created new subdirectories.

10/6

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET 8

Grating 300L

Observer RJD

Telescope 61" Wyeth

Date 10/6-7/85

Disk ORO 757

Change.... File ID RA Dec L/R +/+ Exposure Comments Halo Binaries

[

Change....	File	ID	RA	Dec	L/R + / +	Exposure	Comments
		1			↓	90 <sup>s</sup>	
		2	G29-71	23:47:27	08:26:48		12 1/2 <sup>m</sup>
		3	ThAr			↑	90 <sup>s</sup>
		4	G29-71	"	"		14 <sup>m</sup>
		5	ThAr			↑	90 <sup>s</sup>
		6	ThAr			↓	90 <sup>s</sup>
		7	G133-45	01:46:31	43:31:24		17 <sup>m</sup>
		8	ThAr			↑	90 <sup>s</sup>
		9	ThAr			↓	90 <sup>s</sup>
		10	G173-57	02:28:49	45:39:12		9 1/2 <sup>m</sup>
		11	ThAr			↑	90 <sup>s</sup>
		12	ThAr			↓	90 <sup>s</sup>
		13	S147079	00:03:14	-19:56:36		4 <sup>m</sup>
		14	ThAr			↑	90 <sup>s</sup>
		15	ThAr			↓	90 <sup>s</sup>
		16	S166200	00:18:13	-25:44:36		2 <sup>m</sup> 15 <sup>s</sup>
		17	ThAr			↑	90 <sup>s</sup>
		18	ThAr			↓	90 <sup>s</sup>
		19	G30-52	00:09:55	14:17:18		2 <sup>m</sup>
		20	ThAr			↑	90 <sup>s</sup>
		21	ThAr			↓	90 <sup>s</sup>
		22	G262-32	20:58:10	64:51:00		7 <sup>m</sup>
		23	ThAr			↑	90 <sup>s</sup>
		24	ThAr			↓	90 <sup>s</sup>
		25	G232-40	21:53:43	55:54:06		17 <sup>m</sup>
		26	ThAr			↑	90 <sup>s</sup>
		27	ThAr			↓	90 <sup>s</sup>
		28	G215-26	21:56:03	50:36:24		2 <sup>m</sup>
		29	ThAr			↑	90 <sup>s</sup>
		30	ThAr			↓	90 <sup>s</sup>
		31	S167605	2:07:47	-21:00:00		3 <sup>m</sup> 45 <sup>s</sup>
		32	ThAr			↑	90 <sup>s</sup>

10/6

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET 8

Grating 300L

Observer RJD

Telescope 61" Wyeth

Date 10/6-7/85

Disk ORO 758

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

Change....	File	ID	1950.0 RA	Dec	L/R +/+	Exposure	Comments
		1			↓	90 <sup>s</sup>	
		2	271-162	01:48:03	-9:36:00	13 <sup>m</sup>	
		3			↑	90 <sup>s</sup>	
		4			↓	90 <sup>s</sup>	
		5	G159-5	01:49:38	-03:03:00	7 <sup>1/2</sup> <sup>m</sup>	
		6			↑	90 <sup>s</sup>	
		7			↓	90 <sup>s</sup>	
		8	G3-28	01:54:15	11:25:12	4 <sup>1/2</sup> <sup>m</sup>	
		9			↑	90 <sup>s</sup>	
		10			↓	90 <sup>s</sup>	
		11	G217-8	23:24:15	60:21:06	15 <sup>m</sup>	
		12			↑	90 <sup>s</sup>	
		13			↓	90 <sup>s</sup>	
		14	G192-23	06:11:57	58:57:18	2 <sup>m</sup>	
		15			↑	90 <sup>s</sup>	
		16			↓	90 <sup>s</sup>	
		17	G160-13	03:39:25	-06:06:06	3 <sup>1/2</sup> <sup>m</sup>	
		18			↘	90 <sup>s</sup>	
		19	G160-1	03:29:58	-8:46:12	2 <sup>m</sup>	
		20			↘	90 <sup>s</sup>	
		21	G160-3	03:33:24	-9:13:24	2 <sup>m</sup>	
		22			↑	90 <sup>s</sup>	
		23			↓	90 <sup>s</sup>	
		24	G5-42	03:28:22	20:36:00	2 <sup>m</sup>	
		25			↑	90 <sup>s</sup>	
		26			↓	90 <sup>s</sup>	
		27	G5-46	03:33:15	16:18:30	2 <sup>m</sup>	
		28			↑	90 <sup>s</sup>	
		29			↓	90 <sup>s</sup>	
		30	S56455	03:23:53	34:15:18	2 <sup>m</sup>	
		31			↑	90 <sup>s</sup>	
		32					

10/6

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET 8

Grating 300L

Observer RJD

Telescope 61" Wyeth

Date 10/6-7/85

Disk ORO 759

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

Change....	File	ID	RA	Dec	1950.0	L/R	↑/↓	Exposure	Comments
		1					↓	90 <sup>s</sup>	
		2	H25329	03:59:53	35:09:18			2 <sup>m</sup>	
		3					↕	90 <sup>s</sup>	
		4	G39-5	04:15:13	35:52:30			2 <sup>m</sup>	
		5					↑	90 <sup>s</sup>	
		6					↓	90 <sup>s</sup>	
		7	G8-36	04:24:50	24:20:00			2 <sup>m</sup>	
		8					↑	90 <sup>s</sup>	
		9					↓	90 <sup>s</sup>	
		10	G78-1	02:38:26	47:08:36			2 <sup>m</sup>	
		11					↑	90 <sup>s</sup>	
		12					↓	90 <sup>s</sup>	
		13	G81-8	04:09:02	41:51:54			4 <sup>m</sup>	
		14					↑	90 <sup>s</sup>	
		15					↓	90 <sup>s</sup>	
		16	G81-33	04:41:15	43:06:44			2 <sup>m</sup>	
		17					↑	90 <sup>s</sup>	
		18					↓	90 <sup>s</sup>	
		19	G96-16	04:58:32	44:58:12			2 <sup>m</sup> 15 <sup>s</sup>	
		20					↕	90 <sup>s</sup>	
		21	G96-17	04:58:35	42:22:18			3 <sup>m</sup>	
		22					↕	90 <sup>s</sup>	
		23	G96-19	05:01:27	43:14:48			2 <sup>m</sup>	
		24					↕	90 <sup>s</sup>	
		25	G96-20	05:01:59	40:11:24			3 <sup>m</sup>	
		26					↑	90 <sup>s</sup>	
		27					↓	90 <sup>s</sup>	
		28	G87-47	07:32:15	36:03:54			5 <sup>m</sup>	
		29					↑	90 <sup>s</sup>	
		30					↓	90 <sup>s</sup>	
		31	G89-14	07:19:48	08:55:12			10 <sup>m</sup>	
		32					↑	90 <sup>s</sup>	

1017

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAWRET 8

Grating 300L

Observer RJD

Telescope 61" Wyeth

Date 10/6-7/1985

Disk ORO 760

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

Change....	File	ID	1950.0	RA	Dec	L/R	Exposure	Comments
						↑/↓		
		1				↓	90 <sup>s</sup>	
		2		5133165	06:19:35	-5:25:48	4 <sup>m</sup>	Halo Binary
		3				↑	90 <sup>s</sup>	
		4				↓	90 <sup>s</sup>	
		5		H26162	04:06:15	19:28:43	2 <sup>m</sup>	IAU Standard Star
		6				↑	90 <sup>s</sup>	
		7				↓	90 <sup>s</sup>	
		8		H66141	07:59:40	02:28:24	2 <sup>m</sup>	IAU R.V. Std Star
		9				↑	90 <sup>s</sup>	
		10				↓	90 <sup>s</sup>	
		11					7 <sup>m</sup>	
		12				↑	90 <sup>s</sup>	
		13					120 <sup>m</sup>	
		14					51 <sup>m</sup>	
OCT 7/8		15				↓	1 <sup>MIN</sup>	5187A - 80μ SLIT
		16					7 <sup>MIN</sup>	
		17				↑	90 <sup>sec</sup>	
		18				↓	90 <sup>s</sup>	IAU Rad Vel Std *
		19		H192572	19:22:35.1	11:50:09	2 <sup>m</sup>	
		20				↑	90 <sup>s</sup>	
		21				↓	90 <sup>s</sup>	Halo Binaries ↓
		22		S122652	17:39:27	04:23:24	2 <sup>m</sup>	
		23				↑	90 <sup>s</sup>	
		24				↓	90 <sup>s</sup>	
		25		G210-46	20:58:01	40:03:42	2 <sup>m</sup> 15 <sup>s</sup>	
		26				↑	90 <sup>s</sup>	
		27				↓	90 <sup>s</sup>	
		28		G223-83	14:47:00	59:07:00	3 <sup>m</sup> 40 <sup>s</sup>	
		29				↑	90 <sup>s</sup>	
		30				↓	90 <sup>s</sup>	
		31		G26-22	21:38:32	-7:42:24	18 <sup>m</sup>	
		32				↑	90 <sup>s</sup>	

1017

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAWRET 8

Grating 300L

Observer RJD

Telescope 61" Wyeth

Date 10/7-8/85

Disk ORO 761

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

*Halo Binaries*

1		Th Ar			↓	90 <sup>s</sup>	
2	G126-56		22:06:51	11:27:06		12 <sup>m</sup>	
3		Th Ar			↑	90 <sup>s</sup>	
4		Th Ar			↓	90 <sup>s</sup>	
5	G27-33		22:30:11	-6:12:42		9 <sup>m</sup>	
6		Th Ar			↑	90 <sup>s</sup>	
7		Th Ar			↓	90 <sup>s</sup>	
8	G171-15		23:42:23	44:23:30		20 <sup>m</sup>	
9		Th Ar			↑	90 <sup>s</sup>	
10		Th Ar			↓	90 <sup>s</sup>	Mazeh ↓
11	S031160		18:45:09.4	59:50:15.1		5 <sup>m</sup>	Low-Mass Binaries
12		Th Ar			↑↓	90 <sup>s</sup>	
13	S031128		18:42:18.5	59:34:22		11 <sup>m</sup>	
14		Th Ar			↑↓	90 <sup>s</sup>	
15	S031129		18:42:18.30			14 <sup>m</sup>	Computer Crash: 12 <sup>m</sup> +2 <sup>m</sup>
16		Th Ar			↑	90 <sup>s</sup>	
17		Th Ar			↓	90 <sup>s</sup>	
18	S031160		18:45:09.4	59:30:15		3 <sup>m</sup>	
19		Th Ar			↑↓	90 <sup>s</sup>	
20	S031128		18:42:18	59:34:22		7 <sup>m</sup>	
21		Th Ar			↑↓	90 <sup>s</sup>	
22	S031192		18:38:37	59:28:51		2 <sup>m</sup>	
23		Th Ar			↑↓	90 <sup>s</sup>	
24	S031128		18:42:18	59:34:22		9 <sup>m</sup>	
25		Th Ar			↑↓	90 <sup>s</sup>	
26	S031129		18:42:19	59:34:05		12 <sup>m</sup>	
27		Th Ar			↑↓	90 <sup>s</sup>	
28	S031192		18:38:37	59:28:51		3 <sup>m</sup>	
29		Th Ar			↑	90 <sup>s</sup>	
30		Th Ar			↓	90 <sup>s</sup>	
31	S128427		23:49:24	02:39:09		2 <sup>m</sup>	
32		Th Ar			↑↓	90 <sup>s</sup>	

1017

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET 7

Grating 300L

Observer RJD + ZM

Telescope 61" Wye H

Date 10/7-8/85

Disk ORO 762

Change.... File ID RA Dec 1950.0 L/R +/+ Exposure Comments *Low-Mass Binaries*

Change....	File	ID	RA	Dec	1950.0	L/R	+ / +	Exposure	Comments
		1	S128497	23:46:37	02:07:37			11m	
		2	Th-Ar				↑↓		
		3	S128427	23:49:24	02:39:09			1m	
		4	Th-Ar				↑↓		
		5	S128329	23:39:44	02:11:26			3m	
		6	Th-Ar				↑↓		
		7	S129397	23:46:37	02:07:27			10m	
		8	Th-Ar				↑↓		
		9	S128329	23:38:41	02:11:26			3m	
		10	Th-Ar				↑	90s	
		11	Th-Ar				↓	90s	
		12	G247-49	04:58:50	63:00:12			2m	<i> halo Binaries</i>
		13	Th-Ar				↑↓	90s	
		14	G247-48	04:58:49	63:00:12			2m	
		15	Th-Ar				↑	90s	
		16	Th-Ar				↓	90s	
		17	G30-52	00:09:55	14:17:18			2m	
		18	Th-Ar				↑	90s	
		19	Th-Ar				↓		
		20	S036250	00:15:41	44:16:52			2m	<i> Low-Mass Binaries</i>
		21	Th-Ar				↑↓	90s	
		22	S036248	00:15:40	43:44:37			4m	
		23	Th-Ar				↑↓		
		24	S036250	00:15:41	44:16:52			2m	
		25	Th-Ar				↑↓		
		26	S036248B	00:15:40	43:44:37			8m	<i> NE of S036248</i>
		27	Th-Ar				↑↓		
		28	S036242	00:15:14	44:18:01			2m	
		29	Th-Ar				↑↓		
		30	S036248	00:15:40	43:44:37			4m	
		31	Th-Ar				↑↓		
		32	S036242	00:15:14	44:18:01			7m	



1017

Intensified Reticon TO CAM  
 Spectrograph ECHELLE Log Sheet RAWRET  
 Grating 300L Observer RJO  
 Telescope 61" Wyeth Date 10/7-8/85 Disk ORO 763

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↑	90 <sup>s</sup>	
		2			↓	90 <sup>s</sup>	Halos Binaries ↓
	G73-57		02:23:23	05:33:12		2 1/2 <sup>m</sup>	D. Latham ↓
		4			↑	90 <sup>s</sup>	
		5			↓	90 <sup>s</sup>	
	G4-6		02:10:59	11:42:36		5 <sup>m</sup>	
		7			↑	90 <sup>s</sup>	
		8			↓	90 <sup>s</sup>	
	S148474		02:31:46	-12:36:01		8 1/2 <sup>m</sup>	
		10			↑	90 <sup>s</sup>	
		11			↓	90 <sup>s</sup>	
	G94-49		02:14:04	27:11:12		2 <sup>m</sup>	
		13			↑	90 <sup>s</sup>	
		14			↓	90 <sup>s</sup>	
	G36-28		02:35:31	30:36:18		2 <sup>m</sup>	
		16			↑	90 <sup>s</sup>	
		17			↓	90 <sup>s</sup>	
	G5-1		02:45:46	22:23:48		2 <sup>m</sup>	
		19			↑	90 <sup>s</sup>	
		20			↓	90 <sup>s</sup>	
	G82-5		04:12:29	-5:45:24		4 <sup>m</sup>	
		22			↑	90 <sup>s</sup>	
		23			↓	90 <sup>s</sup>	
	G82-47		04:44:05	-4:41:42		2 1/2 <sup>m</sup>	
		25			↑	90 <sup>s</sup>	
		26			↓	90 <sup>s</sup>	
	S132259		05:31:08	-3:29:48		2 <sup>m</sup>	Low-Mass Binaries ↓
		28			↓	90 <sup>s</sup>	Mazeh ↓
	S132211		05:28:57.2	-3:42:20		3 1/2 <sup>m</sup>	
		30			↑	90 <sup>s</sup>	
	S132170		05:26:54	-3:29:05		2 <sup>m</sup>	
		32			↑	90 <sup>s</sup>	

10/7

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET 8

Grating 300L

Observer \_\_\_\_\_

Telescope 61" Wye th

Date 10/7-8/85

Disk OR0 764

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

	1	S132259	05:31:08	-3:29:48		2 <sup>m</sup>	Low-Mass Binaries
	2	ThAr			↑↓	90 <sup>s</sup>	
	3	S132211	05:28:57.2	-3:42:20		3½ <sup>m</sup>	
	4	ThAr			↑↓	90 <sup>s</sup>	
	5	S132170	05:26:54	-3:29:05		2 <sup>m</sup>	
	6	ThAr			↑	90 <sup>s</sup>	
	7	ThAr			↓	90 <sup>s</sup>	
	8	G134-10	02:08:35	45:41:24		2 <sup>m</sup>	Halo Binaries ↓
	9	ThAr			↑	90 <sup>s</sup>	
	10	ThAr			↓	90 <sup>s</sup>	
	11	G133-35	01:41:27	44:12:48		2 <sup>m</sup>	
	12	ThAr			↑↓	90 <sup>s</sup>	
	13	G172-58	01:28:13	47:44:54		3½ <sup>m</sup>	
	14	ThAr			↑	90 <sup>s</sup>	
	15	ThAr			↓	90 <sup>s</sup>	
	16	S94288	05:01:11	17:03:24		2 <sup>m</sup>	
	17	ThAr			↑	90 <sup>s</sup>	
	18	ThAr			↓	90 <sup>s</sup>	
	19	G84-37	05:07:06	05:29:42		2 <sup>m</sup>	
	20	ThAr			↑	90 <sup>s</sup>	
	21	ThAr			↓	90 <sup>s</sup>	
	22	G102-20	05:37:21	12:09:12		2 <sup>m</sup>	
	23	ThAr			↑	90 <sup>s</sup>	
	24	ThAr			↓	90 <sup>s</sup>	
	25	S150685	05:38:34	-11:13:24		2 <sup>m</sup>	
	26	ThAr			↑	90 <sup>s</sup>	
	27	ThAr			↓	90 <sup>s</sup>	
	28	-191422	06:19:00	-19:14:06		2 <sup>m</sup>	
	29	ThAr			↑	90 <sup>s</sup>	
	30	ThAr			↓	90 <sup>s</sup>	
	31	H26162	04:06:14.9	19:28:43		2 <sup>m</sup>	IAU R.V. Std
	32	ThAr			↑	90 <sup>s</sup>	



Intensified      Reticon

TO CAM 10/21

Spectrograph ECHELLE      Log Sheet      RAW/RET

Grating 300L      Observer GS/ram

Telescope SH      Date 10/19-20      Disk CR0 766

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
					↓	90 <sup>s</sup>	40μ 6563 A
	B	AQR	21 28.9	-05 48		10 <sup>m</sup>	2 ND FILTER
		TH-AR			↑	90 <sup>s</sup>	NO FILTER
		TH-AR			↓	90 <sup>s</sup>	" "
	A	AQR	22 03 13	-00 33 49		8 <sup>m</sup>	1. ND FILTER
		TH-AR			↑	90 <sup>s</sup>	NO FILTER
		TH-AR			↓	90 <sup>s</sup>	" "
	L	AMAND	23 35 06	46 11 14		7 <sup>m</sup> 22 <sup>sec</sup>	1. ND FILTER
		TH-AR			↑	90 <sup>s</sup>	NO FILTER
		TH-AR			↓	90 <sup>s</sup>	" "
	EIS	AQR	04 58 23	43 45 06		15 <sup>m</sup>	1.0 ND FILTER (FLY CLOUD)
		TH-AR			↑	90 <sup>s</sup>	NO FILTER
		TH-AR			↓	90 <sup>s</sup>	" "
	L	AQR	05 13.0	45 47		13 <sup>m</sup>	2.0 ND FILTER END IN OVERCAST
		TH-AR			↑	90 <sup>s</sup>	NO FILTER
OCT 20/21 →		TH-AR			↓	90 <sup>s</sup>	← 5187 A 80μ SLIT (1712 EST)
		TH-AR			↓	90 <sup>s</sup>	
		SKY				5 <sup>m</sup>	OVERCAST
		TH-AR			↑	90 <sup>s</sup>	
		TH-AR			↓	90 <sup>s</sup>	
	G27-47		07 32 15	+36 04		8 <sup>m</sup>	
		TH-AR			↑	90 <sup>s</sup>	
		TH-AR			↓	90 <sup>s</sup>	
	G27-45		07 29 47	+31 14		19 <sup>m</sup>	
		TH-AR			↑	90 <sup>s</sup>	
	G27-45		" "	" "		19 <sup>m</sup>	
		TH-AR			↑	90 <sup>s</sup>	
		TH-AR			↓	90 <sup>s</sup>	
	G29-14		07 19.7	+08 55		14	
		TH-AR			↑	90 <sup>s</sup>	
		TH-AR			↓	90 <sup>s</sup>	
	H66141		07 59.6	+02 29		2	STANDARD

Intensified      Reticon  
TO CAM 10/21

Spectrograph ECHELLE      Log Sheet      RAWRET 9

Grating 300L      Observer \_\_\_\_\_

Telescope SH      Date OCT 20-21 '85 Disk ORO 767

Change....	File	ID	1950.0 RA	Dec	L/R +/-	Exposure	Comments
		1		9	T	90 <sup>s</sup>	518.7 804
		2			↓	90 <sup>s</sup>	
		3	S133165	06 19.6	-05 26	5 <sup>m</sup>	
		4	TH-AR		T	90 <sup>s</sup>	
		5	TH-AR		↓	90 <sup>s</sup>	
		6	G114-20	08 56.6	-03 50	5 1/2 <sup>m</sup>	
		7	TH-AR		T	90 <sup>s</sup>	
		8	TH-AR		↓	90 <sup>s</sup>	
		9	G88-5	07 03.2	+18 42	7 <sup>m</sup> 37 <sup>s</sup>	
		10	TH-AR		T	90 <sup>s</sup>	
		11	<del>+251981</del> 08 41.5	<del>+24 59</del>	↓	90 <sup>s</sup>	
		12	+251981	08 41.5	+24 59	6 <sup>m</sup>	
		13	TH-AR		T	90 <sup>s</sup>	
		14	TH-AR		↓	90 <sup>s</sup>	
		15	H74000	08 38.5	-16 10	10 <sup>m</sup> 30 <sup>s</sup>	
		16	TH-AR		T	90 <sup>s</sup>	
		17	TH-AR		↓	90 <sup>s</sup>	
		18	G147-52	11 27.7	+36 07	5 <sup>m</sup>	
		19	TH-AR		T	90 <sup>s</sup>	
		20	TH-AR		↓	90 <sup>s</sup>	
		21	S59912	6 12.6	+37 45	2 <sup>m</sup>	
		22	TH-AR		T	90 <sup>s</sup>	
		23	TH-AR		↓	90 <sup>s</sup>	
		24	G90-25	07 50.3	+30 46	2 <sup>m</sup>	
		25	TH-AR		T	90 <sup>s</sup>	
		26	TH-AR		↓	90 <sup>s</sup>	
		27	G112-54	07 52.0	-01 17	2 <sup>m</sup>	
		28	TH-AR		T	90 <sup>s</sup>	
		29	TH-AR		↓	90 <sup>s</sup>	
		30	H66141	07 59.7	+02 27	90 <sup>s</sup>	STANDARD
		31	TH-AR		T	90 <sup>s</sup>	
		32					

Intensified Reticon

TO CAM 10/21

Spectrograph ECHELLE

Log Sheet

RAWRET 9

Grating 300L

Observer Ren

Telescope 61" - SH

Date 10/20-21/85

Disk ORO 768

Change....	File	ID	RA	Dec	L/R +/-	Exposure	Comments
	1	TH-AR			↓	90 <sup>s</sup>	5187 90 <sup>u</sup>
	2	SKY				5 <sup>m</sup>	
	3	TH-AR			↑	90 <sup>s</sup>	
	4	INCAN				120 <sup>m</sup>	
	5	INCAND				27 <sup>MIN</sup>	
OCT 21-22	6	TH-AR			↓	90 <sup>s</sup>	5187 A 80 <sup>u</sup> SLIT
	7	SKY				5 <sup>MIN</sup>	
	8	TH-AR			↑	90 <sup>s</sup>	
	9	TH-AR			↓	90 <sup>s</sup>	
	10	H182592	19 22.6	+11 50		2 <sup>m</sup>	STANDARD
	11	TH-AR			↑	90 <sup>s</sup>	
	12	TH-AR			↓	90 <sup>s</sup>	
	13	G210-46	20 58.0	+40 03		2 <sup>m</sup>	
	14	TH-AR			↑	90 <sup>s</sup>	
	15	TH-AR			↓	90 <sup>s</sup>	
	16	S122652	17 29.5	+04 23		2 <sup>m</sup>	
	17	TH-AR			↑	90 <sup>s</sup>	
	18	TH-AR			↓	90 <sup>s</sup>	
	19	G202-65	16 34.5	+45 58		17 <sup>m</sup>	
	20	TH-AR			↑	90 <sup>s</sup>	
	21	TH-AR			↓	90 <sup>s</sup>	
	22	G180-66	16 37.8	+34 22		5 <sup>m</sup> 36 <sup>s</sup>	
	23	TH-AR			↑	90 <sup>s</sup>	
	24	TH-AR			↓	90 <sup>s</sup>	
	25	G141-19	18 31.0	+13 07		5 <sup>m</sup>	
	26	TH-AR			↑	90 <sup>s</sup>	
	27	TH-AR			↓	90 <sup>s</sup>	
	28	G206-34	18 33.3	+28 40		15 <sup>m</sup>	
	29	TH-AR			↑	90 <sup>s</sup>	
	30	G206-34	"	"		15 <sup>m</sup>	
	31	TH-AR			↑	90 <sup>s</sup>	
	32						

10/22 RPS

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAWRET 9

Grating 300L

Observer DM

Telescope 5H

Date 10/21-22/85

Disk QRO 769

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments	
		1	<del>20 03.3</del>	<del>03 54</del>	↓	90s	5177 80μ	
		2	G24-3	20 03.3	103 54		8m	
		3	TH-AR			↑	90s	
		4	TH-AR			↓	90s	
		5	G143-43	20 14.8	+17 07		5m 30s	
		6	TH-AR			↑	90s	
		7	TH-AR			↓	90s	
		8	G186-26	20 22.6	+24 54		20m	
		9	TH-AR			↑	90s	
		10	TH-AR			↓	90s	
		11	G125-64	20 07.3	+42 43		11m	
		12	Th-Ar			↑	90s	
		13	Th-Ar			↓	90s	
		14	H1213014	22 25 458	17 00 28		2m	IAU standard
		15	Th-Ar			↑	90s	
		16	Th-Ar			↓	90s	
		17	G1230-45	20 38 54.0	54 02 18		9m	11.4/20
		18	Th-Ar			↑	90s	
		19	Th-Ar			↓	90s	
		20	G1210-33	20 43 33.0	40 12 30		16m	1.2/50
		21	Th-Ar			↑	90s	
		22	Th-Ar			↓	90s	
		23	G1262-14	20 27:35	61:50:54		9m	1.5/20
		24	Th-Ar			↑	90s	
		25	Th-Ar			↓	90s	
		26	G1232-40	21:53:43	55:54:06		18m	1.6/30
		27	Th-Ar			↑	90s	
		28	Th-Ar			↓	90s	
		29	G1262-32	20:58:10	64:51:00		6m	0.7/20
		30	Th-Ar			↑	90s	
		31	/					
		32	/					

10/22 RPS  
TO CAM

Spectrograph ECHELLE Intensified Reticon  
 Grating 300L Log Sheet  
 Telescope SH Date 10/21-22/85 Observer RPS/ram  
 Disk ORO 770

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
	G214-5	2	21:57:07	46:48:12		22m	11.5/50 (G214-5)
	Th-Ar	3			↑	90s	
	Th-Ar	4			↓	90s	
	G128-45	5	23:15:33	31:15:30		10m	11.7/15
	Th-Ar	6			↑	90s	
	TH-AR	7			↓	90s	
	G190-10	8	23 05.6	141 35		8m	
	TH-AR	9			↑	90s	
	TH-AR	10			↓	90s	
	G190-15	11	23 11.3	+39 09		15 <sup>MIN</sup>	
	TH-AR	12			↑	90s	
	TH-AR	13			↓	90s	
	H2779	14	01 23.9	-00 39		2m	STANDARD
	TH-AR	15			↑	90s	
	TH-AR	16			↓	90s	
	H26162	17	040614	192843		2 <sup>MIN</sup>	STANDARD
	TH-AR	18			↑	90s	
	INCAND	19				120 <sup>m</sup>	TAKEN 15HRS AFTER OPS ↑
	"	20				25 <sup>m</sup>	
10/22-23 ←	TH-AR	21			↓	90s	TH-Ar bad!
	SKY	22				5 <sup>m</sup>	
	Th-Ar	23			↓	90s	
	SKY	24				5m	rather dark; counts ≈ 100
	Th-Ar	25			↑	90s	
	Th-Ar	26			↓	90s	
	H182572	27	19 22 35	+11 50 10		2m	IAU standard
	Th-Ar	28			↑	90s	
	Th-Ar	29			↓	90s	
	G170-47	30	17:30:38	23:46:18		4m	9.0/100
	Th-Ar	31			↑	90s	
		32					



10/22 RPS  
TO CAM

Intensified Reticon

Spectrograph ECHELLE

Log Sheet

RAW RET 9

Grating 300L

Observer RPS

Telescope SH

Date 10/22-23/85

Disk ORO 771

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
		2	5189226	20:20:39	-21:31:05	2m	8.7/30
		3			↑	90s	
		4			↓	90s	<del>10.4/30</del>
		5	-2316310	20:29:05	-23:42:48	10m	10.4/30
		6			↑	90s	
		7			↓	90s	
		8	624-25	20:37:42	00:22:42	8m	10.6/50
		9			↑	90s	
		10			↓	90s	
		11	6248-29	19:30:32	48:28:54	12m	8.5/200
		12			↑	90s	
		13			↓	90s	
		14	Q227-37	18:34:48	63:39:18	3m	8.1/20
		15			↑	90s	
		16			↓	90s	
		17	H213014	22 25 46	17 00 28	2m	IAU standard
		18			↑	90s	
		19			↓	90s	
		20	6260-29	19:38:09	62:30:42	6m	10.4/15 Seeing variable 4-8"
		21			↑	90s	
		22			↓	90s	<del>10.4/30</del>
		23	G171-15	23:42:33	44:23:39	16m	11.6/40
		24			↑	90s	
		25			↓	90s	
		26	G29-71	23 47:27	08:26:48	24m	11.4/50
		27			↑	90s	
		28			↓	90s	
		29	G129-42	23:52:30	20:06:21	3m	9.0/20
		30			↑	90s	
		31					
		32					

TO CAM 10/23

Spectrograph ECHELLE Intensified Reticon  
 Log Sheet RAW/RET 9  
 Grating 300L Observer RPS  
 Telescope SH Date 10/22-23/85 Disk ORO 772

Change....	File	ID	RA	1950.0 Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	
		2	G13φ-32	23:57:31	33:54:42	2m	8.5/20
		3	TH-AR		↑	90s	
		4	TH-AR		↓	90s	
		5	G173-57	φ2:28:49	45:39:12	6m	11.3/15
		6	TH-AR		↑	90s	
		7	TH-AR		↓	90s	
		8	G133-45	φ1:46:31	43:31:24	9m	11.8/20
		9	TH-AR		↑	90s	
		10	TH-AR		↓	90s	
		11	G72-6φ	φ2:φ5:38	31:φ9:24	4m	10.3/15
		12	TH-AR		↑	90s	
		13	TH-AR		↓	90s	
		14	G4-37	φ2:41:55	φ8:16:18	25m	11.4/100
		15	TH-AR		↑	90s	
		16	G4-37			14m	
		17	TH-AR		↑	90s	
		18	TH-AR		↓	90s	
		19	G7-2φ	φ4:φ2:47	1φ:54:54	7m	11.6/15
		20	TH-AR		↑	90s	
		21	TH-AR		↓	90s	
		22	G82-5	φ4:12:29	-φ5:45:24	4m	10.7/15
		23	TH-AR		↑	90s	
		24	TH-AR		↓	90 <sup>s</sup>	6300A 120 <sup>u</sup>
5003		25	HALLEY	05 47.6	121 09	20 <sup>m</sup>	ON NUCLEUS
		26	TH-AR		TH	90 <sup>s</sup>	
5004		27	HALLEY	"	"	10 <sup>m</sup>	10 <sup>s</sup> GUIDE MOTION N OF NUC.
		28	TH-AR		TH	90 <sup>s</sup>	
5005		29	SKY6200	"	≈ 22°	5 <sup>m</sup>	FEW <sup>MIN</sup> <del>SEC</del> N OF COMET
		30	TH-AR		TH	90 <sup>s</sup>	
5006		31	HALLEY	"	"	10 <sup>m</sup>	
		32	TH-AR		↑	90 <sup>s</sup>	

Intensified      Reticon

TO CAM 10/23

Spectrograph ECHELLE      Log      Sheet

Grating 300L      Observer nan

Telescope SH      Date 10/22-23/25      Disk ORO 7173

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90 <sup>s</sup>	5187 80 <sup>h</sup>
		2	G99-315	5 42.2	+09 14		7 <sup>min</sup>
		3	TH-AR			↑	90 <sup>s</sup>
		4	TH-AR			↓	90 <sup>s</sup>
		5	G88-10	7 07.3	+24 26		20 <sup>min</sup>
		6	TH-AR			↑	90 <sup>s</sup>
		7	TH-AR			↓	90 <sup>s</sup>
		8	G41-41	9 26.6	+08 51		18 <sup>h</sup>
		9	TH-AR			↑	90 <sup>s</sup>
		10	G41-41	"	"		9 <sup>h</sup>
		11	TH-AR			↑	90 <sup>s</sup>
		12	TH-AR			↓	90 <sup>s</sup>
		13	H92588	10 38.9	-01 29		2 <sup>h</sup> STANDARD
		14	TH-AR			↑	90 <sup>s</sup>
		15	TH-AR			↓	90 <sup>s</sup>
		16	G87-45	07 29.8	+31 14		9 <sup>h</sup>
		17	TH-AR			↑	90 <sup>s</sup>
		18	TH-AR			↓	90 <sup>s</sup>
		19	G87-47	07 32.3	+36 04		3 <sup>h</sup>
		20	TH-AR			↑	90 <sup>s</sup>
		21	TH-AR			↓	90 <sup>s</sup>
		22	G41-5	08 50.5	+09 37		4 <sup>h</sup> 30 <sup>s</sup>
		23	TH-AR			↑	90 <sup>s</sup>
		24	TH-AR			↓	90 <sup>s</sup>
		25	G41-34	09 20.1	+11 29		2 <sup>h</sup>
		26	TH-AR			↑	90 <sup>s</sup>
		27	TH-AR			↓	90 <sup>s</sup>
		28	G43-3	09 46.2	+13 59		2 <sup>h</sup>
		29	TH-AR			↑	90 <sup>s</sup>
		30	TH-AR			↓	90 <sup>s</sup>
		31	SKY				5 <sup>h</sup>
		32	TH-AR			↑	90 <sup>s</sup>

Intensified Reticon TO CAM 10/23

Spectrograph ECHELLE Log Sheet RAW RET 9

Grating 300L Observer GS/um

Telescope SH Date 10/22-23 Disk ORO 774

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1				120 <sup>m</sup>	5187A 80 μ SLIT
Oct 23/24		2			↓	90 <sup>s</sup>	5187A 80 μ SLIT
		3				5 MIN	(1712)
		4			↑	90 <sup>s</sup>	
		5			↓	90 <sup>s</sup>	
		6	H182572	192235	115009	2 MIN	1 AU STANDARD
		7			↑	90 <sup>s</sup>	
		8			↓	90 <sup>s</sup>	
		9	G170-47	173038	234618	4 MIN	(8.9)
		10			↑	90 <sup>s</sup>	
		11			↓	90 <sup>s</sup>	
		12	S122652	173927	042324	2 MIN	(7.0)
		13			↑	90 <sup>s</sup>	
		14			↓	90 <sup>s</sup>	
		15	G202-65	163430	455754	13 MIN	(11.2) (13 MIN)
		16			↑	90 <sup>s</sup>	
		17			↓	90 <sup>s</sup>	
		18	G182-7	172301	380454	2 MIN	(9.1)
		19			↑	90 <sup>s</sup>	
		20			↓	90 <sup>s</sup>	
		21	G170-47	173038	234618	4 MIN	(8.9)
		22			↑	90 <sup>s</sup>	
		23			↓	90 <sup>s</sup>	
		24	G170-56	173605	183515	4 MIN	(9.8)
		25			↑	90 <sup>s</sup>	
		26			↓	90 <sup>s</sup>	5197A 80 μ SLIT (KENTON)
		27	V433HRC	192002	232547	8 MIN	(10.5)
		28			↑	90 <sup>s</sup>	
		29			↓	90 <sup>s</sup>	
		30	HM-506	193941	163736	15 MIN	(11.0)
		31			↑	90 <sup>s</sup>	
		32					

TO CAM 10/23

Spectrograph ECHELLE Intensified Reticon  
 Log Sheet RAW/RET 9  
 Grating 300L Observer GSL/UM  
 Telescope 61" SH Date OCT 23-24 Disk 775  
1985

Change....	File	ID	RA	1950.0 Dec	L/R ↑/↓	Exposure	Comments
					↓	90 <sup>s</sup>	5197 A 80μ SLIT (KENYON)
						11 MIN	(10.0)
					↑	90 <sup>s</sup>	
					↓	90 <sup>s</sup>	
						8 MIN	(11.0)
					↑	90 <sup>s</sup>	
					↓	90 <sup>s</sup>	
						3 MIN	(8.5)
					↑	90 <sup>s</sup>	
					↓	90 <sup>s</sup>	
						5 MIN	(11.0)
					↑	90 <sup>s</sup>	
					↓	90 <sup>s</sup>	
						2 <sup>m</sup>	
					↑	90 <sup>s</sup>	
					↓	90 <sup>s</sup>	6563 A 80μ
						15	
					↑	90 <sup>s</sup>	
					↓	90 <sup>s</sup>	6563 40μ
						8 <sup>m</sup>	NO = 1 FILTER
					↑	90 <sup>s</sup>	
					↓	90 <sup>s</sup>	
						8 <sup>m</sup>	NO = 1
					↑	90 <sup>s</sup>	
					↓	90 <sup>s</sup>	
						12 <sup>m</sup>	NO = 1 (SOME FOG)
					↑	90 <sup>s</sup>	
					↓	90 <sup>s</sup>	5197 10μ
						6 <sup>m</sup>	
					↑	90 <sup>s</sup>	





10/26 RPS  
TO CAM

Intensified Reticon

Spectrograph ECHELLE

Log Sheet

RAW/RET 9

Grating 300L

Observer RPS

Telescope SH

Date 10/23-24/85

Disk 778 ORO

Change....	File	ID	RA	Dec	1950.0 L/R ↑/↓	Exposure	Comments
		1			↓	90s	
		2	H66141	φ7:59:40	φ2:28:24	2.5m	<del>sample</del> IAU standard
		3			↑	90s	
		4			↓	90s	
		5	SKY-DWN	stow		5m	
		6			↑	90s	
		7				120" N	
		8				87" N	
OCT 24/25		9			↓	90s	5187A 80μ SLIT
		10				5" N	OVERCAST
		11			↑	90s	
OCT/26-27/85		12			↓	90s	5187A 80μ slit clear
		13	SKY-EVE	stow		5min	
		14			↑	90s	
		15			↓	90s	
		16	H182572	19:22:35	11:50:09	2m	IAU standard
		17			↑	90s	
		18			↓	90s	
		19	G170-47	17:30:38	23:46:18	6m	9.0/100 Halo Binaries
		20			↑	90s	
		21			↓	90s	
		22	S122652	17:39:27	φ4:28:24	2m	7.0/20 Oh! Had wrong star!! OK now.
		23			↑	90s	
		24			↓	90s	
		25	G20-8	17:37:16	φ2:26:34	20m	10.0/100 - very low on horizon.
		26			↑	90s	
		27			↓	90s	
		28	G141-47	18:50:55	10:33:48	12m	10.5/30 6" seeing
		29			↑	90s	
		30			↓	90s	
		31	S105417	19:52:47	10:36:15	2m	9.8/30
		32			↑	90s	



10/26 RPS

TO CAM1

Spectrograph ECHELLE Intensified Reticon  
 Grating 300L Log Sheet  
 Telescope SH Date OCT/26-27/85 Observer RPS RAW/RET 9  
 Disk 779 ORO

Change....	File	ID	RA	Dec	L/R ↑/↓	Exposure	Comments
		1A-Ar			↓	90S	
		-14589φ	2φ:53:23	-15:42:42		8m	10.2/30
		1A-Ar			↑	90S	
		1A-Ar			↓	90S	
		G25-24	21:14:φ6	-φ1:3φ:36		20m	11.6/30
		1A-Ar			↑	90S	
		1A-Ar			↓	90S	
		G25-15	21:φ1:37	φ2:48φ4		3m	7.4/50
		1A-Ar			↑	90S	
		1A-Ar			↓	90S	
		H2φ1911	21:φ9:4φ	17:32:φ4		2m	7.1/30
		1A-Ar			↑	90S	
		1A-Ar			↓	90S	
		G210-46	2φ:58:φ1	4φ:φ3:12		2m	6.6/300
		1A-Ar			↑	90S	
		1A-Ar			↓	90S	
		G187-4φ	21:19:46	27:14:18		5m	10.5/30
		1A-Ar			↑	90S	
		1A-Ar			↓	90S	
		G188-22	21:41:43	27:φ9:42		6m	10.0/30 Note: the catalog DEC is wrong - should be 27:φ9 not 27:19.
		1A-Ar			↑	90S	
		1A-Ar			↓	90S	
		G185-3φ	21:53:φ3	32:24:24		7m	11.1/30
		1A-Ar			↑	90S	
		1A-Ar			↓	90S	
		G20-38	21:56:12	φφ:34:18		4m	10.3/15
		1A-Ar			↑	90S	
		1A-Ar			↓	90S	
		G18-28	22:φ3:14	12:φ8:18		2m	1.6/30
		1A-Ar			↑	90S	
		/					
		/					



10/27 RPS

TO CAMI

Spectrograph ECHELLE  
 Grating 300L  
 Telescope SH

Intensified Reticon  
 Log Sheet  
 Date OCT/26-27/85

Observer RPS  
 Disk ORO 781

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		TA-Ar			↓	90s	
	538	φ29	φ2:25:36	44:44:29		12m	7.4/200
		TA-Ar			↑	90s	
		TA-Ar			↓	90s	Clouds - heavy; everywhere
	556	455	φ3:23:53	34:15:18		2m	6.7/50
		TA-Ar			↑	90s	
		TA-Ar			↓	90s	
	637	-26	φ3:φ5:28	26:φ9:φ6		3m	8.1/50 "
		TA-Ar			↑	90s	
		TA-Ar			↓	90s	
	643	-57	φ2:22:23	φ5:33:12		2m	8.0/15 "
		TA-Ar			↑	90s	
		TA-Ar			↓	90s	
	642	-44	φ1:17:59	51:43:24		2m	7/20 clearing
		TA-Ar			↑	90s	
		TA-Ar			↓	90s	
	H26	16L	φ4:φ6:15	19:28:43		2m	IAU standard
		TA-Ar			↑	90s	
		TA-Ar			↓	90s	in clouds
	Lφφ3	φ3:27:37	19:56:01			9m	10.8 Hyades Binaries
		TA-Ar			↑	90s	
	VE3	φ3:27:37	19:56:01			2m	8.4
		TA-Ar			↑	90s	
		TA-Ar			↓	90s	
	H270	φ4:19:52	16:40:32			4m	7.9
		TA-Ar			↑	90s	through clouds
		TA-Ar			↓	90s	
	H379	φ4:23:15	15:24:44			2m	7.5
		TA-Ar			↑	90s	
		TA-Ar			↓	90s	
	H382	φ4:23:32	16:44:30			2m	8.0
		TA-Ar			↑	90s	

10/27/RPS

TO CAM

Spectrograph ECHELLE

Intensified Reticon

Grating 300L

Log Sheet

RAW/RET 9

Telescope SH

Date OCT/26-27/85

Observer RPS

Disk ORO 782

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1h-Ar			↓	90s	
	H388		04:25:48	16:38:00		2m	8.1 cluster standard
	1h-Ar				↑	90s	
	Th-Ar				↓	90s	
	LS1		04:38:41	13:07:54		8m	DLSB
	1h-Ar				↑	90s	
	1h-Ar				↓	90s	
	VB41		04:20:03	17:25:54		2m	3.8
	Th-Ar				↑	90s	
	1h-Ar				↓	90s	
	H493		04:27:48	13:35:05		2m	5.5 10?
	1h-Ar				↑	90s	
	1h-Ar				↓	90s	
	VB131		05:06:37	27:58:48		2 1/2 m	6.0
	1h-Ar				↑	90s	
	VB132		05:06:37	27:58:18		4m	8.5
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	988-14		07:10:51	25:06:44		4m	8.4/15
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	989-34		07:35:23	05:42:00		3m	8.2/15
	1h-Ar				↑	90s	
	1h-Ar				↓	90s	
	<del>989-34</del> S113285		06:24:03	03:27:24		3m	8.0/30
	Th-Ar				↑	90s	clearing
	Th-Ar				↓	90s	
	G103-34		06:25:59	27:02:42		3m	8.6/30
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G103-44		06:33:22	37:53:48		2 1/2 m	9.1/30
	Th-Ar				↑	90s	

in heavy clouds

clearing

10/27 RPS

TO CAM

Spectrograph ECHELLE Intensified Reticon  
 Grating 300L Log Sheet  
 Telescope SH Date OCT/26-27/85

Observer RPS  
 Disk ORO 783

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Th-Ar		↓	90s	
		2	H66141	07:59:40	02:28:24	2m	IAU standard
		3	Th-Ar		↑	90s	
		4	Th-Ar		↓	90s	
		5	SKY-DWN	stow		5m	(0959)
		6	Th-Ar		↑	90s	
		7	INCAND			120m	
		8	INCAND			59m	
27 OCT 85		9	Th-Ar		↓	90s	5187A 80μ partly cloudy
		10	SKY-EVE	stow		5m	cloudy
		11	Th-Ar		↑	90s	
		12	Th-Ar		↓	90s	
		13	H182572	19:22:35	+11:50:10	2m	IAU standard
		14	Th-Ar		↑	90s	
		15	Th-Ar		↓	90s	
		16	G170-47	17:30:38	23:46:18	13m	9.0/100 Halo Binaries
		17	Th-Ar		↑	90s	
		18	Th-Ar		↓	90s	
		19	S162947	19:42:21	-17:37:42	7m	9.2/30 clear
		20	Th-Ar		↑	90s	
		21	Th-Ar		↓	90s	
		22	S144547	20:30:07	-09:32:42	20m	9.5/100
		23	Th-Ar		↑	90s	
		24	Th-Ar		↓	90s	
		25	S125806	20:23:47	09:17:35	2m	8.4/50
		26	Th-Ar		↑	90s	
		27	Th-Ar		↓	90s	
		28	S127141	21:51:28	06:37:42	2m	6.2/30
		29	Th-Ar		↑	90s	Jupiter occultation;
		30	Th-Ar		↓	90s	clouds
		31	G67-38	22:56:49	11:55:36	2m	7.6/30
		32	Th-Ar		↑	90s	

10/27 RDS

TO CAM

Spectrograph ECHELLE Intensified Reticon  
 Grating 300L Log Sheet  
 Telescope SH Date OCT/27-28/85

Observer RAWRET 9  
 Disk ORO 784

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	90s	clouds
	S165532	23 07 43	-13:34:51			2m	8.1/100 (Doesn't need 100 counts)
	Th-Ar				↑	90s	ID problem? this ID
	Th-Ar				↓	90s	looks o.k.
	S165664	23 14 30	-14:06:25			2m	8.2/50
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	clearing
	G68-31	23 33 33	18:09:48			2m	7.7/20
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	S166244	φφ: 18: 13	-25: 44: 36			2m	8.3/20
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	S147479	φφ: φ: 14	-19: 56: 36			3m	9.7/15
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	G71-3	φ1: 2φ: 17	φφ: 27: 12			12m	8.3/100
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	H8779	φ1: 23: 54	-φφ: 39: 29			2m	IAU standard
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	-18271	φ1: 34: 54	-17: 44: 12			4m	9.8/20
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	271-162	φ1: 48: 03	-φφ: 36: 00			11m	10.4/40
	Th-Ar				↑	90s	
	Th-Ar				↓	90s	
	-22395	φ2: 19: 39	-21: 44: 36			9m	10.5/20
	Th-Ar				↑	90s	
	31						
	32						

Intensified      Reticon

TO CAM 19/28

Spectrograph ECHELLE      Log Sheet      RAW/RET 9

Grating 300L      Observer RPS

Telescope SH      Date OCT/27-28/85      Disk ORO 785

Change....	File	ID	RA	Dec	1950.0	L/R	Exposure	Comments
						+/-		
		1				↓	90s	
		2	5149474	02:31:46	-12:36:41		8m	9.8/25
		3				↑	90s	
		4				↓	90s	
		5	3171-58	04:22:26	47:46:12		2m	7.5/50
		6				↑	90s	
		7				↓	90s	
		8	L28	04:14:00	22:33:00		5m	11.1/15 Halo & Hyades *
		9				↑	90s	
		10				↓	90s	
		11	L027	04:12:11	22:59:30		7m	10.7 Hyades Binary stars
		12				↑	90s	
		13				↓	90s	
		14	H532	04:29:37	13:00:30		11m	"
		15				↑	90s	
		16				↓	90s	
		17	L81	04:38:41	13:07:34		12m	DLSB "
		18				↑	90s	
		19				↓	90s	
		20	H358	04:23:48	16:38:48		2m	standard - Hyades
		21				↑	90s	
		22				↓	90s	4110A 80V
		23	OH CEP	22 44.9	+57 49		20m	
		24				↑	90s	
		25				↓	90s	
		26	NY CEP	22 86.7	+62 49		15m	
		27				↑	90s	
		28				↓	90s	
		29	λ ORI	05 33.0	-05 56		3m	
		30				↑	90s	
		31						
		32						

Spectrograph ECHELLE Intensified Reticon  
 Grating 300L Log Sheet  
 Telescope SM Date 10/27-8/85

TO CAM 10/28

Observer JA  
 Disk ORO 786

Change....	File	ID	RA	Dec	1950.0 L/R +/-	Exposure	Comments
	1	TH-AR			↓	90 <sup>s</sup>	4110A 80 <sup>s</sup>
	2	HRI 755	05 29.5	-07 20		5 <sup>m</sup>	
	3	TH-AR			↑	90	
DATE/TIME WRONG }	4	TH-AR			↓	90 <sup>s</sup>	5187A 80 <sup>s</sup>
	5	G 75-14	07 19.8	08 55		13 <sup>m</sup>	TIME OF OBS → 03 28
	6	TH-AR			↑	90 <sup>s</sup>	
	7	TH-AR			↓	90 <sup>s</sup>	
	8	G 114-26	08 56.6	-03 50		8 <sup>m</sup> 9 <sup>s</sup>	
	9	TH-AR			↑	90 <sup>s</sup>	
	10	TH-AR			↓	90 <sup>s</sup>	
	11	G 147-58	11 27.7	+36 07		4 <sup>m</sup>	
	12	TH-AR			↑	90	
	13	TH-AR			↑	90	
	14	G 41-41	9 26.6	+08 51		20 <sup>m</sup>	
	15	TH-AR			↑	90 <sup>s</sup>	
	16	G 41-41	"	"		15	SEEING BECOMES V POOR
	17	TH-AR			↑	90 <sup>s</sup>	
	18	TH-AR			↓	90 <sup>s</sup>	
	19	G 53-30	10 09.9	-00 23		6 <sup>m</sup>	
	20	TH-AR			↑	90 <sup>s</sup>	
	21	TH-AR			↓	90 <sup>s</sup>	
	22	G 243-63	01 06.5	+61 17		4 <sup>m</sup>	
	23	TH-AR			↑	90 <sup>s</sup>	
	24	TH-AR			↓	90 <sup>s</sup>	
	25	G 220-13	02 31.8	+59 34		3 <sup>m</sup>	
	26	TH-AR			↑	90 <sup>s</sup>	
	27	TH-AR			↓	90 <sup>s</sup>	
	28	DANNSKY				5 <sup>m</sup>	
	29	TH-AR			↑	90 <sup>s</sup>	
	30	INCAND				120 <sup>m</sup>	
	31	INCAND				79 <sup>m</sup>	
	32						



Spectrograph ECHELLE Intensified Reticon  
 Grating 300L Log Sheet  
 Telescope 6" WYETH Date OCT 28-29 85

TO CAM 10/28

Observer RAW/RET 9  
Skip; Dave Latham  
 Disk ORD 787

Change....	File	ID	RA	Dec	1950.0 L/R +/-	Exposure	Comments
		1			TH-AR	90°	5187A 80μ SLIT SKIP
		2			SKY-EVE	5 min	↓
		3			TH-AR	90°	
		4			TH-AR	90°	
		5	H182572	1922 35	1150 09	2 min	IAU STANDARD - <sup>POOR</sup> SEEING
		6			TH-AR	90°	
		7			TH-AR	90°	
		8	H213019	222545	170028	4 min	IAU STANDARD
		9			TH-AR	90°	
		10			TH-AR	90°	BRIGHT MOON
		11	G17047	173038	234618	9 min (8.9)	Halo ↓
		12			TH-AR	90°	gusty wind DNL ↓
		13			TH-AR	90s	
		14	S122652	17:39:21	04:23:21	3m	6.9 no offset, 2.9 in field
		15			TH-AR	90s	of spotter OK
		16			TH-AR	90s	
		17	G202-25	15:58:22	+45:52.98	12m	11.0 sky ~ 1/3 total
		18			TH-AR	90s	
		19			TH-AR	90s	
		20	S031160	18:45:09	59:30:15	3m	Majek Low Mass
		21			TH-AR	90s	seeing 5-8"
		22	S031128	18:42:18.5	59:37:22	7m	
		23			TH-AR	90s	
		24	S031129	18:42:19.3	59:37:05	10m	
		25			TH-AR	90s	
		26	S031160	18:45:09.4	59:30:15	3m	
		27			TH-AR	90s	
		28	S031092	18:38:37.4	59:28:50	3m	
		29			TH-AR	90s	
		30	S031128	18:42:18.5	59:37:22	7m	
		31			TH-AR	90s	
		32	S031129	18:42:19.3	59:37:05	10m	

Intensified      Reticon      TO CAM

Spectrograph ECHELLE      Log Sheet      RAWRET 9

Grating 300L      Observer \_\_\_\_\_

Telescope 5H      Date 10/28-29/85      Disk ORU 788

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Th-Ar		↓	12-Ar	
		2	S 031092	18:38:37.7	54:28:51		3m
		3	Th-Ar		↑	T2-Ar	
		4	Th-Ar		↓	Th-Ar	
		5 (5)	S 128427	23:49:24	02:39:08		2m
		6	Th-Ar		↓	90s	
		7 (7)	S 128397	23:46:37	02:07:37		10m
		8	Th-Ar		↓	90s	
		9 (5)	S 128427	23:49:24	02:39:09		2m
		10	Th-Ar		↑		
		11 (6)	S 128329	23:38:44	02:11:26		3m
		12	Th-Ar		↓		
		13 (7)	S 128397	23:46:37	02:07:37		10m
		14	Th-Ar		↓		
		15 (6)	S 128329	23:38:44	02:11:26		2m
		16	Th-Ar		↑		
		17	Th-Ar		↓		
		18 (8)	S 36250	00:15:41	44:16:52		2m
		19	Th-Ar		↓		
		20 (10)	S 36248	00:15:40	43:44:37		4m ← S 36248
		21	Th-Ar		↓		
		22 (10B)	S 36248B	00:15:40	43:44:37		12m
		23	Th-Ar		↓		
		24 (8)	S 36250	00:15:41	44:16:52		2m
		25	Th-Ar		↓		
		26 (9)	S 36242	00:15:14	44:18:01		2m
		27	Th-Ar		↓		
		28 (10)	S 36248	00:15:40	43:44:37		4m
		29	Th-Ar		↓		
		30	S 36242	00:15:14	44:18:01		2m ← S 36242
		31	Th-Ar		↑		
		32					





Spectrograph ECHELLE Intensified Reticon TO CAM  
 Grating 300L Log Sheet RAWRET 9  
 Telescope 6" SH WYETH Date OCT 31 - NOV 1 1985 Observer R J Davis  
 Disk ORO 791

Change....	File	ID	RA	Dec	1950.0 L/R ↑/↓	Exposure	Comments	
		1			↓	90 <sup>s</sup>	5187A. 80μ SLIT	
		2				5'N		
		3			↑	90 <sup>s</sup>		
		4			↓	90 <sup>s</sup>		
		5	H182572	19:22:35.1 11:50:09		2 <sup>m</sup>	IAU Std.	
		6			↑	90 <sup>s</sup>		
		7			↓	90 <sup>s</sup>		
		8	G210-46	20:58:01 40:03:42		2 <sup>m</sup>	Halo Binaries Latham	
		9			↑	90 <sup>s</sup>		
		10			↓	90 <sup>s</sup>		
		11	G170-47	17:30:38 23:46:18		3 1/2 <sup>m</sup>	Halo Binaries	
		12			↑	90 <sup>s</sup>		
		13			↓	90 <sup>s</sup>		
		14	214-14A	22:13:08 39:31:36		2 <sup>m</sup>	Halos. Brighter * of pair	
		15			↑↓	90 <sup>s</sup>		
		16	214-14B	22:13:08 39:31:36		16 <sup>m</sup>	Halos. Faint * of pair	
		17			↑	90 <sup>s</sup>		
		18			↓	90 <sup>s</sup>		
		19	G27-29	22:25:20 -5:32:06		3 1/2 <sup>m</sup>	Halos	
		20			↑	90 <sup>s</sup>		
		21						
		22	DETECTOR SMASH					
		23						
		24						
		25						
		26						
		27						
		28						
		29						
		30						
		31						
		32						

1 November 1985

D. Latham

Detector package run into east pier; intensifier package fatally damaged; methanol leaking into Reticon head. This was on Halloween. By tonight we have the detector up again on Mac's spare intensifier. John had to replace blown parts in Reticon head. Detector installed on spectrophotograph. Gamis eyeballed by John.

1. Front tube voltage decay. Half decay time  $\sim$  6 minutes
2. MCP events. With MCP=5, get  $\sim$  300 cts/s/side at disc. = 0.500  
Spurious MCP events go to 0 for disc  $\sim$  .8 or .9
3. Translation. All the way to the east, and needs to go  $\sim$  1 mm more.
4. Pulse height distribution: 2500 V gives knee, just eliminates persistence.
5. Same Echelle & grating settings give excellent wavelength fits at 5187.  
However, LCO = 100 and RCO = 1700 should be used.
6. Focus with 40  $\mu$  slit at  $48^\circ F = 1.0/1.0$
7. Comparison of  
BEL 300 = 35-53 -15-270       $40^\circ 18'$       473  
BAL 1200 = 35-53 -15-330       $13^\circ 53'$       767-772

