

7/4

Spectrograph ECHELLE Intensified Reticon TO CAM
 Grating 300L Log Sheet RAW/RET
 Telescope Wyath Date 30 June - 1 July 1987 Observer GS MDR JAM
 Disk ORO 1627

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

Change....	File	ID	RA	1950.0	Dec	L/R	Exposure	Comments
		1	TH-AR			↓	60s	
		2	SKY	4W	+24		2m	
		3	TH-AR			↑	60s	This night washed out, repeatedly!
		4	TH-AR			↓	60s	
		5	SKY	OHA	+35		4m	
		6	TH-AR			↑	60s	
		7	TH-AR	OHA	+43		2 ^{MIN}	938 cross dispersion Flux tests
		8	TH-A	OHA	-20		2 ^{MIN}	939.1 " " Flux
		9	TH-A ₁	4WHA	0		2m	936.3 Flux
		10	TH-A ₁	4EHA	0		2m	943.5 Flux
		11	TH-A ₁	OHA	+43		2m	938 - so is irreproducible
		12	TH-AR	4WHA		↓	60s	
		13	SKYEVEN	ZENITH	+40		2m	
		14	TH-AR			↑	60s	high clouds...
		15	TH-AR			↓	60s	
		16	SKYEVEN	4HRS.W	+40		2m	
		17	TH-AR			↑	60s	
		18	TH-AR			↓	60s	
		19	1114762	3:09:54	17:46:55		3m	7.3 IAU
		20	TH-AR			↑	60s	
		21	TH-AR			↓	60s	
		22	559-32	12:37:37	21:05:12		8m	9.0 HALO
		23	TH-AR			↑	60s	
		24	TH-AR			↓	60s	
		25	1102495	12:56:49	09:30:42		10m	9.7 HALO
		26	TH-AR			↑	60s	
		27	TH-AR			↓	60s	
		28	560-47	7:52:44	08:06:12		6m	9.9 HALO
		29	TH-AR			↑	60s	
		30						
		31						
		32						

7/1 7/2

JULY 4/5

7/4

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300-L

Observer MORSEY, REM

Telescope Wyeth 61"

Date 7/4-5/87

Disk ORO 1628

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	H135148	15:10:55	12:38:36	4m	9.5 HALO
		3			↑	60s	
		4			↓	60 ^s	6563 A
		5	PCYG	20 15 57	37 53	3 ^m	SALLY
		6			↑↓	60 ^s	
		7	S49438	20 16 21	40 34	2 ^m	SALLY
		8			↑	60 ^s	
		9			↓	60s	5893 A
		10	S49438	20:16:21	40:34	2m	SALLY
		11			↑↓	60s	
		12	PCYG	20:15:57	37:53	2m	SALLY
		13			↑	60s	
		14			↓	60s	5876 A
		15	PCYG	20:15:57	37:53	2m	SALLY
		16			↑↓	60s	
		17	S49438	20:16:21	40:34	2m	SALLY
		18			↑	60s	
		19			↓	60 ^s	5754 A
		20	S49438	20:16	40:34	4m	SALLY
		21			↑↓	60s	
		22	PCYG	20:16	37:53	4m	SALLY
		23			↑	60s	
		24			↓	60 ^s	
		25	PCYG	20:16	37:53	3m	5127A SALLY
		26			↑↓	60 ^s	
		27	S49438	20:16	40:34	4.5m	SALLY
		28			↑	60 ^s	
		29			↓	60 ^s	5056A
		30	S49438	20:16	40:34	4m	SALLY
		31			↑↓	60s	
		32	PCYG	20:16	37:53	2m	
		33			↑	60s	MAC MADE 116 ← PO IT

Intensified Reticon

TO CAM 7/4

Spectrograph ECHELLE

Log Sheet

RAW RET

Grating 300l

Observer Moseley, REM

Telescope Wyeth 61"

Date 7/4-5/87

Disk 0801629

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	60s	518.7A
		2	G182-7	17:23:01	38:04:54		4m 8.1 HALO
		3	TH-AR		↑	60s	
		4	TH-AR		↓	60s	
		5	S101380	15:05:06	17:38:30		10m 9.2 HALO
		6	TH-AR		↑	60s	
		7	TH-AR		↓	60s	
		8	H013070	15:20:08	01:26:30		6m 9.5 (way west) HALO
		9	TH-AR		↑	60s	
		10	TH-AR		↓	60s	
		11	G202-35	15:58:22	45:52:48		6m 11.0 seeing ~2" HALO
		12	TH-AR		↑	60s	
		13	TH-AR		↓	60s	
		14	G169-13	16:27:49	30:48:06		3m 10.2 HALO
		15	TH-AR		↑	60s	
		16	TH-AR	17:30:38	23:46:18	↓	60s
		17	G170-47	17:30:38	23:46:18		6m 9.0 HALO
		18	TH-AR		↑	60s	
		19	TH-AR		↓	60s	
		20	G183-11	17:52:35	20:16:54		6m 9.8 HALO
		21	TH-AR		↑	60s	
		22	TH-AR		↓	60s	
		23	G21-12	18:21:07	-05:10:30		12m 11.1 HALO
		24	TH-AR		↑	60s	
		25	TH-AR		↓	60s	
		26	G21-35	18:45:58	-05:08:42		4m 10.4 HALO
		27	TH-AR		↑	60s	
		28	TH-AR		↓	60s	
		29	S162947	17:42:21	-17:37:42		5m 9.2 HALO
		30	TH-AR		↑	60s	
		31					
		32					

7/4

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 3002

Observer _____

Telescope Wyeth 61"

Date 7/4-5/87

Disk ORO 1630

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

1	TH-AR				↓	60s	
2	G162-374	19:31:23	16:25:24		↓	2m	7.6 HALO
3	H-AR				↑	60s	
	TH-AR				↓	60s	
5	H182537	9:27:35	10:50:09		↓	2000 90s	5.2 TAU
6	TH-AR				↑	60s	
7	H-AR				↓	60s	
8	G24-25	20:37:42	10:22:42		↓	10m	10.6 HALO
9	H-AR				↑	60s	
10	TH-AR				↓	60s	
11	G25-15	21:01:37	07:48:00		↓	90s	7.4 HALO
12	TH-AR				↑	60s	
13	TH-AR				↓	60s	
14	G57-38	22:56:49	11:55:30		↓	3m	8.4 HALO
15	H-AR				↑	60s	
16	TH-AR				↓	60s	
17	G190-10	23:05:39	41:35:12		↓	7m	11.2 HALO
18	TH-AR				↑	60s	
19	TH-AR				↓	60s	
20	G68-31	23:33:33	18:09:48		↓	90s	7.7 HALO
21	TH-AR				↑	60s	
22	TH-AR				↓	60s	
23	G130-10	23:43:38	34:58:12		↓	90s	9.1 HALO
24	TH-AR				↑	60s	
25	TH-AR				↓	60s	
26	G129-42	23:52:30	20:01:24		↓	90s	9.0 HALO
27	TH-AR				↑	60s	
28	TH-AR				↓	60s	
29	G20-32	23:57:31	23:54:42		↓	90s	8.5 HALO
30	TH-AR				↑	60s	
31							
32							

Intensified Reticon

TO CAM 7/5

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300L

Observer

Telescope Wyoth 61"

Date 7/4-5/87

Disk 000 1631

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

Change....	File	ID	1950.0	RA	Dec	L/R	Exposure	Comments
						↑/↓		
		1				↓	60s	Down...
		2		H8779	01:23:54 -00:39:27		90s	6.4 IAU (SKY contaminated)
		3		TH-AR		↑	60s	
		4		TH-AR		↓	60s	
		5		SKYDOME	02:15 (440) 10°		5m	
		6		TH-AR		↑	60s	
		7		TH-AR		↓	60s	
		8		SKYDOME	ZENITH +30°		5m	
		9		TH-AR		↑	60s	
		10		INCANDS			120m	
		11		INCANDS			120m	
		12		INCANDS			36m	
		13		TH-AR		↓	60s	2197A 90μSUT
		14		SKYEVEN	0 HA +40		2m	
		15		TH-AR		↑	60s	
		16		TH-AR		↓	60s	
		17		SKYEVEN	4 W		2m	
		18		TH-AR		↑	60s	
		19		TH-AR		↓	60s	
		20		H136262	15:16:45 01:57:11		2min	S.1/ IAU
		21		TH-AR		↑	60s	
		22		TH-AR		↓	60s	
		23		(2)	15:29:23 24:03:14		5m	9.8/50 AST
		24		TH-AR		↑	60s	
		25		TH-AR		↓	60s	
		26		G123-9	12:08:25 44:16:54		5m	10.5/45 Halo
		27		TH-AR		↑	60s	
		28		TH-AR		↓	60s	
		29		G122-40	11:42:53 47:56:51		2m	8.6/15 HALO
		30		TH-AR		↑	60s	
		31						
		32						

July 1/6
MOP
+
GS

Spectrograph ECHELLE

Intensified Reticon

TO CAM 7/5Grating 300L

Log Sheet

RAW RETTelescope Wyeth 61"Date 7/5-6/87Observer M PaysonDisk ORO 1632

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
					↓	60 ^s	
					↓	10 ^m	9.3/30 Halo
					↑	60 ^s	
					↓	60 ^s	
					↓	3 ^m	9.4/15 Halo
					↑	60 ^s	
					↓	60 ^s	6.4/100
					↓	10 ^m	8.9/100 Halo
					↑	60 ^s	
					↓	60 ^s	
					↓	14 ^m	11.0/20 Halo
					↑	60 ^s	
					↓	60 ^s	
					↓	4 ^m	9.8/20 Halo
					↑	60 ^s	
					↓	60 ^s	
					↓	10 ^m	11.7/15 Halo
					↑	60 ^s	
					↓	60 ^s	
					↓	6 ^m	10.7/ M STAR
					↑	60 ^s	
					↓	60 ^s	
					↓	2 ^m	7.1/ Cepheid
					↑	60 ^s	
					↓	60 ^s	6.4/ Cepheid
					↓	2 ^m	6.4/ Cepheid
					↑	60 ^s	
					↓	60 ^s	
					↓	2 ^m	6.3/100 M STAR
					↑	60 ^s	
					↑	60 ^s	
					↑	60 ^s	

Intensified Reticon
TO CAM 7/5

Spectrograph ECHELLE Log Sheet RAW RET

Grating 300L Observer M Payson

Telescope 61" Wgeth Date 7/5-6/87 Disk ORO 1633

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	615 638	16:43:14	33:35:54	3m	8.1/50 Mstar
		3			↑	60s	
		4			↓	60s	
		5	615 735	18:53:03	05:20:18	15m	10.1/50 Mstar
		6			↑	60s	
		7			↓	60s	
		8	615 763	19:32:10	04:28:16	6m	9.4/30 Mstar
		9			↑	60s	
		10			↓	60s	
		11	SID 4835	19:33:45	05:53:44	2m	6.7/100 Mstar
		12			↑	60s	
		13			↓	60s	light clouds obscuring our area
		14	6158-30	21:53:03	32:24:24	6m	11.1/30 fighting clouds Halo
		15			↑	60s	
		16			↓	60s	
		17	626-38	21:56:12	00:34:18	5m	10.2/15 Halo
		18			↑	60s	
		19			↓	60s	
		20	S165532	23:07:48	13:34:54	15m	8.4/100 Halo
		21			↑	60s	
		22			↓	60s	
		23	H213014	22:25:45	17:00:28	2m	7.7/ IAU
		24			↓	60s	
		25	213014B	22:25:46	17:00:28	6m	?/ IAU
		26			↑	60s	
		27			↓	60s	
		28	SKYDOME	4 HA E	+35.0	7m	
		29			↑	60s	
		30			↓	60s	
		31	SKYDOME	0 HA	+30.0	5m	
		32			↑	60s	

Intensified Reticon

TO CAM 7/6

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300L

Observer M. Payson

Telescope Wyeth 61"

Date 7/5-6 1987

Disk ORO 1634

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1				120M	518.7A 80μ slit
		2				120M	
		3				60M	
7/6-7		4			↓	60S	
		5	SKYEVEW	0 HA	+35.0	2.5m	
		6			↑	60S	
		7			↓	60S	
		8	SKYEVEW	4 HAW	+35.0	2m	
		9			↑	60S	
		10			↓	60S	
		11	W136202	15:16:45	01:57:11	2m	5.11 IAU
		12			↑	60S	
		13			↓	60S	
		14	TXCV-a	12:38:39	36:01:23	4m	9.01 SYMBIOTIC
		15			↑	60S	
		16			↓	60S	
		17	(2)	15:29:15	23:54:51	5m	7.8/50 Asteroid
		18			↑	60S	bright. ↓
		19			↓	60S	moon ↓
		20	W133H-c	18:20:03	23:25:47	9m	10.51 SYMBIOTIC
		21			↑	60S	
		22			↓	60S	
		23	CH Cyg	19:23:14	50:08:31	2m	7.01 SYMBIOTIC
		24			↑	60S	
		25			↓	60S	
		26	CI CYG	17:48:21	35:33:24	9m	11.01 SYMBIOTIC
		27			↑	60S	
		28			↓	60S	
		29	RSO ph	17:47:31	06:41:00	9m	12.01 SYMBIOTIC
		30			↑	60S	
		31					
		32					

Intensified Reticon

TO CAM 7/7

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300L

Observer HOP, REM

Telescope 61" Wyeth

Date 7/6-7

Disk OR 0 1635

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	TH-AR		↓	60 ^s	6563 A H ₂ Prof. 1-5
		2	VCu _n	13:17:17	45:47:22	7 ^m	6.8/
		3	TH-AR		↑	60 ^s	
		4	TH-AR		↓	60 ^s	
		5	PCyg	20:15:57	37:52:36	2 ^m	4.8/ PCyg
		6	TH-AR		↓	60 ^s	
		7	S49438	20:16:21	40:34:31	4 ^m	5.8/ PCyg
		8	TH-AR		↑	60 ^s	
		9	TH-AR		↓	60 ^s	-5893 A
		10	S49438	20:16:21	40:34:31	2.5 ^m	5.8/ PCyg
		11	TH-AR		↓	60 ^s	
		12	PCyg	20:15:57	37:52:36	2 ^m	4.8/ PCyg
		13	TH-AR		↑	60 ^s	
		14	TH-AR		↓	60 ^s	-5876 A
		15	PCyg	20:15:57	37:52:36	2 ^m	4.8/ PCyg
		16	TH-AR		↓	60 ^s	
		17	S49438	20:16:21	40:34:31	3 ^m	5.8/ PCyg
		18	TH-AR		↑	60 ^s	
		19	TH-AR		↓	60 ^s	-5754 A
		20	S49438	20:16:21	40:34:31	2.5 ^m	5.8/ PCyg
		21	TH-AR		↓	60 ^s	
		22	PCyg	20:15:57	37:52:36	2 ^m	4.8/ PCyg
		23	TH-AR		↑	60 ^s	
		24	TH-AR		↓	60 ^s	-5127 A
		25	PCyg	20:15:57	37:52:36	4.5 ^m	4.8/ PCyg
		26	TH-AR		↓	60 ^s	
		27	S49438	20:16:21	20:16:21	2 ^m	5.8/ PCyg
		28	TH-AR		↑	60 ^s	
		29	TH-AR		↓	60 ^s	-5056 A
		30	S49438	20:16:21	20:16:21	4 ^m	5.8/ PCyg
		31	TH-AR		↓	60 ^s	
		32	PCyg	20:15:57	37:52:36	2 ^m	4.8/ PCyg
		33	TH-AR		↑	60 ^s	

Intensified Reticon

TO CAM 7/11

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300L

Observer MDP, REM

Telescope 61" Wyath

Date 7/6-7-1987

Disk ORO 1636

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	-6563A (H α)
		2	Beta Agr 21:28:56	-05:47:32		8.5 ^m	2.9/ H α profile
		3			↑	60 ^s	clouds...
		4			↓	60 ^s	
		5	FF Agr 21:58:01	-02:59:00		15 ^m	8.7/ H α profile
		6			↑	60 ^s	
		7			↓	60 ^s	
		8	Alph Agr 22:05:07	-00:23:01		7 ^m	2.9/ H α profile
		9			↑	60 ^s	
		10			↓	60 ^s	
		11	LAM AN 23:35:06	46:11:14		4 ^m	3.9/ H α profile
		12			↑	60 ^s	
		13				120 ^m	-5187A - clouded out 2:38 ^{EST}
		14				120 ^{MIN}	
JULY 7-8 DWL		15				100 ^{SEC}	Front = 3.32V MCP = 1
		16				"	
		17				"	
		18				"	
		19				"	
		20				"	
		21				"	
		22				"	
JULY 9-10		23			↓	60 ^s	5187
		24	SKYEVE 0 th HA	+6		2 ^h	
		25			↑	60 ^s	
		26			↓	60 ^s	
		27	SKYEVE 4 th W	+6		2 ^h	
		28			↑	60 ^s	
		29			↓	60 ^s	
		30	14605 16 11 43	-03 37		2 ^h	1 AM
		31				60 ^s	
		32					

Spectrograph ECHELLE Intensified Reticon TO CAM 7/11
 Grating 300 Log Sheet RAW RET
 Telescope SH Date 7/9-10/87 Observer Jan MDP
 Disk OR 11637

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	5187
		2	H136202	15 16 45 01 57		2 ^m	1 ALL
		3			↑	60 ^s	
		4			↓	60 ^s	6563
		5	P CYG	20 15 57 37 53		2 ^m	P CYG
		6			↑	60 ^s	
		7			↓	60 ^s	5876
		8	P CYG	" "		2 ^m	
		9			↑	60 ^s	
		10			↓	60 ^s	5754
		11	P CYG	" "		2 ^m	
		12			↑	60 ^s	
		13			↓	60 ^s	5127A
		14	P CYG	" "		4 ^m	
		15			↑	60 ^s	
		16			↓	60 ^s	5056A
		17	P CYG			4 ^m	
		18			↑	60 ^s	
		19			↓	60 ^s	5187A - same
		20	SU VUL	19:49:28 22:19:53		4 ^m	CEPH
		21			↑	60 ^s	
		22			↓	60 ^s	
		23	157422	17:19:52 35:52:14		10 ^m	8.11 F STARS
		24			↑	60 ^s	
		25			↓	60 ^s	
		26	158956	17:29:06 19:03:12		21 ^m	8.11 F STAR
		27			↑	60 ^s	
		28			↓	60 ^s	
		29	159502	17:32:02 29:07:42		10 ^m	8.11 SB? F star
		30			↑	60 ^s	
		31					
		32					

Intensified Reticon TO CAM 7/11

Spectrograph ECHELLE Log Sheet RAW/RET

Grating 3002 Observer MOP

Telescope 61" WJ + H Date 7/9-10 Disk ORO 1638

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

RA Dec ↑/↓

1		TH-AR			↓	60s	
2	162880(A)		17:49:42	44:55:09		6m	7.2/ upper pt. of pair Fstar
3		TH-AR			↓	60s	
4	16288B		"	"		6m	7.2/ lower pt. of pair Fstar
5		TH-AR			↑	60s	
6		TH-AR			↓	60s	
7	166281		18:06:53	24:32:55		11m	8.0/ Fstar
8		TH-AR			↑	60s	
9		TH-AR			↓	60s	
10	166600		18:08:05	34:14:29		15m	8.6/ Fstar
11		TH-AR			↑	60s	
12		TH-AR			↓	60s	
13	168066		18:14:13	47:32:08		10m	7.5/ Fstar
14		TH-AR			↑	60s	
15		TH-AR			↓	60s	
16	168342		18:15:00	52:50:56		10m	8.1/ Fstar
17		TH-AR			↑	60s	
18		TH-AR			↓	60s	
19	170313		18:25:01	46:46:34		5m	8.1/ Fstar
20		TH-AR			↑	60s	
21		TH-AR			↓	60s	
22	171275		18:30:31	36:23:16		7m	7.6/ Fstar
23		TH-AR			↑	60s	
24		TH-AR			↓	60s	
25	171244		18:30:44	24:38:27		4m	7.7/ Fstar
26		TH-AR			↑	60s	
27		TH-AR			↓	60s	
28	172342		18:36:37	24:36:03		10m	8.0/ Fstar
29		TH-AR			↑	60s	
30		TH-AR			↓	60s	
31	173109		18:40:03	43:30:00		5m	7.9/ Fstar
32		TH-AR			↑	60s	

Intensified Reticon TO CAM 7/11

Spectrograph ECHELLE Log Sheet RAWRET

Grating 3002 Observer MDP

Telescope 61" W 7' eth Date 7/9-10 Disk ORO 1639

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60 ^s	
		2	H213014	22:28:45	17:00:28	4 ^m	7.7/ IAU
		3			↓	60 ^s	
		4	213014B	22:28:46	17:00:28	6 ^m	/ IAU
		5			↑	60 ^s	
		6			↓	60 ^s	down checking...
		7	21331C	22:27:51	22:12:36	5 ^m	7.9/ Fstar
		8			↑	60 ^s	
		9			↓	60 ^s	
		10	SKYDUNE	24 ^h E	+35.0	3 ^m	
		11			↑	60 ^s	
		12			↓	60 ^s	
		13	SKYDUNE	Ona	+35.0	2 ^m	
		14			↑	60 ^s	
		15	NO ID	(INCANDS)		4 HRS	
		16				120 ^{MIN}	
		17				40 ^{MIN}	
10-11 July 1987		18			↓	60 ^s	-heavy haze-
		19	SKY-EVE	φ hrs	+240	2 ^m	
		20			↑	60 ^s	- CPU problems -
		21			↓	60 ^s	
		22	H1460S1	16:11:43	-03:34:01	2 ^m	2.7 IAU standard 0.1ND
		23			↑	60 ^s	
		24			↓	60 ^s	
		25	(2)	15:28:55.2	23:19:50	6 1/2 ^m	9.9 Asteroid
		26			↑	60 ^s	
		27			↓	60 ^s	
		28	S122332	17:20:30	00:53:12	2 ^m	7.5/20 HALOS
		29			↑	60 ^s	
		30					
		31					
		32					

7/17

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 3002

Observer RPS, Morsey

Telescope 61" Wyeth

Date 10-11 July 1987

Disk ORO 1640

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	G204-23	17:38:26	44:05:30	3m	9.0/15 HALOS
		3	Th-AR		↑	60s	stopped by clouds
7/11-12/87		4	TH-AR		↓	60s	
		5	SKYEVIEW	15 ^h 00 ^m	+40°	4m	very hazy
		6	TH-AR		↑	60s	
		7	TH-AR		↓	60s	
		8	SKYEVIEW	4 ^h west	+10	5m	→ seeing ~1.5-2.0
		9	TH-AR		↑	60s	→ haze hills about 2.0 magnitudes
		10	TH-AR		↓	60s	
		11	H114362	13:09:54	17:46:58	4m	7.3 IAU
		12	TH-AR		↑	60s	
		13	TH-AR		↓	60s	
		14	G59-32	12:37:32	21:05:12	12m	9.0 (tough) HALO (25cta)
		15	TH-AR		↑	60s	
		16	TH-AR		↓	60s	
		17	H102495	12:56:49	09:30:42	12m	9.5 (tough) HALO (15cta)
		18	TH-AR		↑	60s	
		19	TH-AR		↓	60s	
		20	H135148	15:10:55	12:38:36	7m	9.5 HALO
		21	TH-AR		↑	60s	
		22	TH-AR		↓	60s	
		23	H146051	16:11:43	-03:34:01	2m	2.7 IAU
		24	TH-AR		↑	60s	
		25	TH-AR		↓	60s	
		26	G182-7	17:23:01	38:04:54	8m	8.1 HALO
		27	TH-AR		↑	60s	
		28	TH-AR		↓	60s	6563A
		29	P-CYG	20:15:57	37:53	2m	4.8 SALLY
		30	TH-AR		↑	60s	
		31					
		32					

7/17

TO CAM

Intensified Reticon

Spectrograph ECHELLE

Log Sheet

RAW RET

Grating 3000

Observer Moseley, REM

Telescope Wyeth 61"

Date 7/11/87

Disk ORO 1641

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	TH-AR			3m	5876A PCYG
		3	PCYG	20:16	37:53		
		4	TH-AR		↑	60s	
		5	TH-AR		↓	60s	
		6	PCYG	20:16	37:53	5m	5754A PCYG
		7	TH-AR		↑	60s	
		8	TH-AR		↓	60s	
		9	PCYG	20:16	37:53	5m	5127A PCYG
		10	TH-AR		↑	60s	
		11	TH-AR		↓	60s	
		12	PCYG	20:16	37:53	5m	5056A PCYG
		13	TH-AR		↑	60s	
INCA M13		13	TH-AR	INCA M13	↑	60s 120	6563 5187
INCA M13		14	A AND	23 35 46 46 11		120 min	FULLY
		15	INCA M13			120 min	
7/17-13		16	TH-AR		↓	60s	
65 MDP		17	SKYVIEW	0 HA	+35.0	2"	
		18	TH-AR		↑	60s	
		19	TH-AR		↓	60s	
		20	SKYVIEW	4 HA W	+35.0	2.5m	
		21	TH-AR		↑	60s	
		22	TH-AR		↓	60s	
		23	H1146001	18:11:43	-03:39:0	4m	2.7/ Hazecity! (1500 ^{0.5} of 11.) LAU
		24	TH-AR		↑	60s	
		25	TH-AR		↓	60s	
		26	(2)	15:22:00	05:06:44	4m	9.9/ AST
		27	TH-AR		↑	60s	
		28	TH-AR		↓	60s	Hazecity
		29	135100	15:09:49	46:52:44	25"	8.1/300 141 ^{0.5} FSTAR
		30	TH-AR		↑	60s	
		31	2 INCA M13			120m	THE END
		32					

7/17

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300L

Observer MOP

Telescope 61"

Date JULY 12-13 1987

Disk ORO 1642

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1				120 ^{MIN}	
		2				120 ^{MIN}	
		3				120 ^{MIN}	
7/13-14		4			↓	60 ^S	5187A 80μ SLIT
		5	SKYEVIEW	0 HAS +35		2m	
		6	TH-AR		↑	60 ^S	
		7	TH-AR		↓	60 ^S	
		8	SKYEVIEW	4 ^{HIS} W +35		2m	HA ZC
		9	TH-AR		↑	60 ^S	
		10	TH-AR		↓	60 ^S	
		11	H46051	16:11:43 -03:54:01		4m	2.7/ IAU
		12	TH-AR		↑	60 ^S	
		13	TH-AR		↓	60 ^S	
		14	(2)	15:28:54 22:52:10		5m	7.9/ AST
		15	TH-AR		↑	60 ^S	
		16	TH-AR		↓	60 ^S	5563A
		17	PCYG	20:15:57 37:52:36		15m	4.8/ PCYG
		18	TH-AR		↑	60 ^S	
7/14-15		19	TH-AR		↓	60 ^S	↓
		20	SKYEVIEW	1 ^{HIS} HA +35.0		2.5m	5187A
		21	TH-AR		↑	60 ^S	
		22	TH-AR		↓	60 ^S	
		23	SKYEVIEW	4 ^{HIS} W +35.0		3m	
		24	TH-AR		↑	60 ^S	clouds
7/15-16		25	TH-AR		↓	60 ^S	
		26	SKYEVIEW	0 HA +35.0		2.5m	
		27	TH-AR		↑	60 ^S	
		28	TH-AR		↓	60 ^S	
		29	SKYEVIEW	4 ^{HIS} W +35.0		2m	
		30	TH-AR		↑	60 ^S	
		31					
		32					

Intensified Reticon

TO CAM 7/17

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300L

Observer M.D.P. RGM

Telescope 61" Wjeth

Date 7/15-16 1987

Disk ARO 1644

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

Change....	File	ID	1950.0	RA	Dec	L/R	Exposure	Comments
		1				↓	60s	5127 A
		2		20:16:21	20:34:8		17 m	5.8/2000
		3				↓	60s	More clouds...
		4		20:15:57	20:52:36		12 m	4.8/2000
		5				↑	60s	
		6				↓	60s	6563 A
		7		"	"		11 m	
		8				↑	60s	
		9					120	5187 A
		10					120	
7/16-17		11				↓	60s	
		12		0 H A	+350		2 m	SKY
		13				↑	60s	
		14				↓	60s	
		15		4 ^h 15 ^m W	+250		2 m	SKY
		16				↑	60s	
		17				↓	60s	
		18		18:16:45	01:52:11		2 m	5.11
		19				↑	60s	TAU
		20				↓	60s	
		21		12:32:27	21:05:12		7 m	9.0/60 15% sky cont HALO
		22				↑	60s	
		23				↓	60s	
		24		12:52:44	08:06:12		5 m	9.9/20 HALO
		25				↓	60s	
		26		12:59:06	09:35:43		6 m	9.7/30 HALO
		27				↑	60s	
		28				↓	60s	
		29		12:06:25	04:16:54		6 m	10.5/15 HALO
		30				↑	60s	
		31						
		32						

7/17

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300R

Observer M Payson

Telescope 61" W 7.5th

Date July 16-17 1987

Disk ORU 1647

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		TH-AR			↓	60 ^s	
	6126-52		22:01:51	9:18:36	↓	4 ^m	11.0/15 HALO Fin
		TH-AR			↑	60 ^s	
		TH-AR			↓	60 ^s	
	618-29		22:03:57	05:40:54	↓	4 ^m	10.6/15 - HALO Fin
		TH-AR			↑	60 ^s	
		TH-AR			↓	60 ^s	
	6127-34		22:25:56	27:51:24	↓	4 ^m	1.0/15 HALO Fin
		TH-AR			↑	60 ^s	
		TH-AR			↓	60 ^s	
	6214-18		22:13:08	39:31:36	↓	2 ^m	7.5/20 this is just our 2nd star HALO
		TH-AR			↑	60 ^s	
		TH-AR			↓	60 ^s	
	667-38		22:56:49	11:55:36	↓	3 ^m	8.3/100 HALO
		TH-AR			↑	60 ^s	
		TH-AR			↓	60 ^s	
	6190-10		23:05:39	41:35:12	↓	5 ^m	11.2/20 HALO
		TH-AR			↑	60 ^s	
		TH-AR			↓	60 ^s	
	6165532		23:07:48	13:30:54	↓	6 ^m	8.4/100 HALO
		TH-AR			↑	60 ^s	this is identical to 19 file
		TH-AR			↓	60 ^s	
	213014B		22:25:46	17:00:28	↓	5 ^m	9.0/ IAU
		TH-AR			↓	60 ^s	
	4213014		22:25:45	17:00:28	↓	2 ^m	7.7/ IAU
		TH-AR			↑	60 ^s	
		TH-AR			↓	60 ^s	
	SKYDOME	4th E	+35.0		↓	5 ^m	SKY
		TH-AR			↑	60 ^s	
		TH-AR			↓	60 ^s	
	SKYDOME	0 HA	+35.0		↓	4 ^m	SKY
		TH-AR			↑	60 ^s	

Intensified Reticon

TO CAM1

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300L

Observer _____

Telescope 61" Wgeth

Date July 16-17 1987

Disk ORU 1648

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	Incand's			120 ^m	PROBABLY N.G. (LAMP OFF)
		2	INCAND			120 ^m	
JULY 17/18		3	TH-AR		↓	60 ^s	5187 A 80 μ SCI
		4	SKYELEM	0 ^{HRS} HA +35		2 ^{MIN}	CLEAR
		5	TH-AR		↑	60 ^s	
		6	TH-AR	4^{HRS} HA +35	↓	60 ^s	
		7	SKYELEM	4 ^{HRS} W HA +35		2 ^{MIN}	
		8	TH-AR		↑	60 ^s	
		9	TH-AR		↓	60 ^s	
		10	H136202	15:16:45 01:57:11		2 ^{MIN}	5.1 / 1 AU
		11	TH-AR		↑	60 ^s	
		12	TH-AR		↓	60 ^s	
		13	(2)	15:29:09 22:14:36		6 ^{MIN}	9.9 / ASTEROID
		14	TH-AR		↑	60 ^s	
		15	TH-AR		↓	60 ^s	
		16	G59-32	12:37:37 21:05:12		6 ^m	9.0 HALO
		17	TH-AR		↑	60 ^s	
		18	TH-AR		↓	60 ^s	
		19	+102495	12:56:49 09:30:42		6 ^m	9.7 HALO
		20	TH-AR		↑	60 ^s	
		21	TH-AR		↓	60 ^s	
		22	+122547	13:01:24 11:41:00		6 ^m	9.9 HALO
		23	TH-AR		↑	60 ^s	
		24	TH-AR		↓	60 ^s	
		25	USGR	18:28:57 -19:09:42		2 ^m	6.5 CEPH
		26	TH-AR		↑	60 ^s	clouds wait a while.
		27	TH-AR		↓	60 ^s	
		28	H182572	19:22:35 11:50:10		90 ^s	5.2 1 AU
		29	TH-AR		↑	60 ^s	
		30					watch out for guiding errors giving systematic error in vel. (?)
		31					
		32					

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET

Grating 3002

Observer Morsey, AJN

Telescope Wyeth 61"

Date 7/17-18/87

Disk ORO 1649

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	GL 623	16:22:39 48:28:24		8m	10.3 MISC
		3			↑	60s	
		4			↓	60s	
		5	G24-3	20:03:15 +03:54:24		8m	10.4 clouds... in front.
		6			↑	60s	
		7			↓	60s	← Hour and DAY wrong!
		8	G144-33	20:41:59 21:43:24		3m	10.1 HALO
		9			↑	60s	
		10			↓	60s	
		11	G26-11	21:29:56 00:47:42		5m	8.3 HALO
		12			↑	60s	
		13			↓	60s	
		14	G26-8	21:29:10 -02:08:54		7 min	10.5 HALO
		15			↑	60s	
		16			↓	60s	
		17	G26-21	21:35:34 -02:21:28		2m	8.6 HALO
		18			↑	60s	
		19			↓	60s	
		20	G93- 27	21:37:24 06:09:18		15m	11.6 HALO
		21			↑	60s	
		22			↓	60s	
		23	G93-28	21:37:52 -02:14:36		2m	8.6 HALO
		24			↑	60s	
		25			↓	60s	
		26	S164618	21:41:42 -12:00:18		2m	8.6 HALO
		27			↑	60s	
		28			↓	60s	
		29	-095831	21:42:51 -08:39:06		6m	10.4 HALO
		30			↑	60s	
		31					
		32					

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET

Grating 300L

Observer Mosley, AJN

Telescope Wyeth 61"

Date 7/17-18/87

Disk ORD 1650

1950.0

L/R

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

1	TH-AR				↓	60s		
2	G26-34	21:49:05	00:36:54			2m	8.7	HALO
3	TH-AR				↑	60s		
4	TH-AR				↓	60s.		
5	G93-47	21:49:39	07:24:30			6m	10.8	- HALO
6	TH-AR				↑	60s		
7	TH-AR				↓	60s		
8	G18-5	21:51:37	04:44:30			2m	9.3	HALO
9	TH-AR				↑	60s		
10	TH-AR				↓	60s		
11	G18-10	21:56:36	02:59:30			2m	8.45	Halo
12	TH-AR				↑	60s		
13	TH-AR				↓	60s		
14	G18-27	22:02:58	05:30:42			6m	10.57	Halo
15	TH-AR				↑	60s		
16	TH-AR				↓	60s		
17	G18-30	22:03:59	01:36:30			90s	7.3	HALO
18	TH-AR				↑	60s		
19	TH-AR				↓	60s		
20	L3780	22:11:46	-08:59:09			13m	11.8	HALO
21	TH-AR				↑	60s		
22	TH-AR				↓	60s		
23	G67-38	22:56:49	11:55:36			3m	8.4	HALO
24	TH-AR				↑	60s		
25	TH-AR				↓	60s		
26	G190-10	23:05:39	41:35:12			8m	11.2	HALO
27	TH-AR				↑	60s		
28	TH-AR				↓	60s		
29	H213014	22:25:46	17:00:28			3m	7.7	IAU
30	TH-AR				↑↓	60s		
31	H213014B	22:25:46	17:00:28			7m	9.0	IAU
32	TH-AR				↑			

Intensified Reticon

TO CAM

Spectrograph ECHELLE

Log Sheet

RAW RET

Grating 300L

Observer Morsey, ATN

Telescope Wyeth 61"

Date 7/17-18/87

Disk 0201651

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	dark
		2		4 hr W +10°		5m	SKY
		3			↑	60s	
		4			↓	60s	
		5		ZENITH +30		5m	SKY
		6			↑	60s	
		7				120m	
		8				120mm	
18-19 July 1987		9			↓	60s	5187Å -partly cloudy-
		10		φ hrs +30°		2m	
		11			↑	60s	
		12			↑	60s	
		13		5h W +30°		150s	
		14			↑	60s	-clouds-
		15			↓	60s	
		16		H146051 16:11:43 -03:3481		3m	2.7 (0.1 NO) TAV
		17			↑	60s	
		18			↓	60s	
	19		(2) 15:29:195 22:04:064		8m	10.0 asteroid	
	20			↑	60s		
	21			↓	60s		
	22		168459 18:17:22 -08:00:12		10m	6.54 F stars	
	23			↑	60s		
	24			↓	60s		
	25		163117 17:52:08 -11:37:244		8m	6.96 F STARS	
	26			↑	60s		
	27			↓	60s		
	28		162883 17:50:51 -08:41:55		7 min	8.1 CUT short by clouds prob. no good F STARS	
	29			↑	60s		
	30					-clouds & rain-	
	31						
	32						

Intensified Reticon

TO CAM

Spectrograph ECHELLE Log Sheet

Grating 300R Observer RPS, MOP

Telescope Wyeth 61" Date 19-20 July 1987 Disk ORO 1652

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
		2	SKY-EVE	φhrs +35°		2m	SKY
		3	TH-AR		↑	60s	
		4	TH-AR		↓	60s	
		5	SKY-EVE	4 hrs W +35		2m	SKY
		6	TH-AR		↑	60s	
		7	TH-AR		↓	60s	
		8	+136202	15:16:45 01:57:11		2m	5.1/ JAU
		9	TH-AR		↑	60s	
		10	TH-AR		↓	60s	
		11	158527	17:27:47 -23:48:12		14m	7.3/ FSTAR
		12	TH-AR		↑	60s	
		13	TH-AR		↓	60s	
		14	162883	17:50:51 -08:41:54		12m	8.1/ FSTAR
		15	TH-AR		↑	60s	
		16	TH-AR		↓	60s	
		17	72547	18:38:47 -24:24:06		12m	7.6/ Fstar
		18	TH-AR		↑	60s	
		19	TH-AR		↓	60s	clouds coming from SW
		20	175384	18:55:28 -18:43:39		14m	8.2/ Fstar
		21	TH-AR		↑	60s	
		22	TH-AR		↓	60s	
		23	175432	18:53:00 -14:52:48		20m	8.2/ FSTAR
		24	TH-AR		↑	60s	
		25	TH-AR		↓	60s	
		26	78341	19:06:02 -18:45:48		14m	7.9/ FSTAR
		27	TH-AR		↑	60s	
		28	TH-AR		↓	60s	
		29	180539	19:14:43 -18:00:42		12m	8.0/ FSTAR
		30	TH-AR		↑	60s	
		31					
		32					

Intensified Reticon

Spectrograph ECHELLE Log Sheet TO CAM

Grating 300R Observer M Payson

Telescope 61" Wyeth Date July 19-20 1998 Disk OR 0 1653

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

RA Dec ↑/↓

1		TH-AR			↓	60s	
2	(6)	19:34:24	-10:35:28			12m	9.11 AST
3		TH-AR			↑	60s	
4		TH-AR			↓	60s	SYS CRASH! MORE CLOUDS
5	-176036	20:34:27	-16:44:30			20m	10.5/50 HALO
6		TH-AR			↑	60s	
7		TH-AR			↓	60s	
8	214-18A	22:13:08	39:31:36			2m	7.5/20 HALO
9		TH-AR			↓	60s	1hr delay: clouds.....
10		TH-AR			↓	60s	
11	214-18B	22:13:08	39:31:36			18m	11.5?/15 HALO
12		TH-AR			↑	60s	
13		TH-AR			↓	60s	Another cloud delay
14	6127-33	22:25:40	24:41:00			25m	9.9/15 4 ^{hrs} - not loaded on disk. HALO kept out of interest
15		TH-AR			↑	60s	
16		INCANDS				120m	NIGHT CALLED: CLOUDS 2:05 EST
17		INCANDS				120m	
18		INCANDS				69m	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							

Intensified Reticon

TO CAM 7/31

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300L

Observer D.W. LaMann RPS MDP

Telescope Wyeth

Date 30-31 July 87

Disk ORO 1654

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1	LH 1.018				Spectrograph to Cambridge for
		2	RH 1.018				2nd try at new cross dispersion
		3	LH 1.000				micrometer. Flexure still 1 order.
		4	RH 1.000				-5h to +5h Back to old system
		5	INCAND			120 ^m W	- Blue Thunder -
		6	TH-AR		↓	60^s	
		7	2130148	22:25:46	17:00:28		9m 9/40 IAU
		8	TH-AR		↓	60 ^s	
		9	H213014	22:25:45	17:00:28		2m 7.7/ IAU
		10	TH-AR		↑	60 ^s	
		11	TH-AR		↓	60 ^s	
		12	6127-33	22:25:40	24:41:00		5m 9.9/15 HALO
		13	TH-AR		↑	60 ^s	serious clouds ...
		14	TH-AR		↓	60 ^s	
		15	(3)	22:12:16	-01:14:21		4m 9.8/ AST
		16	TH-AR		↑	60 ^s	
		17	TH-AR		↓	60 ^s	
		18	61K-55	22:30:20	10:09:00		3m 9.3/15 HALO
		19	TH-AR		↑	60 ^s	
		20	TH-AR		↓	60 ^s	
		21	6191281	22:35:14	-22:54:12		11m 9.1/30 HALO
		22	TH-AR		↑	60 ^s	
		23	TH-AR		↓	60 ^s	
		24	S191333	22:34:17	-21:02:48		14m 9.2/30 C HALO
		25	TH-AR		↑	60 ^s	L
		26	TH-AR		↓	60 ^s	O
		27	S147079	00:03:14	-19:56:30		7m 9.6/15 U HALO
		28	TH-AR		↑	60 ^s	D
		29	TH-AR		↓	60 ^s	S
		30	S166200	00:14:13	-25:44:38		6m 8.3/20 HALO
		31	TH-AR		↑	60 ^s	
		32					

Intensified Reticon

TO CAM 7/31

Spectrograph ECHELLE

Log Sheet

RAW/RET

Grating 300R

Observer M Payson / RPS/ATJN

Telescope 61" length

Date July 30-31 1987

Disk ORO 1655

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

Change....	File	ID	RA	Dec	L/R	Exposure	Comments
		1	TH-AR		↓	60s	clouds rollin in
		2	Z13014B	22:25:46	17:00:28	9m	9/ fighting cloud IAU
		3	TH-AR		↓	60s	
		4	H213014	22:25:45	17:00:28	2m	2.7/ IAU
		5	TH-AR		↑	60s	
		6	TH-AR		↓	60s	DAW n...
		7	627-44	22:41:18	03:37:12	4m	2.4/30 Quasar target HALO
		8	TH-AR		↑	60s	
		9	TH-AR		↓	60s	
		10	SKYDOME	4 hrs E	+35	2m	SKY
		11	TH-AR		↑	60s	
		12	TH-AR		↓	60s	
		13	SKYDOME	0 HA	+35	2m	SKY
		14	TH-AR		↑	60s	
		15	INCAND			120m	
		16	INCAND			120m	
		17	INCAND			57m	
31 July -		18	TH-AR		↓	60s	5187Å -clear-
1 Aug.		19	SKYEVE	φ hrs	+10°	2m	
1987		20	TH-AR		↑	60s	
		21	TH-AR		↓	60s	
		22	SKYEVE	4 hrs. W	+10°	2m	
		23	TH-AR		↑	60s	
		24	TH-AR		↓	60s	
		25	H146051	16:11:43	-03:34:01	2m	2.7 IAU standard 0.1 ND
		26	TH-AR		↑	60s	
		27	TH-AR		↓	60s	
		28	S101380	15:05:06	17:38:30	9 min	9.2/50 HALOS
		29	TH-AR		↑	60s	
		30	/				
		31	/				
		32	/				

Intensified Reticon

TO CAM 8/1

Spectrograph ECHELLE

Log Sheet

Grating 300L

Date 31 July - 1 Aug. 1987

Observer RAW/RET RPS, AJN

Telescope 61" Wyeth

Date

Disk ORO 1657

Change....	File	ID	1950.0 RA	Dec	L/R ↑/↓	Exposure	Comments
		1			↓	60s	
	G129-42	25:52:30	20:06:24			3m	9/20 HALO
		3			↑	60s	
		4			↓	60s	
	G130-32	25:54:31	53:54:40			2m	8.5/20 - HALO
		6			↑	60s	
		7			↓	60s	
	G68-31	23:33:33	18:09:48			2m	7.7/20 HALO
		9			↑	60s	
		10 11			↓	60s	
	H4128	00:41:05	-18:15:39			2m	2.φ IAU standard 0.1ND (watch for sky)
		12 13			↑	60s	
		13 14			↓	60s	
	SKY-DWN	4hrs. E	+30°			2m	Why are counts so low?
		15 16			↑	60s	- sky is late; should be ± 3000 not 1000!!
		16 17			↓	60s	
	SKY-DWN	φ hrs	+30°			2m	OR!
		18 19			↑	60s	
	INCANDS					120''	
	INCANDS					112''	
		21 22			↓	60s	S187A - clear -
	SKY-EVE	φ hrs.	+30°			2m	
		23 24			↑	60s	
		24 25			↓	60s	
	SKY-EVE	4.5 hrs W	+30°			2m	
		26 27			↑	60s	
		27 28			↓	60s	
	H1460S1	16:11:43	-05:34:01			2m	2.7 IAU standard 0.1ND
		29 30			↑	60s	
		30 31					
		31 32					
		32 33					

*10 Dummy

1-2 AUGUST 1987