

Telescope: 61"

Frame prefix #: FR46B Day of Week: Sat/Sun RA offset: 08⁰⁰ Focus: 3580 Humdty: 47 Sheet #: ①
 Observers: Fink Schultz Date MST/UT: Feb 22/23 Dec offset: 2^m South Tailpiece: 17 Balance: 72 Temp O/I: 36/39

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.)
✓001	LAN 4834	1.5	R	6300	12:29:19	16:16:14	14:41:56	0 ^h 58 ^m E	
✓002	"	11	V	4200	12:32:59			0 ^h 55 ^m	
✓003	"	2.0	R	8100/760	12:33:47			0 ^h 54 ^m E	
✓004	Ropt 27	0.40	R	5200	12:40:05	17:43:16.8	5:23:07	2 ^h 14 ^m E	
✓005	"	20	6300	1600	12:47:32			2 ^h 7 ^m	
✓006	"	11	6300 TLT	1500/740	49:30				
✓007	Halley	1.0	R	1624 Sat	13:01:07			4 ^h 47 ^m E	
✓008		0.1	"	3200	13:02:45	20:37:31	-14:21:00	4 ^h 46 ^m	
✓009		0.3	"	9000	13:04:25			4 ^h 44 ^m	
✓010		5			13:05:51	37:33	-14:20:48	4 ^h 43 ^m	
✓011		11	V	Sat	09:24			4 ^h 39	
✓012		0.3		11400	10:38			4 ^h 38 ^m	
✓013		30	6300	9800	14:03	20:37:41	-14:20:19	4 ^h 35 ^m	
✓014		11	TLT	6300	16:08			4 ^h 33 ^m	
✓015			TLT	7400/2200	17:59			4 ^h 31 ^m	5200 counts above sky.

Telescope: 61"

Frame prefix #: FR86B Day of Week: Sun/Mon RA offset:

Observers: Firk Schulte Date MST/UT: Feb 23/24 Dec offset:

Focus: 3480 Humdty: 50 Sheet #: (3)

Tailpiece: 17

Balance: 72 Temp O/I: 39/42

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.)
✓025	Flat Field	0.3	R	8359					Topped off dewar 2:45
✓026		"	"	8352					
✓027		0.5	V	8919					
✓028		"	"	9032					
✓029		15	6250	8461					Handle pushed in
✓030				8465					
✓031		6	6185	7580					Handle all the way out
✓032				7307					
✓033	Dove	1.0	N/A	782					
✓034		1.0	N/A	778					
✓035	Flat	60	6300	7395					
✓036	"	"		7301					
✓037		11	TLT	6322					
✓038		11	11	6212					
✓039	LAN 84334	2	R	6100	21:34	16:16:138	14:41:45	2 ^h 2 ^m E	

Telescope: 61"

Frame prefix #: FR86B

Day of Week: Sun/Mon

RA offset:

Focus: 3480

Humdty: 49

Sheet #: (4)

Observers: Fink Schult?

Date MST/UT: Feb 23/24

Dec offset:

Tailpiece: 17

Balance: 72

Temp O/I: 41/45

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.)
✓40	LAN84334	1.5	R	9700	11:25:57	16:16:138	14:41:45	1 ^h 58 ^m	
✓41		11	V	5000	31:48			1 ^h 52 ^m	computer died
✓42		2		5400	33:37			1 ^h 50 ^m	
✓43	Koppf 27	20	6250	5800	39:59			3 ^h 11 ^m _E	
✓44		30		7600	42:29	17:43:153	5:23:08	3 ^h 8 ^m	
✓45		12	6185	10400	44:55			3 ^h 6 ^m	
✓46		8		8600	49:42			3 ^h 4 ^m	FWHM 3 pixels
✓47		120	6300	8000	53:51			2 ^h 57 ^m	
✓48		11		7450	57:21			2 ^h 53 ^m	
✓49		11	TLT	7100	12:01:03			2 ^h 50 ^m	
✓50		11	"	7100	04:33			2 ^h 46 ^m	40/46
✓51	Halley	1.0	R	7400	12:54:55	20:35:50	-14:38:59	4 ^h 48 ^m	
✓52		5		Sat	56:38			4 ^h 46 ^m	
✓53		1		10000	13:00:05			4 ^h 42 ^m	clouds
✓54			R	14000	02:03		-14:30:28	4 ^h 41 ^m	

Telescope:

Frame prefix #: FRS66B Day of Week: Sun/Mon RA offset:
 Observers: F. H. C. Schulte Date MST/UT: Feb 23/24 Dec offset:

Focus: 3480 Humdty:
 Tailpiece: 17
 Balance: 72 Temp O/I:

Sheet #: (5)

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.)
✓55	Halley	1	✓		13:03:18	20:35:50.8	-14:38:25	4 ^h 40 ^m	
✓56		3		6600	04:27			4 ^h 39 ^m	Hazy - has spike tail
✓57		5			05:59				
✓58		5	6185	7100	07:21				
✓59		30		17000	08:50			4:34	
✓60		81	6250		10:42	20:35:53.2	-14:40:27	4:32	
✓61		18.5	"	11300	13:06			4 ^h 30 ^m	27 ⁵ - Hant
✓62		1	R		14:55			4 ^h 28 ^m	18.5
✓63		0.3	"	12500	15:52			4 ^h 27 ^m	27 30
✓64		30	6300	6300	17:17				81.0
✓65			TLT	5800	18:49			4:24	not photo
✓66			"	6300 7900	20:19	20:35:54.8	-14:40:14	4:23	
✓67		30	6300	8000	21:43			4:21	clouds
✓68	Dave	1	N/A	622					
✓69	"	"	"	623					

Pluton
 27
 30
 81.0
 not photo
 clouds
 Dave

Telescope: 61"

Iris = 318

Full moon

Frame prefix #: FR86B

Day of Week: Mon/Tue

RA offset: 0

Focus: 3580

Humdty: 50

Sheet #: (6)

Observers: Fink
Sill
Schultz

Date MST/UT: Feb 24/25

Dec offset: 2^m South

Tailpiece: 17

Balance: 72

Temp O/I: 42/45

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.)
✓070	LAN 84334	1.0	R	9000	11:07:07			2 ^h 13 ^m E	3:25 topped off dewar Full width 3+pixels
✓071		"	"	6800	08:20	16:16:14.0	14:41:46	2 ^h 12 ^m	
✓072		1.2	V	8800	13:48			2 ^h 8 ^m	
✓073		"	"	8800	14:53			2 ^h 5 ^m	
✓074	Kopff 27	8	6185	8500	11:28:18			3 ^h 19 ^m	
✓075				8900	29:34	17:43:15.2	5:23:07	3 ^h 17 ^m	
✓076		20	6250	8400	33:21			3 ^h 14 ^m	
✓077				6500	11:34:48			3 ^h 12 ^m	
✓078		100	6300	8300	39:38				
✓079		"	"	10000	42:30			3 ^h 4 ^m	
✓080		"	T2T	7100	11:45:37			3 ^h 1 ^m	
✓081		"	"	9500	48:35			2 ^h 58 ^m	
✓082		35	4565	9800	58:55			2 ^h 48 ^m	
✓083		"	"	9100	12:00:21			2 ^h 47 ^m	
✓084	Dave	1	N/A	640					

Telescope:

Frame prefix #: FR86B Day of Week: Mon/Tue

RA offset:

Focus: 3580 Humdty:

Sheet #: 7

Observers: Fink Schultz
Sill

Date MST/UT: Feb 24/25

Dec offset:

Tailpiece: 17

Balance: 72 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.)
✓085	DARK	1	N/A	647					
✓086	Halley	1	R	Sat	12:58:22			4 ^h 47 ^m	
✓087		0.3	"	11900	51:40	20:34:033	-14:59:34	4 ^h 46 ^m	
✓088		5			53:00			4 ^h 44 ^m	
✓089		"	V		54:05			4 ^h 43 ^m	
✓090		1			55:06			4 ^h 42 ^m	
✓091		0.35		14000	56:02	20:34:04.8	-14:59:50	4 ^h 41 ^m	
✓092		0.2		12500	57:14			4 ^h 40 ^m	
✓093		5	6185	Sat	58:30			4 ^h 39 ^m	
✓094		30			59:48	20:34:06.8	-15:00:00	4 ^h 38 ^m	
✓095		2		9200	13:01:13			4 ^h 36 ^m	
✓096		5	6250	7000	02:33			4 ^h 35 ^m	very good
✓097		75			04:02	20:34:07	-15:00:11	4 ^h 33 ^m	best morning
✓098		0.2	R	13000	06:14			4 ^h 31 ^m	
✓099		0.1		10700	07:25			4 ^h 30 ^m	

Telescope: 4" lens

Frame prefix #: FR86B

Day of Week: Tue/Wed

RA offset: 1^m07^s E

Focus:

Humdty: 48 Sheet #: (9)

Observers: Fink Schultz
Sill

Date MST/UT: Feb 25/26

Dec offset: 41^m South

Tailpiece: 17

Balance: 72

Temp O/I: 44/46

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.)
✓107	M 42	5	R						
✓108		10							
✓109		40							
✓110		15	6185						
✓111		300							
✓112	Horse head	120	R		3 ^h 58 ^s				
✓113	Rosette Neb	180							
✓114	LAN 84334	60	R	2600	11:09:51	16:17:23.2	14:02:46	2 ^h 7 ^m	
✓115		120		4200 1200	13:41			2 ^h 3 ^m	
✓116		11			18:56			1 ^h 58 ^m	
✓117		11	V	4500	23:41			1 ^h 53 ^m	
✓118		11		3900 1500	27:02			1 ^h 50 ^m	
✓119	BS 6629	0.05	V	4000	45:42	17:48:14.8	2:01:22	3 ^h 3 ^m	
✓120		0.1		6000	46:39			3 ^h 1 ^m	Full width 3 pixels
✓121		3	6185	5200	52:07			2 ^h 56 ^m	

Telescope: 4" lens

Frame prefix #: FR86B

Day of Week: Tue/Wed

RA offset:

Focus:

Humdty:

Sheet #: (10)

Observers: Finic Schultz
Sill

Date MST/UT: Feb 25/26

Dec offset:

Tailpiece: 17

Balance: 72

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.)
✓ 122	BS 6629	5	6485	8100	11:53:51	17:48:19.3	2:01:22	2 ^h 54 ^m	
✓ 123		10	6250	8800	56:01			2 ^h 52 ^m	
✓ 124				9300 667	57:27			2 ^h 50 ^m	
New tape ✓ 125	DARK	1	N/A	671					
✓ 126		1	N/A	659					
✓ 127	Halley	30	R	14000 1300	12:43:40	20:32:45.8	-16:00:40	4 ^h 48 ^m	OK estimate high
✓ 128		11	11	1600 1000	49:31			4 ^h 42 ^m	good ring Ann 7.1
129		120	11	SAT	58:20	20:32:25.3	-15:50:00	4 ^h 33 ^m	fully saturated
✓ 130		30	"	7000	13:01:37			4 ^h 30 ^m	sh is too high
✓ 131	FIAT	30	R	5000					} clear sky overhead.
✓ 132	"	11	11	6900					
✓ 133	"	11	11	10800					
✓ 134									
✓ 135									
✓ 136									

tail
68%
used

Telescope:

Frame prefix #: FR86B

Day of Week: Wed/Thur

RA offset: 0

Observers: Sill, DiSanti

Date MST/UT: 2/6/27 Feb

Dec offset: 3^h S

3640
3665
3685

5
4+
5+

Full width

3 1/2 → 4 pixels

Focus: 3820

Humdty: 57

Sheet #: 11

Tailpiece: 17

Balance: 72

Temp O/I: 43/46

Exp #	Object	Exp time	Filter alt	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
✓134	LAN 8433	1.5	R	4800	10:29:14	16:16:58	+14:41:46	2:43 E	Focus jumped to 3660!!!
✓135	"	1.5	R	8300	10:57:30			2:15	refocused to 3650 (24pix)
✓136	"	"	"	8500	59:13			2:13	topped off dewar ~ 3 AM by mistake
✓137	"	1.2	✓	4500	11:01:52			2:10	A137 } these two were
✓138	"	2.5	"	10000	03:42			2:08.5	A138 } misnamed!
✓139	Kopff 27	8.0	6185	4300	14:25	17:43:16	+5:22:00	3:23 E	
✓140	"	16.0	"	8000	17:12			3:22	
✓141	"	"	"	9200	18:56			3:20	
✓142	"	40	6250	9100	21:22			3:18	
✓143	"	"	"	9860	23:24			3:16	
✓144	"	150	6300	6900	35:42			3:03	
✓145	"	"	"	8300	39:34			2:59	
✓146	"	"	620 ^{TR}	6600	43:55			2:55	
✓147	"	"	"	8000	47:44			2:51	23 frames on tape
✓148	DARK	1	N/A						

76 Power
+ 1
1

Telescope:

Frame prefix #: FR86B

Day of Week: Wed/Thurs

RA offset: ϕ

Focus: 3650

Humdty: 57

Sheet #: 12

Observers: Sil DiSanti

Date MST/UT: 26/27 Feb

Dec offset: 3'S

Tailpiece: 17

Balance: 72

Temp O/I: 43/46

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.)
✓ 149	DARK	1	NA		~12:30				
✓ 150	HALLEY	0.2	R	9800	12:44:52	20:30:58	-15:40:48	4:41	
✓ 151		0.2	V	7400	47:10			4:39	
✓ 152		1.0	V	sat	49:47			4:36.5	moved tel 3.5 S W
✓ 153		1.0	R	"	51:30			4:35	
✓ 154		2.0	6185	6800/800	53:15			4:32	
✓ 155		10	"	sat	56:26			4:29.5	
✓ 156		30	"	1/1300	58:02			4:28	
✓ 157		5	6280	4500/800	13:00:35			4:25.5	
✓ 158		75	"	sat/pan	02:21	20:30:40S	-15:41:07	4:24	
✓ 159		10	6300	2400/800	07:46			4:18.5	
✓ 160		60	"	11000/1800	09:29			4:17	T _{air} = 46°F, T _{out} = 42°F, Hum = 58%
✓ 161		"	6300	13000/2000	11:53			4:14	
✓ 162		10	"	3260/1000	14:21			4:12	
✓ 163		30	"	8000	16:47			4:09.5	
✓ 164		11	6300	9250/3400	18:17			4:08	

Telescope:

Frame prefix #: FR86B

Day of Week: Thur/Fri

RA offset:

Focus:

Humdty: 55 Sheet #: 14

Observers: Schultz

Date MST/UT: Feb 27/28

Dec offset:

Tailpiece: 17

Balance: 72 Temp O/I: 45/48

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	Hub neb	120	6185	12600	3:53:26	6:38:25.2	+8:43:29	0 ^h 22 ^m	
✓178		900		10500	57:29			0 ^h 26 ^m	looks like two blobs being ejected from R-mon
✓179		300		Sat	9:00:35			0 ^h 29 ^m	
✓180		180	6250	9100	07:26			0 ^h 36 ^m	73
✓181		600			4:12:56			0 ^h 41 ^m	Focus 3842 -64 3 pixels
✓182		45	8600	7500	4:43:01			1 ^h 22 ^m	Focus 3875
✓183		120			56:04			1 ^h 25 ^m	see one of Christy's objects
✓184		60	9180	6700	5:06:04			1 ^h 35 ^m	
✓185		300			08:51			1 ^h 37 ^m	
✓186		180	4565	6000	5:19:22			1 ^h 48 ^m	Focus 3841
✓187		600			24:40			1 ^h 53 ^m	
✓188	BD+82015	15	4565	6800	5:58:36	8:14:56.0	7:37:54	0 ^h 50 ^m	
✓189		11	11	7900	59:10			0 ^h 51 ^m	
✓190		18	6185	10400	6:07:29			1 ^h 00 ^m	
✓191		6		7600	09:05			1 ^h 01 ^m	

Telescope: 61"

Frame prefix #: FR66B

Day of Week: Thu/Fri

RA offset:

Focus: 3842 Humdty:

Sheet #: (15)

Observers: Schultz

Date MST/UT: Feb 27/28

Dec offset:

Tailpiece: 17

Balance: 72 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.)
✓192	BD+82015	20	6250	9300	6:11:18	9:14:59.0	7:37:54	1 ^h 04 ^m	
✓193		11	"	9100	6:12:57			1 ^h 05 ^m	Focus 3846
✓194		10	8600	8500	20:41			1 ^h 13 ^m	Focus 3775
✓195		11	"	8400	22:22			1 ^h 15 ^m	
✓196		15	9160	8500	27:04			1 ^h 19 ^m	
✓197				8000	28:32			1 ^h 21 ^m	
✓198	Danz	1	N/A	639					
✓199	"	11	"	642					
✓200	FF	4	9160	8700					
✓201				8900					
✓202		3	8600	7900					
✓203				8100					
✓204		60	4565	8500					
✓205				8400					
✓206	LAN 84334	B, S	R	5100	9:18:13	16:16:13.9	14:41:56	3 ^h 50 ^m	

Telescope:

Frame prefix #: FR86B

Day of Week: Thur/Frid

RA offset:

Focus:

Humdty:

Sheet #: 16

Observers: D. Sant
Schultz

Date MST/UT: Feb 27/28

Dec offset:

Tailpiece: 17

Balance: 172 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.)
✓ 207	LAW 84334	2.0	R	10700	9:20:48	16:16:148	14:41:56	3 ^h 48 ^m	
✓ 208		3.0	V	9400	23:13			3 ^h 45 ^m	
✓ 209				10400	26:32			3 ^h 42 ^m	
✓ 210		1.5	R	10800	11:40:186			1 ^h 28 ^m	
✓ 211		1.0		7600	41:47			1 ^h 26 ^m	
✓ 212		2.0	V	10000	43:17			1 ^h 25 ^m	
✓ 213		1.5		8300	46:22			1 ^h 22 ^m	
✓ 214	K _{opt} 27	8	6185	7300	52:24			2 ^h 43 ^m	
✓ 215				7300	54:44			2 ^h 40 ^m	
✓ 216		20	6250	6700	56:41			2 ^h 38 ^m	
✓ 217		11	"	10800	58:23			2 ^h 37 ^m	Full width 3 1/2 pixels
✓ 218		120	6300	8800	12:01:47			2 ^h 33 ^m	
✓ 219		"	"	10400	05:03			2 ^h 30 ^m	
✓ 220		"	TLT	7100	08:32			2 ^h 26 ^m	Focus 3565
✓ 221		"	"	9200	11:46			2 ^h 23 ^m	Temp 43/47

computer died during w FR86B 214

Telescope:

Frame prefix #: FR66B Day of Week: Thu/Fri RA offset:

Focus: Humdty: Sheet #: 17

Observers: DISANTI
Schultz Date MST/UT: Feb 27/28 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.)
✓ 222	Halley	1	R	13100/800	12:35:40	20:29:06.8	-15:59:48	4 ^h 45 ^m	
✓ 223		0.2		4000	39:20			4 ^h 41 ^m	
✓ 224		11		4000	41:53			4 ^h 39 ^m	
✓ 225		1.0		Sat/750	43:59			4 ^h 36 ^m	
✓ 226		1.0	V	Sat/775	45:04			4 ^h 35	
✓ 227		0.2		330/650	46:05			4 ^h 34 ^m	27
✓ 228		5		Sat/1200	47:05			4 ^h 33 ^m	30
✓ 229		2	6185	2100	48:06	20:28:57.0	-16:00:10	4 ^h 32 ^m	81
✓ 230		10		10100/800	49:25			4 ^h 31 ^m	
✓ 231		30		16950/900	50:30			4 ^h 30 ^m	
✓ 232		5	6250	2700	52:12			4 ^h 28 ^m	
✓ 233		27		11600/800	53:11			4 ^h 27 ^m	
✓ 234		81		Sat/1000	54:32			4 ^h 26 ^m	
✓ 235		.2	R	5400/700	12:56:57			4 ^h 23 ^m	
✓ 236		5		Sat/3000	58:05			4 ^h 22 ^m	

Telescope:

19

Frame prefix #: FR86B

Day of Week: Fri/Sat

RA offset:

Focus: 3555 Humdty: 57 Sheet #:

Observers: FINK/DiSANTI

Date MST/UT: 28 Feb/1 Mar

Dec offset: 2⁷S

Tailpiece: 917
Balance: N=420 Temp O/I: 39/43
S=350

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.)
9 ✓ 246	Xenon	0.05	0.25	10600					
✓ 247	"	0.2	"						
✓ 248	Helium	"	"						
✓ 249	"	0.05	"						
✓ 250	109 VR (BS 5511)	0.1	1.0	7000/	10:58:00	14:45:34.2	+1:54:35	0:35 E	
✓ 251	"	"	"	7600	11:00:57			0:32.5	
15 ✓ 252	"	"	"	7500/725	11:02:11			0:31	CTL=387
✓ 253	BS 6998	1.0	2.0 1.0	8700	11:22:28	18:37:59.8	-21:04:05	4:03 E	FITS HDR says 0.25 mm slit.
✓ 254	"	"	0.25	8000	24:25			4:01	
✓ 255	"	"	"	7000	27:28			3:58.5	
✓ 256	"	"	"	6500	29:32		-21:04:16	3:56.5	
✓ 257	"	"	"	5400	32:01	18:37:8.3	04:22	3:54	
✓ 258	"	"	"	9500	37:07		-21:04:26	3:49	
✓ 259	"	"	"	7000	41:18	57.2	-21:04:32	3:44.5	
✓ 260	"	"	"	7500	43:43			3:42	

Telescope:

Frame prefix #: FR86B

Day of Week: FRI/SAT

RA offset:

Focus:

Humdty:

Sheet #: 20

Observers: FINK, DISANTI

Date MST/UT: 28 Feb / 1 Mar

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.)
24 ✓ 261	BS 6998	1.0	0.25	8900	11:47:07	18:37:58	-21:04:39	3:39 E	
✓ 262	"	"	"	6400	52:48			3:33	
✓ 263	"	"	"	7000	54:06		-21:04:47	3:32	
✓ 264	"	"	"	11000	12:00:37		-21:04:54	3:25	
(28) ✓ 265	"	0.8	"	6300	07:47		-21:05:00	3:18	
✓ 266	Halley	5	"	1150	38:45	20:27:26.4	-16:22:32	4:36.5	
✓ 267	"	30	"	10900	42:40		:53	4:32.5	Very nice
✓ 268	"	25	"	3500	46:12			4:29	OK
✓ 269	"	"	"	11400	50:54	20:27:28	-16 23:24	4:24	good one
✓ 270	"	20	"	5500/1000	53:00			4:22	ok had to reboot.
✓ 271	"	20	"	9500/1000	54:11			4:21	nice exp.
✓ 272	"	120	"	11000/4000	57:00			4:18	behind aperture good one
✓ 273	"	120	"	12200/7000	13:01:20		-16:23:58	4:14	bottom corner is OK. 2nd. " cent. (+ light leak toward top of screen)
✓ 274	"	20	"	4800/2300	05:04			4:10	weak, 2nd corner right
New tape ✓ 275	"	20	"	4800/3000	07:13			4:08	adjust off chart
✓ 276	"	"	"	11700/3900	09:16			4:06	looks OK; 2nd is high adjust in hardware

fine views clear but Halley is clear

Telescope:

Frame prefix #: FR86B

Day of Week: Sat/Sun

RA offset:

Focus:

Humidity: 61 Sheet #: 22

Observers: FINK, DiSANTI

Date MST/UT: 1/2 MAR

Dec offset:

Tailpiece:

Temp O/I: 39/43

Balance:

Tape pos	Exp #	Object	Exp time	Filter (slip)	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
7	✓ 281	HALEY	20	0.25	580/900	12:29:40	20:25:38.5	-16:43:57	4:40E	OK
	✓ 282	"	"	"	6500/800	31:18			4:38	OK
	✓ 283	"	120	"	1450/1200	33:38			4:36	nice
10	✓ 284	"	"	"	"	37:37		-16:44:41	4:32	about the zone, nice
	✓ 285	"	300	"	sat/2000	41:32	20:25:36.8	-16:45:09	4:28	moved nucleus just occ. strip
	✓ 286	"	300	"	sat	49:17	20:25:37.5	-16:45:34	4:20	" OK up a bit more.
	✓ 287	"	120	"	1450/	57:56	:44.0	-16:45:44	4:11.5	nice slight at top
	✓ 288	"	"	"	"	13:01:33			4:08	OK light leak.
	✓ 289	"	20	"	4450/1500	05:00		45:55	4:04.5	out of site (?) Hazard? probably haze.
	✓ 290	"	"	"	9700/2000	08:02			4:01.5	nice
	✓ 291	"	"	"	200/240	09:24		-16:46:04	4:00	OK
	✓ 292	FF (dome)	15	"	8200					- clouds all night long
	✓ 293	"	"	"						- lighted up ~ 3 am
20	✓ 294	"	"	"						- Hally seem to have gotten the best of the night.
	✓ 295	"	"	"	clouds.					- generally clear but some haze in arow.
	✓ 296	FF (down)	0.2		10000					
23	✓ 297	" (slay)	"		8000					(41.4 % of tape used)

Telescope: 61" / spectrometer

Frame prefix #: FR86B Day of Week: Sat/Mon RA offset:

Focus: 3590 Humdty: 68 Sheet #: 23

Observers: FinkSchultz Date MST/UT: Mar 2/3 Dec offset:
LeUY

Tailpiece: 917
Balance: h=420 Temp 0/I: 36/40
L=350

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.)
✓298	BS 6998	1.0	0.25	8400 800	12:15:35	18:38:00.2	-21:05:14	3 ^h 02 ^m	
✓299					19:22			2 ^h 58 ^m	Clouds moving in
✓300	Halley	20	0.25	4800	30:07	20:23:548	-17:06:54	4 ^h 34 ^m	
✓301		11	"	6300	34:57			4 ^h 29 ^m	
✓302		120	"	10400	37:03			4 ^h 27 ^m	
✓303		300		SAT	41:04	20:23:50.8	-17:07:51	4 ^h 23 ^m	
✓304		120		11000	50:34	20:23:57.0	-17:08:10	4 ^h 13 ^m	very good
✓305		20		3400	54:04			4 ^h 10 ^m	
✓306	Flat Field	15		9400		18:23:51.0	-13:42:50		
✓307		11	11	9000					
✓308		11	11						
✓309		11	11	9100					
✓310	Dave	1	N/A	713					
✓311				714					

PHOTO METERIC
 clouds all in
 but Hubs in
 NOT very good

Telescope: 61" - Spectrometer

Frame prefix #: FR86B

Day of Week: Mon/Tue

RA offset:

Focus: 3600

Humdty: 86

Sheet #: 24

Observers: Fink
Schulze

Date MST/UT: Mar 3/4

Dec offset:

Tailpiece: 917

Balance:

Temp O/I: 33/38

24

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.)
✓ 312	BS 6828	0.2	1.00	11500	11:22:33	17:47:11.3	21:40:24	3 ^h 01 ^m	windy night
✓ 313		0.15	1.00	7700	25:21			2 ^h 58 ^m	
✓ 314		11	11	7700	26:32			2 ^h 57 ^m	
✓ 315		11	11	8700	28:44			2 ^h 55 ^m	
75.65 ✓ 316		11	11	9700	33:05			2 ^h 50 ^m	computer died
77.45 ✓ 317	BS 6998	1.0	0.25	2600	44:33	18:37:585	-21:04:51	3 ^h 30 ^m	
79.25 ✓ 318		2.0		4600	45:53			3 ^h 28 ^m	
81.05 ✓ 319		2.0		5400	48:45			3 ^h 25 ^m	
✓ 320		3.0		2600	50:07			3 ^h 24 ^m	
✓ 321	BS 7637	2.0		4200	12:02:06		~ -10°	4 ^h 33 ^m	
✓ 322		2.0			41:25				
✓ 323		3.0		3500	06:20			4 ^h 29 ^m	
90.06 ✓ 324		11			07:24			4 ^h 27 ^m	
91.86 ✓ 325		11		6900	08:35			4 ^h 26 ^m	
93.66 ✓ 326					11:31			4 ^h 25 ^m	

52 images

Telescope: 61" Spectrometer

Frame prefix #: FR86B

Day of Week: Tue/wed

RA offset:

Focus:

Humdty:

Sheet #: 26

Observers: FINK, Sill, DISANTI

Date MST/UT: MAR 4/5

Dec offset:

Tailpiece: $\phi 7$

Balance:

Temp O/I:

Tape Pos	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.)
13	✓ 339	MKN 376	120	0.25	1850 ^(H)	2:53:04	7:13:16.9	+45:41:24	0:54 E	eyepiece offsets ~15" N, 7" E 1.0443
	340	"	600	"	1200^(H)	57:10			0:50 E	out of shot (didn't write)
14	✓ 341	"	"	"	4300	3:12:25			0:34.5	1.0327
15	✓ 342	"	900	"	7700	25:55			0:21 E	1.0286
	✓ 343	"	"	"	7000	43:42		4	0:03 E	1.0282
	✓ 344	"	"	"	7500	4:02:37		45:41:25	0:16 W	1.0308
	✓ 345	"	"	"	7200	19:37			0:33 W	1.0373
	✓ 346	"	"	"	8000	37:00		41:19	0:50 S	1.0477
	✓ 347	SAO 41579	2	"	6200	5:02:50	7:07:08.5	44:01:38	1:22.5	1.0631
	✓ 348	"	2.5	"	8000	5:07:10			1:27	written over (after #349) 1.0680
	✓ 349	"	2.5	"	6500	5:05:40			1:25.5	1.0663
	✓ 350	"	"	"	11000	5:08:14			1:28	1.0708
	✓ 351	"	2.0	"	10000	09:59			1:29.5	1.0708
	✓ 352	MKN 376	900	"	5900	32:00	7:13:17.0	45:41:22	1:43.5	1.1073
	✓ 353	SAO 41579	"	"		6:04:25	13.18	1:16	2:18	lost 15" ←
			3		9000	6:49:42			3:09.5	1.2756 exp. (sat'd)

Telescope:

Frame prefix #: FR86B

Day of Week: Mon 4/5

RA offset:

Focus:

Humdty:

Sheet #: 27

Observers:

Date MST/UT:

Dec offset:

Tailpiece:

Balance:

Temp O/I:

27

50490
used

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.)
✓ 354	SAO 41591	3	0.25	9200	6:51:03	7:07:11.0	44:01:41	3:11	filled dewar 11:45 PM 1,2803
✓ 355	"	3	"	9000	6:52:14			3:12	1,2836
✓ 356	SAO 120291	1	"	8000	8:17:47	14:01:52.8	+9:42:47	2:17E	
✓ 357	"	1.25	"	8300	8:19:40			2:15	
✓ 358	"	1.0	"	8100	8:25:07			2:09.5	
✓ 359	"	"	"	8400	26:13			2:08.5	topped off dewar
✓ 360	NGC 5548	300	"	9600	53:31	14:17:24.3	+25:09:29	1:56.5 E	3-col defect on red <u>4x</u> wing 1:45 AM
✓ 361	"	"	"	10600	9:01:58			1:48	
✓ 362	"	"	"	11000	08:35			1:41.5	
✓ 363	"	240	"	5800	15:50			1:34	drifted out -- recentered
✓ 364	"	"	"	3300	24:11			1:26	
✓ 365	"	"	"	8700	38:58			1:11	
✓ 366	"	"	"	5500	45:24			1:04.5	
✓ 367	"	"	"	8500	51:54			0:58	
✓ 368	"	"	"	8800	58:40			0:51	

10:04:44

0:45

Telescope:

Frame prefix #: FR86B Day of Week: Tue/Wed

RA offset:

Focus:

Humdty:

Sheet #: (28)

Observers: Fink, Gill, Disant Date MST/UT: 4/5 Mar

Dec offset:

Tailpiece: 007

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.)
✓369	NGC 5548	240	0.25	7000	10:04:44	14:17:22.8	+25:09:26	0:45	
✓370	"	"	"	9800	11:00			0:39	
✓371	SAG 120251	1	"	10700	22:55	14:01:51.6	+9:42:35	0:12.5	
✓372	"	0.8	"	8800	24:30			0:9.5	
✓373	"	"	"	7900	25:34			0:8.5	
✓374	"	"	"	9300	27:38			0:6.5	
✓375	109 VIR ^(K2 PMS 572)	0.1	1.0	7200	42:14	14:45:33.4	01:54:28	0:36E	1.1741
✓376	"	"	"	6600	43:47			0:34.5	1.1730
✓377	"	"	"	6500	46:15			0:31.5	1.1708
51 ✓378	"	"	"	6900	47:16			0:30.5	
New pipe ✓379	BS 6629 ^(K2 PMS 572)	"	"	5400	11:06:31	17:47:11.5	02:40:22	3:13E	filled dewar 3:55 1.6702
✓380	"	"	"	5700	09:04			3:10	1.678
✓381	BS 6998 ^(K2 PMS 572)	2	0.25	9400	22:15	18:37:56.6	-21:04:37	3:48E	4.167
✓382	BS 7118	240	"	9700	23:45			3:46	4.071
✓383	"	"	"	8500	26:24			3:44	3.980

Telescope:

Frame prefix #: FR86B

Day of Week: Tue/Wed

RA offset:

Focus:

Humdty:

Sheet #: 29

Observers: FINK, Sill, DiSANTO

Date MST/UT: 4/5 Mar

Dec offset:

Tailpiece: 007

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.)
6 ✓ 384	shy obj to BS 6998	600	0.25	1000	10:28:58	18:37:46.8	-21:04:45	3:41 E	3.655
✓ 385	BS 6998	2	"	9300	43:05			3:29	3.357
✓ 386	"	"	"	9400	44:13	18:37:57.8	-21:04:59	3:26	3.327
✓ 387	BS 7637	11	"	4700	54:29	19:58:51.2	-10:00:20	4:36.5 E	4.820
✓ 388	"	"	"	5000	57:31			4:33	4.565
✓ 389	"	"	"	9900	12:00:42			4:30	ASP 4.368
✓ 390	"	"	"	7000	01:55			4:29	4.306
✓ 391	Adj shy	600	"	~900-920	03:28	19:58:31.2	-10:00:42	4:27	4.320
✓ 392	HALEY	600	"	2800	20:01	20:20:01.2	-17:54:36	4:32 E	6.321
✓ 393	"	"	"	5400	32:11	20:20:14.3	-17:54:46	4:20 E	moved ~ 1/2 way closer to nucleus (5.123)
✓ 394	"	300	"	5500	44:28	20:20:18.4	-17:55:11	4:08 E	halved dist. to nucl. again (4.462)
✓ 395	"	180	"	5300	51:32	20:20:21.0	-17:55:22	4:01 E	closer still to nucleus (4.131)
✓ 396	"	120	"	1370	46:24	20:20:22.6	-17:55:37	3:56 E	(3.915)
✓ 397	"	20	"		13:00:16	20:22.8	55 53	3:52 E	Comet (nucl) in obs (3.784)
✓ 398	"	15	"		01:54	22.6	55 55	3:50	0:02 (3.702)

Telescope:

Frame prefix #: FR86B

Day of Week: Wed/Thurs

RA offset: ϕ

Focus: 3570

Humdty:

Sheet #

(31)

Observers: Sill, DiSanto

Date MST/UT: 5/6 Mar.

Dec offset:

Balance:

Temp O/I:

6185 (out)
V
R
6250 (in)

Tape pos	Exp #	Object	Exp time	Filter alt	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
29 ✓	407	PN42 Trapezoid	0.08	R		3:08.5	5:34:35	-5:26:55	1:04.5	
✓	408	"	1	685		3:12:35			1:08.5	
✓	409	Hub Neb	15	B	11200	3:47.48	6:38:24.6	+8:43.19	0:40W	(805, 400)
✓	410		45	B	Sat	50:17			0:42.5	
✓	411		135	B	"	52:33			0:44.5	
✓	412		5	V	11300	4:08:40			1:00.5	moved tel 20" to N
✓	413		15	"	Sat	4:10:23			1:02.5	
✓	414		45	"	↓	4:11:52			1:04	
✓	415		4	R	8300	13:30			1:06.5	
✓	416		15	"	Sat	17:06			1:09	
✓	417		45	"	↓	18:30			1:10.5	
✓	418		120	"	↓	20:21			1:12.5	
✓	419		5	I	7700	27:17			1:19.5	Focus → 3525
New tape	✓	420	15	"	Sat	31:42			1:24	(FWZI ≥ 5 Pixels)
1 ✓	421		45	"	"	34:30			1:25.5	

Telescope:

Frame prefix #: FR86B

Day of Week: Wed/Thurs

RA offset:

Focus:

Humdty:

Sheet #: 32

Observers: Sill, DiSanto

Date MST/UT: 5/6 Mar

Dec offset: 3' 15" S

Tailpiece:

Temp O/I:

Balance:

Exp #	Object	Exp time	Filter	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
2 ✓	422 Hubble	120	I		4:36:25	6:38:24.8	+8:43:39	1:29	
3 ✓	423 Dark	1	—	~650 ± 14					} (650 X 650)
4 ✓	424 "	1	—						
5,7 ✓	425 LAN 76281	8	I	8300	5:22:05	8:20:20.1	14:45:18	0:32.5W	SW } 295 → 3550 (col2)
6,8 ✓	426 "	"	I	9000	23:36			0:34	SW } ← these two are written twice (second time)
9 ✓	427 "	"	B	7000	28:59			0:39.5	SW } was max col = 550 Focus → 3570
✓	428 "	"	"	7100	32:55			0:43	
✓	429 "	2	✓	5400	37:32			0:48	
✓	430 "	3	"	5600	38:52			0:49	
✓	431 "	5	R	5500	40:39			0:51	filled dewar 3:30 am
✓	432 "	"	"	5500	41:59			0:52.5	25% used
✓	433 LAN 84-334	1.5	R	5600	11:10:54			1:33 E	T _{in} = 42, T _{out} = 38, H = 61%
✓	434	"	"	5300	13:07	16:16:03.0	14:39:55	1:31 E	topped off dewar 3:55
✓	435	"	"	5300	14:29			1:30	focus = 3530 (changed!)
✓	436	0.3	"	5300	31:56	good focus (~3.5 pix)		1:12	Focus → 3580

Frame prefix #:

Telescope:

Day of Week:

RA offset:

Focus: 3660
Tailpiece:

Humdty:

Sheet #: 33

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.)
19 ✓ 437	LAN 84334	0.3	V	3000	11:34:07			1:10 E	V focus 4+ pix.
✓ 438	"	1	V	7600	11:35:43			1:08.5	
✓ 439	"	"	"	7700	36:40			1:07.5	
✓ 440	Kopff 27	10	6185	7200	42:34	17:43:14.5	+5:21:30	2:29 E	
✓ 441	"	"	"	5250	45:45			2:26	
✓ 442	"	"	"	5000	47:07			2:24.5	
✓ 443	"	30	6250	6200	48:49			2:22.5	
✓ 444	"	"	"	6000	50:29			2:21	
✓ 445	"	90	6300	4400	53:57			2:17	
✓ 446	"	"	"	4000	56:37			2:15	
✓ 447	"	100	6300	4650	59:30			2:12	
30 ✓ 448	"	"	"	4500	12:02:11			2:09	
✓ 449	"	30	4565	6900	05:58			2:05	
✓ 450	"	"	"		07:32			2:04	
✓ 451	HALLEY	0.2	V	3000	22:19			4:24 E	005.

Telescope:

Frame prefix #: FR86B Day of Week:

RA offset:

Focus:

Humdty:

Sheet #: 34

Observers: Sill, DiSanti Date MST/UT:

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.)
✓ 452	HALLEY	1.0	V	13K	12:24:10	20:18.24	-18:19:08	4:22.5E	016
✓ 453	"	0.2	R	3600	27:32			4:19	moved tel 1:5 W
✓ 454	"	1.0	R	sat	29:04			4:17.5	
✓ 455	"	5	R	"	30:45			4:16	
✓ 456	"	3	6185	2400	32:22			4:14	
✓ 457	"	15	"	9400	34:11	:18.5	:42	4:12	looks good + strong!
✓ 458	"	45	"	sat	36:02			4:10	$\alpha=4.820$ rays visible - lots!
✓ 459	"	35	6250	8500	38:37			4:08	
✓ 460	"	105	"	sat	40:28	+ :53		4:06	$\alpha=4.524$
✓ 461	"	30	4565	5200/800	45:46	:18.8	20:14	4:00.5	
✓ 462	"	150	"	sat/1400	47:55			3:58.5	
✓ 463	"	45	6300	4000	51:58	:20.0	:28	3:54.5	
✓ 464	"	135	"	11000/1000	54:32			3:52	
✓ 465	"	11	6300 T4	11000/1100	58:17			3:48	
✓ 466	"	45	"	4300/900	13:01:42		:48	3:44.5	

(42 Fram)
93%

Newtype

Telescope:

Frame prefix #: FR86B

Day of Week: Wed/Thurs RA offset: ϕ

Focus: 360 Humdty: 60 Sheet #: 35

Observers: Sill/D'Antoni

Date MST/UT: 5/6 Mar Dec offset: $\sim 3^{\text{h}}$

Tailpiece: 17 Balance: Temp O/I: 42/38

Temp pos
7

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.)
✓ 467	DARK	1.0	NA	650	(695.44 ± 14.57)				HDR samp FILTER=630T (still)
✓ 468	"	"	"						
✓ 469	FF	60	6300	7300					
✓ 470	"	"	"	7400					
✓ 471	"	"	6300						
✓ 472	"	"	"	8600					
✓ 473	"	"	4865	10000					
✓ 474	"	"	"	9900					
✓ 475	"	75	6250	9000					
✓ 476	"	"	"						
✓ 477	"	6	6185	8400					
18 ✓ 478	"	"	"	"					
New tape 1 ✓ 479	"	0.4	V	8000					
✓ 480	"	"	"						
✓ 481	"	0.2	R	6200					

[Handwritten scribble]

Telescope:
 Frame prefix #: FR86B

Day of Week: Thurs/Fri

RA offset:

Focus:

Humdty:

Sheet #: 37

Observers: DiSanti

Date MST/UT: 6/7 Mar

Dec offset:

Tailpiece:

Temp O/I:

sample rows 250-270

Exp #	Object	Exp time	Filter slt	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
✓ 487	LAN 84-334	0.3	R	4800	9:45:52			2:55E	filled dewar 1:45 AM.
✓ 488	"	0.70	"	11400	10:00:32	16:16:04.8	+14:39:55	2:40	topped off ~2:35
✓ 489	"	0.60	"	10000	04:13			2:36	focus ~3.5pix (both V+R) on SAO SET-UP
✓ 490	"	2.5	"	7500 ⁽³⁴⁾	07:05			2:33	(to get 84-332 (~row 260))
✓ 491	"	"	V	5000 ⁽³⁵⁾	11:57			2:29	
✓ 492	"	0.75	"	9100	14:32			2:26	
✓ 493	"	0.6	"	7600	20:21			2:20	
✓ 494	Kopff 27	1.0	6185	7500	11:20:39			2:47E	
✓ 495	"	"	"	8300	23:18	17:43:12.8	+5:21:41	2:44	
✓ 496	"	2.5	6250	7600	26:10			2:41	
✓ 497	"	"	"	7200	29:42			2:40	
✓ 498	"	1.0	6185	8400	29:30			2:38	
✓ 499	"	1.50	6300	10300	34:34			2:33	
✓ 500	"	"	"	10200	38:21			2:29	
✓ 501	"	"	6300TA	9700	42:16			2:25	

Telescope:

Frame prefix #: FR96B

Day of Week: Thurs/Fri

RA offset: ϕ

Focus: 3660

Humdty:

Sheet #: 38

Observers: DiSanti/Levy

Date MST/UT: 6/7 Mar

Dec offset: $\sim 3^{\circ} S$

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.)
✓ 502	Kopff 27	150	6300 ¹²	8900	11:46:03	17:43:132	+5:21:41	2:21E	
✓ 503	"	30	4965	10700	52:49			2:14.5	
✓ 504	"	25	"	9400	54:41			2:13	type 579. used
27 ✓ 505	Halley	0.5	R	14000	12:20:10	20:16:29.6	-18:44:46	4:20.5	topped off dewar $\sim 4:55am$
✓ 506	"	0.2	"	7500	21:25			4:19	
✓ 507	"	5	"	Sat/900	23:45				
30 ✓ 508	"	0.5	V	15000/700	25:18	123.3	1458.00	4:15	
✓ 509	"	0.2	V	7500/675	26:40			4:14	
✓ 510	"	5	"	Sat/800	28:03				
✓ 511	"	10	6185	14000/700	30:06				
New target 1 ✓ 512	"	5	"	8000/600	31:38				
✓ 513	"	45	"	Sat/725	33:13			4:07	
✓ 514	"	30	"	"/ "	35:16			4:05	
✓ 515	"	12.5	6250	10200/675	38:19				
✓ 516	"	7.5	"	Sat/735	40:20	116:25.0	145:45	4:00	

Telescope: _____
 Frame prefix #: FR86B Day of Week: Thursday RA offset: _____
 Observers: DiSanti/Lew Date MST/UT: 6/7 Mar Dec offset: _____

Focus: 3660 Humdty: 62% Sheet #: 39
 Tailpiece: 70 Balance: Temp O/I: 37/40

Type pos	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.)
6	✓ 517	HALLEY	30	4565	1500/775	12:47:30			3:53E	
	✓ 518		10	11	6000/200	49:18			3:51	
	✓ 519		90	11	Sat/1300	50:41	20:16:25.2	-18:46:09	3:50	
	✓ 520		45	6300	10300/750	54:07			3:46	
10	✓ 521		135	6300	Sat/1000	56:08			3:44	
	✓ 522		135	6300 (11)	Sat/1050	59:44			3:41	#
	✓ 523		30	6300 (11)	7900/800	13:03:34	20:16:26.5	-18:46:37	3:37	
	✓ 524		30	11	7700/1500	13:10:20			3:30	
	✓ 525		30	11	8700/1800	13:12:30			3:28	← Header ⁶²¹ NOT LET
	✓ 526	✓	11	6300	8800/2400	14:12			3:26.5	OK
	✓ 527	DARK	1	—	653 ± 15.4					header corrected
	✓ 528	11	1	—	66 ± 15.4					

Telescope: 61"

40

Frame prefix #: FR86B

Day of Week: Fri/Mon

RA offset:

Focus:

Humdty: 60 Sheet #:

Observers: MARCIALIS
SCHULTZ

Date MST/UT: MAR 7/8

Dec offset: 2'29"

Tailpiece: 17

Balance: 70 Temp O/I: 37/40

Sout 2

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.)
✓529	LAN 84334	0.3	R		11:08:32			1 ^h 33 ^m	Filed dewar 2:10 A.M. 3 1/2 pixel full width
✓530		0.7	"		05:36	16:16:05.1	14:39:45	1 ^h 31 ^m	
✓531		0.7	"		06:58			1 ^h 30 ^m	
✓532		1.0	✓	3200	09:39			1 ^h 27 ^m	
✓533		2.0		5500	11:37			1 ^h 25 ^m	
✓534		0.6		10800	13:05			1 ^h 23 ^m	
✓535		0.5		8100	14:32			1 ^h 22 ^m	
✓536	Kopff 27	8	6185	8700	24:31	17:43:13.9	05:21:51	2 ^h 39 ^m	1.43
✓537		"	"	10900	25:52			2 ^h 38 ^m	
✓538		25	6250	8400	27:52			2 ^h 34 ^m	1.41
✓539				9300	29:24				
✓540		110	6300			17'			Saw possible comet disturbance
✓541		140	6300	9200	48:52			2 ^h 14 ^m	
✓542				7600	52:43			2 ^h 11 ^m	
543			TLT	7400	56:32			2 ^h 07 ^m	

Telescope:

Frame prefix #: FR86 D

Day of Week: Fri/Sat

RA offset:

Focus:

Humdty:

Sheet #

41

Observers: Marcialis
Schulze

Date MST/UT: MAR 7/8

Dec offset: 2' 29" South
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.)
✓ 544	Kopp 27	140	6300 TLT	11,595/54	1700			2 ^h 03 ^m	
✓ 545	Halley	1	R	6350 950	1227116			4 ^h 07 ^m	
✓ 546		12	"	6600 800	26:50			4 ^h 15 ^m	
✓ 547		5	"	16850 1200	30:44			4 ^h 08 ^m	Computer died
✓ 548		5	V	1692 1300	31:48			4 ^h 00 ^m	Co
✓ 549		1	"	8000 300	35:50	20:14:24.3	-19:11:28	3 ^h 59 ^m	
✓ 550		0.5	"	4267 800	37:50			3 ^h 57 ^m	2.8 2.7
✓ 551		20	618S	6450 800	39:32			3 ^h 53 ^m	20 54.0
✓ 552		60		16000 1000	41:17				2.7 60
✓ 553		54	6250	6900 900	12:44:15			3 ^h 50 ^m	1620
✓ 554		162		16000 1300	46:34			3 ^h 48 ^m	Looking thru tree
✓ 555		5	R	16300 1500	50:16			3 ^h 44 ^m	windy
✓ 556		1	"	2714 800	51:21			3 ^h 43 ^m	
✓ 557		60	6300	2660 875	54:34	20:14:25.6	-19:12:11	3 ^h 40 ^m	
✓ 558		TLT	"	2200 800	56:58			3 ^h 38 ^m	Tree cirrus

PHOTOMETRIC NOT

Frame prefix #: FR86B

Telescope: 6" 11

Day of Week: Sun/Mon

RA offset:

Focus:

Humidity: 72 Sheet #: 43

Observers:

Date MST/UT: MAR 9/10

Dec offset:

Tailpiece: 17

Balance:

Temp O/I: 38/42

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.)
✓ 565	Halley	30	R	$\frac{2600}{925}$	12:28:18			~20:15(3) 3 ^h 54 ^m	
✓ 566	"	"		$\frac{Sat}{}$	29:19			3 ^h 53 ^m	Good
✓ 567	"	"		$\frac{2100}{930}$	30:31			3 ^h 52 ^m	
✓ 568	"	5		$\frac{2100}{}$	46:33			3 ^h 36 ^m	

NO PHOTO METRIC

COULD NOT FOCUS

HEAVY CLOUD COVER

Telescope: 61"

Frame prefix #: FR86B

Day of Week: Mon/Tue

RA offset:

Focus:

Humdty:

Sheet #: 44

Observers: Schultz

Date MST/UT: MAR 10/11

Dec offset:

Tailpiece:

Balance:

Temp O/I: 24/32

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.)
✓569	FlatField	0.25	R	8300					
✓570				8200					
✓571		0.4	V	8800					
✓572				8800					
✓573		6	6185	9000					
✓574				9300					
✓575		12	6250	8000					
✓576				8100					
✓577	Darg2	1	N/A	811					
✓578				842					
✓579	FV	3	8600	9400					
✓580				9500					
✓581		3	9180	8000					
✓582				7900					
✓583		300	4060	5200					

Telescope:

Frame prefix #: FR86B

Day of Week: Wed/Thu

RA offset:

Focus:

Humdty: 92%

Sheet #: 46

Observers: DIAMANTZ
LEVY URI

Date MST/UT: MAR 12/13

Dec offset:

Tailpiece:

Temp O/I: 21/27

Balance:

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.)
591	Halley	1	R		12:18:06				Shutter didn't open - not saved!
✓ 592	"	1	R	2400/875	~12:16				
✓ 593	"	"	"	3300/900	12:21:18			~3:43E	
✓ 594	"	5	"	10000/1000	25:26	20:03.33.6	-21:39.58	3:38	best unsaturated image
✓ 595	"	10	"	Sat/1250	28:55			3:35	
✓ 596	"	5	"	Sat/1100	33:24			3:30.5	
✓ 597	"	1	"	2600/900	35:06				clouds
✓ 598		2 2.5	"	Sat/1500	~12:43			3:20	really more like 5 ^{sec}
✓ 599		2	"	2900/1000	44:40			3:19	
✓ 600		"	"	6500/1100	46:23			3:17.5	← check focus
✓ 601		"	"	3100/1100	47:38			3:16	
✓ 602		"	"	5900/1600	53:55			3:10E	
✓ 603	DARK	1	N/A	812 ± 14.25					BT
✓ 604	DARK		N/A	809 ± 12.84					BT

tape ~70% used