

Telescope: 61"

Frame prefix #: SP90D

Day of Week: Sat.

RA offset:

Focus: 385 Humdty: 42 Sheet #: 1

Observers: Fink, Grunby, Hunk

Date MST/UT: Jan 16/17

Dec offset:

Tailpiece: 34.3

Balance: 300 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.)
001	Polaris-Hunk	6w	0.70	200 not	3:174	12146:220	-29:29 16	(27) 2.38	
002	"	12w	"	300 not	4:20824	2360	24:18	+1:39	2.48 30% peak Netlow phot. 3000
003	<sup>H10</sup> KSSPT3	0.8	1.0	94w	5:1100	1543 33	+2 32 51	-0:13	1.16
004	"	0.8	"	94w	5:1302				fringe pt. 2728, 418
005	"	"	"	98w	5:1403				
006	"	"	"	93w	5:1504			-0:10	1.15
007	"	"	"	76w	5:1541				
008	"	"	"	93w	5:1603			-0:07	1.15
009	"	"	"	93w				-0:06	1.15
010	Pluto	6w	"	92w		1509 49	-1 15 33	1:11	1.26
011	"	"	"	57w				1:22	1.29
012	"	"	"	9w				1:34	1.31
013	Levy	6w	0.50	48w	10:33	00 8 17	29 12 08	-3:15	1.34
014	"	"	"	49w	10:44			-3:04	1.30
015	"	"	"	59w	10:55			-2:52	1.25 / 1.22

ARGOS MTW



Telescope: 61"

Frame prefix #: SP90D

Day of Week: Sa

RA offset:

Focus: 3890

Humdty: 44% Sheet #: 3

Observers: Ark, Gindy, Hank

Date MST/UT: June 17/18

Dec offset:

Tailpiece: 193

Balance:

Temp O/I: 60/62

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.)	
✓ 024	BS0209	1.0	0.10	99w				2:49	2.51	
✓ 025	"	1.0	0.10	83w				2:48	2.50	
✓ 026	"	"	"	88w	2:44:15			2:46	2.48	
✓ 027	"	"	"	92w	4:40			2:45	2.46	
✓ 028	"	"	"	85w	44:49	16 52 57	-20 22 55	2:41	2.40	
✓ 029	"	"	"	84w				2:40	2.39 GP 370.4 417	
✓ 030	Peters-Hutt	1200S -1200E	"		4:01:52	12 49 00	-29 03 25	1:34	2.41	2nd FPA - 66.6 Pa 5.23 stop/11
031	"	1200	"					2:09	2.69	3rd N at peak 100 Pa 2700 Pa 400 Pa 2:47 4th 400 Pa at end
✓ 31	Rundl 2	12w	1	~3000 cont	5:03 43	15 53 42	-19 24 29	-00:27	1.63	305 2/100 Pa 4:30 Pa
✓ 032	"	"	"	~3000 cont				00:00	1.62	GP 370.8, 417 4:30 Pa
✓ 033	BS0209	1w	0.10	65w		16 52 59	-20 23 36	-00:26	1.67	) 4 ~ 383
✓ 034	"	"	"	70w		"	"	"	"	
✓ 035	"	"	"	76w		"	"	"	"	
✓ 036	"			74w				-02:20	1.66	GP 370.8, 409

4 387

Telescope: 61"

Frame prefix #: SP90D

Day of Week: Sa

RA offset:

Focus: 387+

Humdty:

Sheet #: 4

Observers:

Date MST/UT: Jan 17/18

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.)
✓ 027	B56269	100	0.50	7041				-0:15 1.66	↑ 370.8, 407 ↓ 387
✓ 038	"	"	"	9600				-0:05 1.85	↑ 387
✓ 039	"	"	"	7400					
✓ 040	"	"	"	7700					
✓ 041	"	"	"	8400				-0:01 1.65	
✓ 042	"	"	"	8200					
✓ 043	"	"	"	7800					
✓ 044	Triton	300	"	2700		18 18 55	-21 57 06	-1:19 1.86	
✓ 045	"	600	"	5216				-1:11 1.85	
✓ 046	"	"	"	5400				-1:00 1.80	
✓ 047	"	"	"	5700				-0:50 1.77	
✓ 048	"	"	"	5100				-0:39 1.75	
✓ 049	"	"	"	6300				-0:27 1.73	
✓ 050	"	"	"	6800				-0:16 1.72	
✓ 051	"	"	"	5050				-0:04 1.71	

+0:06 1.71



Telescope: 614

Frame prefix #: SP90D

Day of Week: Su

RA offset:

Focus:

Humdty:

Sheet #: 5

Observers: Fink, Gandy, H.H.

Date MST/UT: June 14/18

Dec offset:

Tailpiece:

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.)
8	002	600	0.10	5000				+0206	1.71
9	003	1	"	5300				+0217	1.73
10	004	"	"	5700				+0229	1.73
11	005	"	"	5800				+0240	1.75
12	006	"	"	4900				+0257	1.77
13	007	"	"	4930				1202	1.80
14	008	"	"	9200				1213	1.84
15	009	"	"	5800	10:01			1229	1.88
	060	BS2291 #05	1.0	6800		19150	-241106	+1225	2.01
	061	"	"	5700					
	062	"	1.5	9700					
	063	"	"	10070	10:20				
	064	"	"	9850					
	065	"	"	9400				+1130	2.03
	066	"	"	9600					

Telescope: 61"

Frame prefix #:

Day of Week: Sa

RA offset:

Focus:

Humdty:

Sheet #: 6

Observers:

Date MST/UT: Jun 17/18

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.)	
067	BS7291	1.5	0.50	9500						
068	"	"	"					+1:35	2.06	
069	BS7994 <sup>71</sup>	1.2	"	7500						
070	BS7994 <sup>71</sup>	1.50	"	10000		20:52:55	-11:36m	+0209	1.39	
071	"	"	"	9200						
072	"	"	"	9500				40:09	1.39	
073				8900						
074	Long	6w	"	5300	11:00	00 08 27	29 16 39	-2:44	1.23	Mundin
075	BS7906 <sup>HIS</sup>	0.10	1.000	3900				1:01	1.08	<del>SLX</del>
076	"	0.15	1.00	6300						SLX
077	"	"	"	6500						
078	"	"	"	6200				1:09	1.08	
079	FR	0.15	3um	6500✓						-650
90	"	"	"	"						

Telescope: 61"

Frame prefix #: SP90 D Day of Week: Tue

RA offset:

Focus:

Humdty: 37% Sheet #: 7

Observers: Fink, Grady

Date MST/UT: Tue 12/20

Dec offset:

Tailpiece:

Balance:

Temp O/I: 64/68  
05/65

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.)
	No spectra obtained on Monday June 18/19								3.
091	<sup>H 17</sup> BS432P	2.0	0.5m	2800		11 07 31.5	-30 05 41	21 49	3.09 real but very
092	"	2.0	"	2700					
093	"	4.0	"	6700		"	"	21 52	5.78
094	"	"	"	5800				21 55	3.80
095	<sup>H 20</sup> BS 4691	2.0	"	8200		12 19 42	-22 06 28		
096	"	4	"	7500				+11 51	2.04
097	"	"	"	8000				+11 52	2.05
098	"	"	"	7000	3143			1:53	2.06
099	Peta/Hell	1200	"	<sup>net</sup> 3000cts	3153	12 54 16.9	-28 13 05	11 29	2.30
100	"	"	"	3000cts		59 18.9	34.6	11 51	2.47
101	"	"	"	"	4136			2:11	2.70 Cat Run 3HH
102	Run 2	"	"			15 52 58	-19 09 12	-00 05	1.61
103						15 52 57.6	-19 09 07	-00 15	1.61
104	<sup>H 70</sup> BS 6269	1.0	0.75	5900					

Cathy Hill, (Smallwood, Danville)

Telescope: 61"

Frame prefix #: SP00

Day of Week: Tue

RA offset:

Focus:

Humdty:

Sheet #: 8

Observers:

Date MST/UT: Jul 19/20

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.)
105	BS 6209	1.5	0.5m	9800		165253	-202307	-0.10	1.66
106	"	"	"	10250					seeing not good
107	"	1.2	"	6800					
108	"	1.4	"	8200					
109	"	"	"	9600					
7 110	"	"	"	7040					
8 111	"	"	"	10000					
9 112	"	1.2	"	8700					
10 113	"	"	"	8300				0.10	1.65
11 114	Triton	1.20	"		6137	181845	-215112	-1250	2.03
12 115	"	6.00	"	2600				-1149	1.98 Triton binned out 1/2 lost along guide
13 116	"	"	"	3900				-1130	1.91
14 117	"	"	"	4500				-1119	1.86
15 118	"	"	"	4400				-1108	1.82
16 119	"	"	"	9680				-0.57	1.79

Telescope: 61"

Frame prefix #: SP90 D

Day of Week: Tue

RA offset:

Focus:

Humdty:

Sheet #: 9

Observers: Fil, Gmf

Date MST/UT: Jul 19/20

Dec offset:

Tailpiece:

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.)
5	Tutu	6w	0.50		3900			-0:46	1.76
6	"	"	"	7153	4600			-0:35	1.74
7	"	"	"		4900			-0:29	1.73
8	"	"	"		4600			-0:13	1.72
9	"	"	"	8:24	4470			-0:02	1.71
10	"	"	"	8:35	4350			+0:07	1.71
11	"	"	"		3700				1.72
12	"	"	"	8:57	5000			0:28	1.73
13	"	"	"		4300				
14	"	"	"	9:19	4400			0:52	1.77
15	"	"	"	9:30	4770			1:02	1.80
16	"	"	"	9:41	4100			1:13	1.84
1	BS <sup>#65</sup> 7291	1.5	"		4800			1:12	1.95
2	"	2.0	"	9:58	9160				VMS <sup>hand</sup> err
3	"	"	"		9100				VMS err

202

Telescope:

Frame prefix #:

Day of Week:

RA offset:

Focus:

Humdty:

Sheet #: 10

Observers:

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.)	
4	RS 7291	2.0	0.10	7300					876	
5	"	"	"	9700				1:22	2.0	
6	"	"	"	9100						
7	"	"	"	8900	10:08					
8	"	"		9926						
9	"	"	"	6500	10:11					
10	"	"	"	7000					1450 - 1240	
11	"	"	"	7000						
12	"	"	"	7200		19 14 59	-29 10 29	1:29	2.03	
144	Kupff	1200	"	<sup>Net</sup> 200	10:33	12 33 35.8	5 55 20	-9:29	2.65	60s: 200 pul 3900 pul 1/10 from just rdy
145	Kupff	600	"		10:54	"	"	-9:08	2.24	
146	RS 7906	0.20	1.0	7660		20 39 47	15 53 23	1:03	1.08	
147	"	"	"	7240						
148	"	"	"	6700						
149	"	"	"	7180				1:05	1.08	





Telescope: 61"

Frame prefix #: FR90D Day of Week: Sun/Mon

Observers: Grundy, Fink(s) Date MST/UT: 17/18

RA offset:

Dec offset:

Autoguiding from Argosmtn in SO. Test

Focus: 3870 Humdty: 43% Sheet #: 2

Tailpiece: 34.3

Balance:

Iris: 302

Temp O/I: 60°/61°

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.)
<del>5</del>	Looking for Peters-Hartley:					$\alpha = .021$	$\delta = .015$	$\delta = -29^\circ$	
<del>5</del>	Guidehist is					"PET90D18.GH" (in SO.TEST)			
256 <sup>2</sup> 6	Peters-H	60	B/Dich	Phot: 6600					Star passed thru comet
7	"	30	B/Dich	3200	4:31				
<del>7</del>	Looking for Russel 3					$\alpha = -.010$	$\delta = +.002$	$\delta = -19^\circ$	T% = 55/54
<del>8</del>	RUS90D18.GH				(370.4, 417)	autoguiding			
8	Russel 3	30	B/Dich	2700	5:05				
9	"	30	"		5:51				T dropping
<del>9</del>	Going to Triton					new focus: 3875 (370.8, 407) guidepoint			
<del>9</del>	Vertical slit, .5mm,					Neptune masked, $\delta = -21^\circ$			
10	Triton	30	B/Dich		7:59				
11	"	"	"	Phot: 30000	8:54				
12	"	"	"		9:30				
13	"	"	"	30000	10:01				
14	"	"	"	"	10:10				



Telescope: 61"

Frame prefix #: FR90D

Day of Week: MON/TUES

RA offset:

Focus: SPST

Humdty:

Sheet #: 4

Observers:

Date MST/UT: 18/19

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.)
16	KupA	160s	92	1600	10:27	11:31:57.6	5 47 52.6	-4:15	2.85 512
17	"	120	4	1060	10:31			-4:12	2.75 512
18	"	11	1	1560/1030	10:37	31:58.2	5 47 49.8	-4:27	2.60 512
19	"	11		1880/1050	10:48	32:08.6	48:21.8	-4:16	2.27 512 <sup>mount 9.25 40" N</sup>
20	"	11	"	1180	10:55	09.2	48:25.0	-4:09	2.25 <sup>not pow 165 mm</sup> 212:112 <sub>down</sub>
21	"	11	"	1380	11:01	09.7	33.6	-4:03	2.17 <sup>212:112</sup> "

2000 2000 40 000  
2000 2000 2000



