

Telescope:

IRIS=313

Frame prefix #: FR87I Day of Week: Thurs/Fri

RA offset:

Focus: 360

Humdty:

Sheet #: 1

Observers: Fink, Disanti, Engel, Mebold, Merciales, Schultz

Date MST/UT: 5/28-/29

Dec offset:

Tailpiece: 17

Balance: 470 Temp O/I:

FR87I

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST/UT	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
001	He	0.05	0.25						Paddle guide = 2.00
002	"	0.2	"						paddle drift = 40.0
3	Xe	"	"						Bias = -0.0060
4	Xe	0.1	"						focus = 3700
5	Xe	0.04	"						balance = 500
6	♀	0.05	N/S	11,200 ~8000	2:00:11	5:53:09.3	+25:40:26		slit 2.0
7	♀	0.05	N/S		2:02:52				" "
8	♀	0.05	N/S	7550 ~5000	2:05:06			1.15	AM 2.63 ↑ P Pentapris. elem
9	flat 2	300	R	2600 6600/490	4:40	16 41 57.6	59 31 54.0	-254	TAILPIECE TO 65° (=91) AM = 1.50
10	"	900	Hd	570/4470	4:52:18	"	"	-246	3.00 AM = 1.28 x=454 y=373
11	"	900	"		5:13:00	"	"	-226	1.24 x=455 y=372
12	DRF 21	900	"	9000 4470	5:36	16 50 49.2	61 02 24.4	-211	1.23 x=460, y=406
13	"	900	"	920/4990	5:56:28	"	"	-152	1.20 x4R 405
14	"	500	R		6:17:33	"	"	-1:32	TEHOLLY 40 INSID 45 1.98 x=479 406
15	DARK	1							

Telescope: 67

Frame prefix #: FR87I Day of Week:

RA offset:

Focus:

Humdty:

Sheet #: 2

Observers: Fink, Disanti Date MST/UT:

Dec offset:

Tailpiece:

Balance:

Temp O/I:

Engel, Mebold, Marciales, Schulte

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start UT MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
✓ 16	Dark	3							
✓ 17	"	3							
✓ 18	♂	3.0	R		6:55				
✓ 19	♂	1.0	R		7:01				12:10 filled rounder
✓ 20	OBSEAN	300	0.5		7:00			0:52E	
✓ 21	"	600			8:09:40			-0:32	1.81 POSS WRONG OBJECT
✓ 22	"	600			8:24:00			-0:13	sec 2 1.79
✓ 23	"	"			8:40:21			+0:03	1.78
✓ 24	BS 6269	1.0			9:11:35	16:53:39.5	-20:22:49.2		1.78
✓ 25	"	1.5			9:14:08				1.81
✓ 26	"	2.0			9:15:48				1.82
✓ 27	"	1.5			9:17:41				1.83
✓ 28	"	1.5			9:18:50				
✓ 29	"	1.5			9:20:59			+1:31	1.84
✓ 30	obanon	900			9:28:45				1.85 DRIFTED OUT

Telescope: 61^u

Frame prefix #: FR87I Day of Week:

RA offset:

Focus:

Humdty:

Sheet #: 3

Observers:

Date MST/UT:

Dec offset:

Tailpiece:

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start UT MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
31	OPBERON	600	0.25		9:56:15	17:40:05.2	-23:29:01.7	+1:19	1.94
32	OPBERON	600	0.25		10:11:05			+1:34	2.02
33	"	600	0.25		10:23:30			+1:58	2.17
34	"	600	0.25		10:35:18			+2:06	2.28 2.28
35	BS 6269	10	0.25		11:25:13			+3:13	2.95 ID UNCERTAIN (AFTER CRASH)
36	"	10	0.25		11:27:09			+3:15	2.98
37	"	10	0.25		11:28:14			+3:16	3.02
38	"	10	0.25		11:29:06			+3:17	3.04
39	FLAT	25	"						SKY FLATS
40	FLAT	20	"						
41	FLAT	20	"						Not too good

New tape

Telescope: 61"

Frame prefix #: FR87I Day of Week: Sat / Sun

RA offset:

Focus: 3946

Humdty:

Sheet #: 4

Observers: DiSanti Engel Date MST/UT: May 30/30
 Fink Mebold Marcialis Schultz

Dec offset:

Tailpiece: 77

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
✓ 42	Mercury	0.10	0.02	10000	1:53:17	6:05:40	25:35:14		tapped off lower dewar 5:30 p.m. focus = 3950
✓ 43	"	"	0.02	11000	1:57:39			75:01	AM = 2.35
✓ 44			0.02	8400	2:21:56	8:05:52	25:35:28	3:25:36	good data 7:20 P.M.
✓ 45	"	0.10	"	9000	2:24:39	"	"	3:28	"
✓ 46	"	0.10	0.03	10800	2:27:50	8:05:53	25:35:31	3:31	"
✓ 47	"	0.10	0.05	13000	2:32:25	"	"	3:36	"
✓ 48	"	0.10	0.05	11500	2:34:37	8:05:56	25:35:35	3:38	"
✓ 49	"	0.10	"	12000	2:36:17			3:40	
✓ 50	"	0.15	"	13000	2:38:16	8:05:38	25:35:38	3:42	
✓ 51	"	"	"	13000	2:40:10			3:43	
✓ 52	"	"	"	13000	2:41:39	8:05:00	25:35:43	3:45	⊛ very good data
✓ 53	"	"	"	13000	2:42:50			3:46	" 2.45 pm
✓ 54	"	"	"	12300	2:45:28			3:48	
✓ 55	"	"	"	12700	2:46:32	8:06:01	25:35:45	3:50	
✓ 56	"	"	"	12900	2:47:42			3:51	

Telescope:

Frame prefix #: F287J

Day of Week: Sat/Sun

RA offset:

Focus:

Humdty:

Sheet #: 5

Observers: Engel, 2x Fink, Date MST/UT: May 30/31

Dec offset:

Tailpiece: 22

Balance:

Temp O/I:

Rebold, Mascialis, Schulte

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
57	BS 2441	2.0	0.05			8:05:21	35:24:10	4:04	
✓ 57	BS 2441	2.0	0.05	2600/	3:00:45	8:05:31	35:18:10	4:04	quite clear in West
✓ 58	"	15.0	"	10700/	3:02:44	"	"	4:06	
✓ 59	"	25.0		11500/	3:04:54	8:05:32	35:23:59	4:08	
✓ 60	"	2.0	"	12000/	3:07:07			4.11	
✓ 61	"	60.0	"	12000/	3:09:19	8:05:33	35:24:03	4.13	
✓ 62	"	60.0	"	11500	3:11:31	"	"	4.15	
✓ 63	"	"	"	11600/	3:13:44	8:05:34	35:24:11	4.17	
✓ 64	"	"	"	11500/	3:15:51			4.19	
✓ 65	"	"	"	11500/	3:17:53	8:05:55	35:24:18	4.21	
✓ 66	"	"	"	11400/	3:20:20			4.24	
✓ 67	"	"	"	"	3:22:28	8:05:36	35:24:25	4.26	
✓ 68	"	"	"	11300/	3:24:31			4.28	
✓ 69									chip washing up

Telescope: 69"

Frame prefix #: B7I

Day of Week: Sa/Sun

RA offset:

Focus: 3945

Humdty:

Sheet #: 6

Observers: RLM, UM, ABS, UF, SE, ...

Date MST/UT: 30/31 MAY

Dec offset:

Tailpiece: 17

Balance: Temp O/I:

68.44

01.20

new
tape

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
70	DARK	01	N/A						
71	FF2	300	R		05:11:20			-2°20'	1.23
72	FF2	120	R		5:20			-2°11'	1.23 failed
72	"	"	"		5:25			-2°05'	" x=426 y=537
73	Dark	1	Hx						
74	FF2	900	Hx		5:34:56			-1°57'	1.20 ↑ 512x512
75	FF2	900	Hx		5:55:33			-1°36'	1.17 650x650
76	DRAF21	1800	Hx		6:14:08			-1°26'	1.18
77	"	300	R		6:36:36			-54'	1.15
78	DARK	1	R						
79	Mars	3	"		7:27:13				
80		1			7:30:10			1:00 E	Am = 1.87
81	Dark								
82	BLANK	300	0.25	5800/4500	8:33:38			0:04 W	Am = 1.78
83		600		6100/4500	8:42:14	97:39:57	-23:29:58	0:13	1.79

262713 megapix
log 8706.10

Telescope: 67"

Frame prefix #: 87I

Day of Week: Sat/Sun

RA offset:

Focus:

Humdty:

Sheet #: 7

Observers: RLM, UM, ABS, ...

Date MST/UT: 30/31 MAY

Dec offset:

Tailpiece:

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts/ Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
484	oberon	600	0.25	9500 4500	9:59:29				1.91
485	DS 6269	10			9:48:19			+2:07	X = 2.06
486	"	5			9:50:48				2.075
487		2			9:54:15				
488		1.0			9:55:46			+2:14	
489	DARK	1.0			9:56:48				dark
490	DS 6269	1.0			9:57:50				X = 2.134
491		1.0			10:05:00			+2:23	X = 2.20
492		1.0			10:06:05				dark
493		1.0			10:08:50			2:27	X = 2.23
494	oberon	600	6200		10:10:30				2.26
495					10:10:25 10:15:25				2.38
496				5000 4500	11:03:05				A.M. 2.55
497	DS 6269	1.0			11:23:17				
498		2.0			11:25:09				

26 2713 negs
by RLM
100 82 007

Telescope:

Frame prefix #:

Day of Week:

RA offset:

Focus:

Humdty:

Sheet #: 7

Observers:

Date MST/UT:

Dec offset:

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
✓ 99	BS 6269	2.0	.25		11:26:49				A.M. 3.96
✓ 100					11:28:02				A.M. 4.00
✓ 101					11:29:00				A.M. 4.05
✓ 102					11:30:13				A.M. 4.10
✓ 103	FF	60	0.25	14000	11:31:13				SKY
✓ 104	FF			16000					
✓ 105	FF	40	15000						
✓ 106	FF	10	9000						
✓ 107	FF	0.03							
✓ 108		0.03							
109		saturated							

262713 meg
 by [unclear]
 11:57:08. [unclear]

Telescope: 61"

Frame prefix #: FR871

Day of Week: Sun/Mon

RA offset:

Focus: 4020

Humdty:

Sheet #: 8

Observers: Engel, Fink

Date MST/UT: May 31/ Jun 1

Dec offset:

Tailpiece: 28

Balance: 490/500

Temp O/I: 6A/60

Mebold, Marciales, Schultz

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
109	Mercury	0.08	0.05	16000/	2:24:26	8:11:49	25:32:25	3:22:00	width Mercury = 0.6 um 7.25 um
110	"	"	"	11800/	2:26:15			3:23:49	H
111	"	0.10	"	14000/	2:28:02			3:25:40	
✓ 112	"	"	"	12000/	2:29:52	8:11:51	25:32:30	3:27:22	
✓ 113	"	"	"	15600/	2:32:32			3:30:06	
✓ 114	"	"	"	15000/	2:33:30			3:31:04	
✓ 115	"	"	"	13000/	2:34:53	8:11:53	25:32:32	3:32:25	
✓ 116	"	"	"	14000/	2:36:55			3:34:27	
✓ 117	"	"	"	10000/	2:38:11			3:35:42	
✓ 118	"	0.12	"	14000/	2:39:32	8:11:55	25:32:36	3:37:07	
✓ 119	"	"	"	14000/	2:41:36			3:39:08	
120	FFsky	1.2	"	10000	2:43:26			3:41:00	
121	Duck	"	"		2:44:16			3:41:51	
122	FFsky	"	"	8800	2:45:13			3:42:48	
123	"	"	"	8000	2:46:08			3:43:45	

262713 mega bytes
log: F109.AT

Telescope: 61"

Frame prefix #: 72871

Day of Week: Sun/Mon

RA offset:

Focus: 4020

Humdty: ☉

Sheet #: 9

Observers: Engel, Fink

Date MST/UT: 05/31/06/01

Dec offset:

Tailpiece: 78

Balance:

Temp O/I:

Udoel, Uscialo, Schmitt

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
124	FF sky	2.0	0.05	9100	2:46:55			3:44:42	
125	"	"	"	8100	2:47:52			3:45	
126	Mercury	0.15	0.05		2:49:32			3:47:06	
127	"	0.15	0.05	16,100	2:50:57			3:48:28	
128	"	0.15	0.05	16,900	2:52:30				
129	"	"	"	16800/	2:54:00	8:12:00	25:32:51	3:51:32	
130	"	0.14	"	14000/	2:55:30			3:53:00	*
131	"	"	"	12000/	2:56:32			3:54:01	
132	"	"	"	11500/	2:58:18	8:12:02	25:32:55	3:55:45	
133	BS 2141	40.0	"	16800/	3:05:57			4:10:45	
134	"	"	"		3:07:58			4:12:08	
134	"	"	"	11200	3:10:13	8:05:31	35:25:43	4:14:12	
135	"	"	"	13200/	3:13:03			4:17:02	
136	"	50.0		16800/	3:14:58			4:19:26	
137	"	"		14800/	3:16:51			4:20:55	

26271 3 megabytes
log 87:10-17

Telescope: 61"

Frame prefix #: F287I

Day of Week: Sun, Moon

RA offset:

Focus: 4020

Humdty:

Sheet #: 10

Observers: Eysel, Frick,
Musciano, Malcol Schick

Date MST/UT: 05/31/06/01

Dec offset:

Tailpiece: D

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
138	BS 2141	50.0	0.05	15,300 15,300	3:19:10	8:05:32	35:25:52	4:23:10	
139	BS 3626	30.0	0.05	4000/	3:44:40	11:08:01	26:42:01	3	1:45
140	"	14.0	"		3:53				1:54
141	"	15.0	0.05	9000/	3:55:10			1:56:50	
142	"	15.0	"	10000/	05:07:46	11:08:07	26:42:22	3:09:36	
143	"	"	"	9000/	05:11:10			3:12:54	
144	"	20.0	"	12000/	05:13:30			3:15:14	
145	"	15.0	"	13000/	5:15:53			3:17:35	
146	"	"	"	12700/	5:17:28	11:08:08	26:42:28	3:19:16	
147	"	"	"	12400/	5:19:49			3:21:33	
148	"	"	"	10200/	5:21:13			3:22:56	
149	"	"	"	11300/	5:25:24			3:27:08	
150	"	"	"	16000/	5:26:59	11:08:09	26:42:35	3:28:43	
151	"	"	"	11100/	5:29:18			3:31:06	
152	"	"	"	12600/	5:30:53			3:32:35	

062713 merged
by 8711.AT

Telescope: 61"

Frame prefix #: F287I

Day of Week: Sun/Mon

RA offset:

Focus: 4020

Humdty:

Sheet #: 11

Observers: Eysel, Fink,

Date MST/UT: 05/31/06/01

Dec offset:

Tailpiece: 28

Balance:

Temp O/I:

Uscorpa, Adeld, Schick

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
153	BS 3626	15.0	0.05	13000/	5:32:20	11:08:10	26:42:40	3:34:05	10:30 pm
154	"	"	"	11700/	5:34:54			3:36:40	
155	"	"	"	10200/	5:36:21			3:38:05	
156	"	"	"	11100/	5:37:48			3:39:35	
157	"	"	"	9800/	5:40:22	11:08:11	26:42:46	3:42:05	
158	"	"	"	9400/	5:43:13			3:44:55	
159	"	"	"	9400/	5:44:45			3:46:29	
160	"	20.0	"	11000/	5:46:39			3:48:22	
161	"	"	"	10600/	5:48:05			3:49:48	
162	"	"	"		5:49:31	11:08:12	26:42:55	3:51:15	topped off upper dewar
163	"	"	"		5:51:00			3:52:45	?
163									tailpiece A
164									
165									
166									

267713 meg
by fcs
1387E12.tif

Telescope: 64 inch

Frame prefix #: FR87I Day of Week: Sun/Mon

RA offset:

Focus:

Humdty:

Sheet #: R

Observers: Fink, Schmitz Date MST/UT: 31/05/01/06

Dec offset:

Tailpiece: 12

Balance:

Temp O/I:

Merrials, Engel Hobold

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
163	Flat 2	300	R		7:20	16:41:41	59:27:46	-1:10	
164	"	600	H α		7:29			-1:20	
165	"	1200	H α		7:40			+9:59	
166	DRAF21	1800	H α		8:08	16:50:53.3	61:00:50.6	+26:05	
167	"	1800	H α		8:40			:59:56	
168	Dark	1			9:12				
169	Dark	1							
170	Dark	1			9:15				
171	DRAF21	300	R		9:16:46			1:36:	
172	Flat 2	1800	H α		9:28	16:42:05	59:30:49.5	1:56	
173	LDS749B	60	R		10:21			-1:59	
173	"	.3	"		10:23			-1:56	16000 counts
175					10:25			-1:55	
					10:29			-1:52	
175	"	.3	R		10:31			-1:49	"
176	"	.3	R		10:33			-1:47	

207715 MS
1087013 HF

Telescope: 61

Frame prefix #: FR ~~PI~~ Day of Week: Mon

RA offset:

Focus: 3935

Humdty:

Sheet #: 13

Observers: Finketal Date ~~12/1~~/UT: 1 Jun 87

Dec offset:

Tailpiece: 17

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
177	LD5748	10	H α	9000	10:35			-4:45	
178	"	20	H α	1600	10:37			-4:43	
179	"	20	H α	~17300	10:39			-4:41	
180	VMa2	60	R		11:01			-4:56	
181	VMa2	60	R		11:02				OFFS RA 00:00:02.0 DEC -0:3:45
182	"	12	R	16000	11:03	048:28.94/5:20.54		-4:54	
183	"	12	R	22000	11:05	"	"	-4:52	
184	"	300	H α	11000	11:07	0:48:29.0 +5:20:52.6		-4:50	
185	"	300	H α	12000	11:14			-4:23	Realign. 5200 counts
186	Dark	1							
187	"	1							

127514.754
2073MB
BMSH37

245-474

Telescope: 614

Frame prefix #: FR87I

Day of Week: Monday

RA offset:

Focus: 3950

Humdty:

Sheet #: 14

Observers: Fink et al.

Date MST/UT: 06/01/06/01

Dec offset:

Tailpiece: 12

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
188	Mercury	0.10	0.05	16000/	21:03:48	6:16:17	25:26:52	0:0:15	3900 focus AN-1.01
189	"	"	0.05	16000/	21:10:18			0:06:25	2.10 pix
190	"	"	"	11600/	21:13:35			0:09:43	Dome half open hand done
191	"	"	"	15000/	21:17:00			0:13:15	
192	"	"	"	14000/	21:18:10			0:14:17	
193	"	"	"	12000/	21:19:55	6:16:20	25:26:50	0:16:05	AN-1.01
194	"	"	"	12600/	21:23:10			0:19:24	
195	"	"	"	14700/	21:24:25			0:20:40	
196	"	0.05	0.05	11000/	21:26:01			0:22:10	Dome shutter open
197	"	"	"	10000/	21:34:27			0:30:35	
198	"	"	"	11600/	21:35:37			0:34:45	
199	"	"	"	10000/	21:36:46	6:16:23	25:26:46	0:33:00	
200	"	"	"	10000/	21:40:36			0:36:43	
201	"	"	"	10000/	21:41:45			0:37:50	AN-1.02
202	"	"	"	12000	21:44:04			0:40:15	

202713 mb
W88715

Telescope: 61"

Frame prefix #: F287I

Day of Week: Mon

RA offset:

Focus:

Humdty:

Sheet #: 15

Observers:

Date MST/UT: 06/01/06/01

Dec offset:

Tailpiece: 17

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
203	Mercury	0.05	0.05	11000/	21:45:07	6:16:25	25:26:44	0:41:10	
204	"	"	"	11600/	21:47:25			0:43:30	
205	"	0.10	"	17000/	21:49:01			0:45:10	
206	"	"	"	16000/	21:51:20			0:47:25	
207	A GEM	0.20	0.05		22:30:40	7:33:50	31:56:58	0:09:30	BS 2891 A17=1.00 mv = 2.0
208	"	"	"	14000/	22:32:08			0:11:00	
209	"	"	"	14000/	22:33:10			0:12:05	
210	"	"	"	14600/	22:48:15			0:27:10	3960 focus A17=1.01
211	"	"	"	15000/	22:52:06			0:31:02	
212	"	"	"	12600/	22:53:02			0:31:55	
213	"	"	"		22:54:01	7:33:50	31:56:50	0:32:59	
214	"	"	"		22:55:20			0:34:15	
215	"	"	"	14100/	22:57:53			0:36:55	
216	"	"	"		22:58:51			0:37:45	
217	"	"	"		22:59:45			0:38:50	

262713 mb
Log 87116.tif

Telescope: 61"

Frame prefix #: F287I

Day of Week: Monday

RA offset:

Focus:

Humdty:

Sheet #: 16

Observers: Engel, Fie

Date MST/UT: 06/01/06102

Dec offset:

Tailpiece: 28

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
218	FF	0.4	0.05	1580/4100	2117:14				Topped/over dew 4:15
219	"	"	"	1500	~2117				
220	"	"	"	1590	~2118			424 3:14	
221	"	"	"	1520	~2120				
222	"	"	"	1500	~2122			3:17	
223	Mary	0.1	"	10360	2:24:05			3:19	
224	"	0.15	"	15475	2:25:51	8:13:46	+252558	3:21	
225	"	"	"	14150	26:42	"	"		
226	"	"	"	12150	29:46	48.2	"	3:25	
227	"	0.20	"	13700	29:31				
228	"	"	"	13550	29:32:28	49.1	2602.8	3:28	
229	"	"	"	13520	33:44			3:29	
230	"	"	"	13470	37:14	70.2	659	3:32:14	
231	"	"	"	13612	28:32	51.4	50	3:34.05	
232	"	"	"		59:43			3:35	

262713 mb
10587017.tif

-3

Telescope: 61"

Frame prefix #: 7287 I

Day of Week:

RA offset:

Focus:

Humdty:

Sheet #: 17

Observers: 

Date MST/UT:

Dec offset:

Balance:

Temp O/I:

Tailpiece: 78

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
233	Mars	0-20	0.05	7030	2:59:23	8:19:01.0	25:26:27		shutter not stuck
234	Mars	0:30	11		3:09:04	00	58.5	4:44	topped off lower dewar 9:25
									filled upper dewar 9:00 P.M.
239	RS 534	20	0.05	14700	4:22:47	16:45:53	+22:18:11	-3:13 +2	MA Tailpiece 78
235	"	"	"	10500	29:12	"	"	-3:11	
236	"	"	"	16800	27:12	52.7	11.5	-3:08	
237	"	"	"	12360	29:18			-3:06	
238	"	"	"	16200	5:49:47	52-1	25 18 00.5	=-2:35 +2:00	last star for article
239	"	"	"	17200	06:20			-2:29	
240	"	18	"	17500	07				
241	"	15	"	14000	09:03			-2:26	
242	"	"	"	15800	10	52.0	9.9		
243	"	"	"	17000	11:17			-2:29	
244	"	13	"	15100	12:17	"	"	-2:23	
245	"	"	"	16500	13:41			-2:22	

Telescope: 69 inch

Frame prefix #: FR27J

Day of Week: Mon

RA offset: 21s

Focus:

Humdty:

Sheet #: 19

Observers: Fink, Engel

Date MST/UT: June 1st

Dec offset: 230"

Tailpiece:

Balance:

Temp O/I:

Marricis, Schultz Mebold

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
256	DARK	1							tipped off upper dewar 11:10
257	DARK	1							
258	flat 2	1200	H α		7:21	164202.25	59:50	16.5-9:55	
259	"	300	R		7: ⁵² 44			³¹ 12:00	
260	DRAF22	600	R		8:03	165053.89	605521.0	0:23	
261	"	1800	H α		8:16			0:36	
262	DARK	1							
263	DARK	1							
264	DRAF22	1800	H α		8:51			1:11	
265	"	"	"		9:23			1:43	
266	"	1800	"		9:55			2:15	car head lights
267	"	1800	"		10:27			2:47	
268	Dark	1							
269	"	1							
270	"	1							

Telescope: 61"

Frame prefix #: FR87I Day of Week: Tue/Wed

RA offset:

Focus: 20

Humidity:

Sheet #: 20

Observers: Engel, Schultz Date MST/UT: June 2/3

Dec offset:

Tailpiece: 17

Balance:

Temp O/I: 68/70

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
✓ 271	Mercury	0.10	0.05	13500	20:04:05	6:21:35.95	25:19:32.4	-1:4	filled low dewar 11:50 A.M.
✓ 272				9800	20:37:50	6:21:43.77	25:19:21.2	-0:32	RA bias 05 cloud over dome DEC bias 0.006
✓ 273				11000	20:39:36			-0:29	Topped off dewar 12:30 AM = 1.01
✓ 274				10000	20:47:18	6:21:45.41	25:19:21.0	-0:22	AM = 1.01
✓ 275		0.15		18000	20:52:15			-0:17	AM = 1.01
276		0.15		16000	20:59:18	6:21:47.81	25:19:16.6	-0:10	AM = 1.01
277		0.15		16000	21:07:39				AM = 1.01
278		0.15		16,800	21:12:25				1.01
279				17000	21:21:53	6:21:52.8	25:19:08.6	+0:13	1.01
280		0.10		11000	21:31:31			+0:22	1.01
281		0.12		11200	21:34:46			+0:25	1.01
282		0.15		16500	21:37:19	6:21:56.0	25:19:05.8	+0:28	1.01
283	danz	0.2							telescope vertical sky
284	danz	0.2							
285	FF	0.15		12000					

Telescope: 61"

Frame prefix #: FR37I

Day of Week: Tue/Wed

RA offset:

Focus: 4032

Humdty:

Sheet #: 21

Observers: Engel,
Marciales, Schultz

Date MST/UT: June 2/3

Dec offset:

Tailpiece: 17

Balance: Temp O/I: 66/68

Exp #.	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
286	FF	0.15	0.05	12000					Topped off dewar 2:50
287	BS 2891	0.2	0.05	10,900	22:04:11	7:33:50		-0:17	RA BIAS - 0.006 DEC BIAS 0.0
288				12100	22:07:12			-0:14	AM = 1.00
289				10600	22:11:12			-0:10	1.00
290				10,800	22:15:02	7:33:50.01	31:56:23.6	-0:06	1.00
291				12000	22:20:38			-0:03:30	1.00
292				11800	22:26:30			+0:05:30	1.00
293				16100	22:31:30	7:33:50.02	31:56:19.2	+0:10:30	1.00
294				16200	22:37:59			+0:17	1.00
295				11700	22:42:55	7:33:50.10	31:56:19.2	+0:22	1.00
296				11800	22:45:22			+0:24	1.00 Flat fields
297				17000	22:48:22	7:33:50.13	31:56:19.3	+0:27	1.01 5 hours over 10min
298	FF	.2		12600					tailpiece 28 topped lower dewar 5:10
299		.3		16000					topped off dewar at 6:45
300		.3		14300					filled upper dewar 7:10

Telescope: 61"

Frame prefix #: FR87I Day of Week: Tue/Wed

RA offset:

Focus:

Humdty:

Sheet #: 22

Observers:

Date MST/UT: June 2/3

Dec offset:

Tailpiece:

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
301	Mercury	0.1	0.5	12300	2:30:28	8:23:12.7	25:19:11.4	+3:15	RA BIAS 0.05 DEC BIAS -0.006 (2.64)
302				10100	2:31:54			+3:18	
303				11200	2:33:01	8:23:14.2	25:19:12.3	+3:19	
304				9300	2:38:39			+3:23	
305		0.15		13300	2:37:54			+3:24	
306				10500	2:39:06	8:23:16.8	25:19:16.3	+3:25	(2.92)
307		.20		12700	2:40:23			+3:26	(2.95)
308		.25		18000	4:1:47			+3:28	
309		.20		13600	4:2:54			+3:29	
310		.20		15600	4:4:02			+3:30	3.04
311	Dwarf								
312	Dwarf	12							
313	BS 2141	40		7600	3:01:32	8:5:38.98	35:25:15.9	+4:5:14.5	3.4
314				10800	3:04:02			+4:08	
315				10300	06:24			+4:10	

Telescope: 61"

Frame prefix #: PR87I

Day of Week: Tuesday

RA offset:

Focus:

Humdty:

Sheet #: 23

Observers: Engel, Morales
Schultz

Date MST/UT: 06/02/06/03

Dec offset:

Tailpiece: 78

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
316	BS 2141	50	0.05	9000	3:08:18	8:5:39.87	35:25:55.4	+4:13	
317		60		13500	3:10:54			+4:15	
318	BS5534	30	0.05	11000	3:37:52	14:39:26.19	24:47:11.7	-1:50	
319	"	50	0.05	14000	3:41:49			-1:47	A.A
320	BS5534	50	0.05	13800	5:14:43	14 ^h 40 ^m 39.5 ^s	+24:48 44.8	=0 ^h 16 ^m	10:00 topped lower dewar T=1.01
321	"	50	0.05	12900	5:16:31			-0 ^h 14 ^m	Reinitialized
322	PARK	50	0.05		5:16:13			-0 ^h 14 ^m	
323	DARK	1.0	-		5:22:78				
324	Uranus	1.0			6:24:42			-2.04	tailpiece: A7 focus = 3980
325	"	3.0			6:32:30			-1.53	topped upper dewar 10:30pm
326	Obseru	300.0	0.25	6300	7:38:22			-0.50	
327	"	600.0	"	6500	7:50:05	17:39:36	-23:28:40	-0.38	
328	Dark	1.0	"						
329	Obseru	600.0	"	5400	8:09:26			-0.19	dewar spec filled 1:30am
330	"	600.0	"	11000	6:39:23			+0.10	

↑ 8:39:23

Telescope: 61"

Frame prefix #: FR87I Day of Week: Wednesday

RA offset:

Focus: 3980 Humdty:Sheet #: 24Observers: Eugl. Machles Date MST/UT: 06/03/87

Dec offset:

Tailpiece: 17

Balance: Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
331	Obsou	600.0	0.25	6200	8:57:22	16		0:28	
332	BS6269	1.0	"	15000	9:21:50	16:52:46	-20:21:39	1:39	
333	"	"	"	10000	9:24:56			1:43	
334	"	"	"	~8000	9:26:07			1:44	
335	"	2.0	"	14000	9:27:26			1:45	
336	"	3.0	"	18000	9:30:42			1:48	
337	Dark				9:30:22				
338	BS6269	2.0	0.25	13000/	10:20:59	16:52:40	-20:21:20	2:39	AM = 2.37
339	"	3.0	"	11200/	10:24:35			2:43	
340	"	2.0	"	12800	10:22:15			2:47	
341	"	"	"	16600	10:30:13			2:48	
342	Obsou	600.0	"	6100	10:37:01			2:09	
343	"	"	"	5700	10:56:23	17:39:18	-23:30:57	2:28	AM = 2.5
344	DARK	1.0	"						
345	DARK	1.0	"						

Telescope: 61"

Set on coordinate
move West 10 minutes in RA

Frame prefix #: FR87I

Day of Week: Wed/Thur

RA offset:

Focus:

Humdty:

Sheet #: 26

Observers: Engel, Marciales
Schultz

Date MST/UT: June 3/4

Dec offset:

Tailpiece: 17

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
349	Mercury	0.1	.05	13000	21:01:05			-0:03	12:40 P.M. Jitted lower dewar
350				11700	21:02:50	6:17:0.76	25:09:59.1	-0:01:30	Am = 1.01
351				12700	21:05:24			+0:01	
352				13800	21:06:31	6:17:01.55	25:10:0.0	+0:02	
353				12500	21:07:40			+0:03	1.01
354				12100	21:08:44	6:17:01.9	25:09:59	+0:01	
355				12000	21:09:40			+0:05	1.01 cloud over dome
356				12800	16:21	6:17:3.56	25:09:55.8	+0:12	
357				12400	21:19:03			+0:14:30	1.01
358				12300	20:30			+0:16	1.01
359				14000	21:25:16	6:17:4.91	25:09:52.7	+0:21	
360				14700	26:38			+0:22	
361				13700	27:36		25:09:51.2	+0:23	
362				15400	29:04			+0:24:30	
363				15600	30:14	6:17:06.33	25:09:50	+0:25:30	clouds coming in

steffe

Telescope: 61"

Frame prefix #: FR87I Day of Week: wed/thurs RA offset: Focus: Humdty: Sheet #: 27
 Observers: Engel, Schult Date MST/UT: Dec offset: Balance: Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
364	BS 2891	0.2	0.05	13000	21:41:40	7:23:45.28	31:55:50.1	-0:29:30	A.M = 1.01
365	"			12600	43:48			-0:29:30	1.01
366	"	0.2	"	14600/	21:59:15			-0:12	1.00
367	"			15300	22:17:33	7:23:44.57	31:55:41	+0:06:30	1.00 clouds coming in
368				14600	22:18:59			+0:08	
369				13100	22:22:24			+0:11	good
370				11000	22:23:45			+0:13	Ha
371				12200	22:27:20	7:23:44.56	31:55:41.2	+0:15	
372				11500	22:30:11			+0:19	good
373				13000	32:14			+0:21	
374				12000	34:49			+0:24	
375				13400	36:25			+0:25	
376					44:27	7:23:44.66	31:55:41.3	+0:38	1.01 stopped
377	FF	0.10		14700	0:03:0	SKY - flat			topped off dewar 3:50
378	FF			14200					clouds everywhere

Flat fields through clouds

Telescope: 61"

Frame prefix #: 87I

Day of Week: WED/THURS RA offset:

Focus: 3981

Humdty:

Sheet #: 28

Observers: SE, ABS, RLM,
MARS

Date ~~MST~~/UT: 4 JUNE 87 Dec offset:

Tailpiece: 17

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
379	DARK	1.0							tapped off lever 9:00
380	DARK	1.0							FF - sky - pointing at mercury
381	FF	.30	.05	9600	2:19:45				Tail piece 28
382	FF	.60		1300					
383	FF	.60		12100					
384	FF	.70		13200					
385	MERCURY	0.1	.05	12400	2:59:30	8 14 36.1	25 08 37.3	5:55	
386	"	0.1	.05	10500	3:01:40				
387	"	0.1	.05	10,600	3:02:55			5:56	
388	DARK	0.1	.05		3:04:00				
389	BS 2141	40.	"		3:16:44	7:58:16.4	35 19 49	6:29	
390	"	60.	"		3:18:52			6:33	
391	"	60	"	16400	3:20:48			6:35	
392		50	"	16400	3:23:10			6:37	
393	BS 5534	50	.05	15400	3:59:13	14:42:57.7	24:49:19.5	-1:34	

