

Telescope: 61"

Mag. 360

Frame prefix #: SP90C

Day of Week: Sunday

RA offset: /

Focus: 380

Humdty: 45% Sheet #: 1

Observers: Fink, Grady, Kucharski

Date MST/UT: May 20/21

Dec offset: /

Tailpiece: 343

Balance: 400

Temp O/I: 48/50

1215: 360

Specimen was tilted; had to be re-aligned on telescope
new sec's; 520
2.15

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	Pluto	600	1.0	4800/110	5:34	15:1225	-17 30	1.20	See file	
002	"	"	"	5100/110	5:42		HA=0:54	1.24	295 474	
003	"			5300/110				-0:41	1.22	
4	"	600	1.0mm	5900/110				-0:30	1.21	
005	BS 5853	0.6	"	5700	6:32	15:43236	+2 33 2.	-0:39	1.17	Comp sta.
006	"	1.0	"	10900				-0:3		"
007	"	0.9	"	10200				-0:35	1.17	"
008	"	"	"	9300						"
009	"	"	"	8400				-0:33	1.16	"
010	Pluto	600	"	5500		12:23.5	-17 29.2	+0:05	1.20	
11	"	600	1mm	6500	6:58				1.21	
12	PLUTO	"	"	5350	7:10				1.21	
013	"	"	"	4620	7:21			+0:41	1.22	done just dump out?
014	BS 5853	0.9	"	10900						
015	"	"	"	10880	7:32			+0:26	1.16	

to file (Spec) Use up 53%
- 18%
35%

Telescope:

Frame prefix #: SP90C

Day of Week: Sa

RA offset:

Focus:

Humdty:

Sheet #: 2

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.)
* 016	BS 585	0.8	1.0	8750					
* 017	"	"	"	7400					
* 018	"	"	0.50	7780					
* 019	"	"	"	8370				+0:23	1.16
* 020	"	"	"	7700					
* 021	RC 6029	0.1	1.0	5800					SH
* 022	BS 6029	0.1	1.0	6330		17 47 28	2 43 21	-1:18	1.22
* 023	BS 6029	0.1	"	6870					
✓ 024	"	"	"	5630					
✓ 025	BS 6269	0.50	"	6050		16:52:55	-20:22:42		59 Cap h Turtan
✓ 026	"	0.480	"	8800				-0:05	1.66
✓ 027	"	"	"	9400					
✓ 028	"	"	"	8800					
✓ 029	"	"	0.50	9130				+0:02	1.65
✓ 030	"	"	"	8000					

possibly the
due north?

Telescope:

Frame prefix #: SP90C

Day of Week: Su

RA offset:

Focus:

Humdty: 48% Sheet #: 3

Observers:

Date MST/UT:

Dec offset:

Tailpiece:

Balance:

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.)
✓ 031	BS6269	0.20	0.10	6500					
✓ 032	Tutu	600	4	3900	8:45	19 01 35.9	-21 47 55	-1:43	1.98
✓ 033	"	"	1.0	6100				-1:28	1.90 / 1.88 intern.
✓ 034	"	"	"	5800			-21 47 44	-1:14	1.89 very slight flares flares about
✓ 035	"	"	"	5900				-1:03	1.80 photo of el. with
✓ 036	"	"	"	6050				0:52	1.77
✓ 037	"	"	"	5200				-0:40	1.75 a cloud pass
✓ 038	BS7241	1.0	"	5300					1.86 H65
✓ 039	"	1.5	"	8100				-0:36	1.85
✓ 040	"	"	"	6400					
✓ 041	"	"	4	6800					
✓ 042	"	2.0	4	9700					1.84
✓ 043	"	"	"	9400				-0:32	1.84
* 044	Aurora	120	0.50	1800/100	10:23	20 17 49	14 24 47	-1:59	1.19
* 045	"	600	"	4800 7200 of				-1:55	1.18 2 cloud near end last 2 mins

Telescope: 61"

Frame prefix #: SP90C

Day of Week: Su

RA offset:

Focus:

Humdty:

Sheet #: 4

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.)	
X046	Antar	0.50	0.50	7500 ⁰⁵ 4800 ^{at}	10:38	205429	142254	-143	1.15	photometric
X047	"	"	"	8500 ⁰¹ 5900 ^{at}		22	2129	-1:52	1.15	photometric
X048	"	"	"	8500 5200		25	142021	-1:20	1.11	photometric
✓049	Titan	5.0	1.00	4800						
✓050	"	12.0	"	9200				+0:05	1.08	
✓051	"	10.0	"	8700						
✓052	"	1.00	"	8200		194823	-205756	+0:06	1.08	
✓053	"	"	"	8700						
✓054	PF	0.10	3.00	5040						
✓55	"	.1		5060						
✓56	"	.01		5000						
✓57	"	.1		5080						
✓58	"	.03		2400						
✓59	"	.03		2450						
✓60	"	.03		2450						

Telescope: 61"

Frame prefix #: SP90C Day of Week: MONDAY

RA offset:

Focus: 3850 Humdty: 42.5% Sheet #: 5

Observers: Grandy, Karkashka Date MST/UT: 21/22

Dec offset:

Tailpiece:

Balance:

Temp O/I: 53/55

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.)
✓ 61	BS5853	.9	.5	8					Hazy clouds scattered around
✓ 62	"	"	.5	6800	5:35			1.25	
✓ 63	"	"	.5	7800	5:37			1.25	
✓ 64	"	"	.5	8000	5:39				
✓ 65	"	"	.5						1.24
✓ 66	PLUTO	600	.5	4240	5:47				1.23 (start)
✓ 67	"	"	"	3150	5:59	15:12:17.9	-1:17:14	-0:37	1.22 (start) fixed pattern noise (low level)
✓ 68	"	"	"	4000	6:11				1.21 20% haze
✓ 69	"	"	"	4180	6:22			-0:14	1.20
✓ 70	"	"	"	3100	6:34			-0:03	1.20
✓ 71	"	"	"	4290	6:45	15:17:17.0	-1:17:23	+ :08	1.20
✓ 72	BS5853	.9	"	8320	7:01				1.15
✓ 73	"	"	"	7800	7:02				1.15
✓ 74	"	"	"	7500	7:04				1.15
✓ 75	"	"	"	7420	7:05				1.15

Not photometric tonight

Telescope: 61"

SLIT IS ROTATED

Frame prefix #: SP90C

Day of Week: MON

RA offset:

Focus:

Humdty:

Sheet #: 7

Observers:

Date MST/UT: 21/22

Dec offset:

Tailpiece:

Balance:

Temp O/I:

wrong in header

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.)
87	BS6269	.8	1.0	4900	8:40				1.67
✓ 88	"	"	"	4000	8:44				1.67
✓ 89	"	"	"	4380	8:46				1.67 Scattered
✓ 90	"	"	"	4000	8:47				1.67 clouds
✓ 91	"	"	"	3670	8:49				1.68
✓ 92	TRITON	300	1.0	2300	9:01				1.88 clouds!
✓ 93	"	600	"	3880	9:09				1.85 (a star is near Triton)
✓ 94	"	"	"	3300	9:20				1.81 clouds
✓ 95	"	"	"		9:32				1.78
Clouds → closing off									2:45 AM (MST)
(thin, everywhere)									T = 53/55
									H = 43%

Telescope: 61"

Frame prefix #: SP90C Day of Week: Tuesday

RA offset: 5

Focus: 3847 Humdty: 47% Sheet #: 9

Observers: Fink, Grady, Kirkhaldy Date MST/UT: May 22/23

Dec offset:

Tailpiece: 39.5

Balance: 4w Temp O/I: 51/54

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.)
✓ 1096	Triton	300	1mm	~4000	9:17				(1.80) rotated slit
✓ 97	"	"	"		9:25	19:11:24.1	-21:49:26	1.78	Bright star in slit
✓ 98	"	"	"		9:45		re focus = 3820		bleeding into Triton
99							new guidepoint = 375, 413.6		Bad seeing too
✓ 99	"	120	"	1800	9:53			1.73	Lousy data
✓ 100	"	"	"	1800				1.72	
101									
✓ 101	RS 7589	1.0	0.10	5800				-0:47 1.09	New focus 3800. slit N-S
✓ 102	"	"	4	6700					photo
✓ 103	"	"	4	7600		19:51:39	+11:55:01	-0:44 1.09	quite
✓ 104	"	"	4	5000					steady
✓ 105	"	"	4	4460	10:29			-0:42 1.09	
✓ 106	"	"	4	5900				-0:39 1.08	
✓ 107	Amnln	600	11	4900	10:43	20:22:02.3	P 2600.	-0:58 1.13	
✓ 108	sg	120	11					8:54 29 -0:42 1.11	30" N

Telescope: 61"

Frame prefix #: SP90 C

Day of Week: Thursday

RA offset:

Focus:

Humdty: 42% Sheet #: 11

Observers: Fink, Grundy

Date MST/UT: May 24/25

Dec offset:

Tailpiece:

Temp O/I: 54/58

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.)
✓ 114	Wild 4	600	0.50	^{1mm wh} 2000/1000	3:25	9:57.58.2	14:13:20.7	2:14	1-23
✓ 115	"	1200	"	^{2mm red} 3000/1000	3:38	59.1	14.5	2:26	1.27 R/disk 20s star power 5 awc pul 11000 cut plate
✓ 116	"	"	"	2800/	3:59	9:58:20.6	14:13:3.7	2:48	1.35 Tail: $\frac{1}{2}$ $\frac{1}{2}$ N tail
✓ 117	"	11	"	2800/	4:20	9:58:02	14:12:15	3:09	1.46 / 1.59 ^{red}
✓ 118	RC SPS ⁹²	1.0	"	8900		13:46:29	6:23:48	+0:22	1.11
✓ 119	"	1.2	"	7000					
✓ 120	"	"	"	8900					
✓ 121	"	4	1.0	9000				+0:07	1.11 } set filter up 0.5m
✓ 122	"	"	"	8400					
✓ 123	"	"	"	8300					
✓ 124	"	"	"	8000					
✓ 125	"	1	"	7600					
✓ 126	RC SPS	0.8	1.0	8000		15:43:36	+2:33		1.24
✓ 127	"	"	"	7400				-1:27	1.24
✓ 128	"	"	"	7000					

245-475 Rm use for quarter

Telescope: 61"

Frame prefix #: SP90C

Day of Week: Thursday

RA offset:

Focus: 3803

Humdty:

Sheet #: 12

Observers: Fick, Grmf

Date MST/UT: Mar 24/25

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.)	
✓ 129	BS 5853	0-8	1-0	8800						
✓ 130	"	"	"	9170				-1:24	1-23	
✓ 131	Pluton	600	"	4400/1100		15h 60	-1:18:20	-0:240	1:22	
✓ 132	"	"	"	5040				-0:30	1:21	
✓ 133	"	600	"	5570				-0:17	1-21	
✓ 134	"	"	"	5720				-0:07	1-20	
✓ 135	"	"	"	5000				+0:23	1-20	
✓ 136	"	"	"	5300				+0:14	1-20	
✓ 137	"	"	"	5300						
✓ 138	RS 6029 ^{H42}	0-10	"	5030					1-30	Std.
✓ 139	"	"	"	5200				-1:12	1-30	
x 140	"	"	"	5500						
x 141	"	"	"	5800				-1:50	1-30	
x 142	Aurora	600	0.50	560 700	10:24	19h 35	159 15	-0:33	1-17	filled dom: camera not completely covered!
x 143	"	"	"	4700 6100				-0:19	1-16	object 2nd track quickly!
x 144	"	"	"	4700 6000	10:56			-0:05	1-16	covered again

Telescope:

Frame prefix #: SP9C

Day of Week: Friday

RA offset:

Focus:

Humdty:

Sheet #: 13

Observers: Fink, Grady

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.)
✓ 145	FF	0.10	3.0mm	3990/1m			-32°	472.4	clicks 2 Vanin 85
✓ 146	"	"	"	3990/1m ⁵¹⁶²			"		(-65° offset from star)
✓ 147	"	"	"	3990					
✓ 148	"	"	"	3999 ⁵¹⁷²					
✓ 149	"	"	"	3964					FF 200mm
✓ 150	"	"	"	3970					
✓ 151	"	"	"	4mm					
✓ 152	"	"	"	3970					
✓ 153	"	"	"	3990					
✓ 154	"	"	"	3940					
✓ 155	"	"	"	3120	451 km edge		-32°		white zone
✓ 156	"	"	"	3120	451 km edge		-12°		white zone
✓ 157	"	"	"	3230	477 km edge		-12°		Done
✓ 158	"	"	"	3390	472 km edge		+2°		

Telescope: 6"

Frame prefix #: SP90C

Day of Week: Friday

RA offset:

Focus: 3792 Humdty: 38% Sheet #: 14

Observers: Fnh, Grady

Date MST/UT: May 25/26

Dec offset:

Tailpiece: 343

Balance: 400 Temp O/I: 50/52

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.)	
✓ 159	BS 5833	0.8	1.0m	7300	159	1525 36	-1231 36	-1:07	1.20	
✓ 160	"	"	"	7870					"	
✓ 161	"	"	"	7800						
✓ 162	"	1	"	9900				-1:00	1.19	
✓ 163	"			8100						
✓ 164	Photo	0.00	"	9600		1511 53	-117 49	-0:17	1.21	Photo 2800 31 ^{Photo}
✓ 165	"	"	"	4870				-0:05	1.20	
✓ 166	"	"	"	5500				+0:05	1.20	
✓ 167	"	"	"	4800				+0:16	1.21	
✓ 168	"	"	"	3900				+0:28	1.21	Don Grady's ladder checked yesterday
✓ 169	"	"	"	5600				0:41	1.22	
✓ 170	"	"	"	5830				0:53	1.24	
✓ 171	BS 5511	0.15	"	6300	149546	149546	154 13	1:40	1.28	
✓ 172	"	"	"	6200						
✓ 173	"	"	"	6500				1:43	1.29	

Telescope:

Frame prefix #: SP90C

Day of Week: Friday

RA offset:

Focus:

Humdty:

Sheet #: 15

Observers:

Date MST/UT:

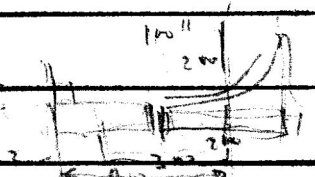
Dec offset:

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.)	
✓ 174	RC6629	0.10	1.0 μ m	5200		1747 28	+241 49	-	1-20	
✓ 175	"	"	"	5200				-1:27	1-20	
✓ 176	"	"	"	6700					1-20	
✓ 177	RC6918	1.0	0.7 μ m	9100		1938 23	-21 09 10	-1:39	1-89	
✓ 178	"	"	"	10310						
✓ 179	"	0.9	"	9400				-1:29	1-87	
✓ 180	"	"	"	9700				-1:27	1-86	
✓ 181	TruAm	600	"	4160	8:32	19 01 11	-21 49 16	-1:36	1-94	
✓ 182	"	"	"	3890				-1:25	1-88	
✓ 183	"	"	"	5700				-1:12	1-83	
✓ 184	Amstron ^{GA}	"	"	5940		1934 58	-1 09 15	-1:16	1-27	
✓ 185	" edge	"	"	5030	9:41			-1:01	1-25	offset.
✓ 186	"	"	"	1100	9:53	1934 38	-1 19 29	-0:49	1-23	offset by $30'' = 5'' S$
✓ 187	Sy	300	"	-	10:09	19 34 30	-1 51 09	-0:37	1-23	offset 30' S.
✓ 188	Amstron ^{edge}	600	"	4100	10:15	19 34 24	-1 17 20	-0:27	1-21	offset



-120 sec counting at present until 1st 120 S; star very dim + catch it

Telescope:

Frame prefix #: SPWC

Day of Week:

RA offset:

Focus:

Humdty: 46% Sheet #: 16

Observers:

Date MST/UT:

Dec offset:

Tailpiece:

Balance:

Temp O/I: 42/46

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.)
✓ 189	Antin ^{edge}	600	0.5		10:25	19 3416	-1 21 00	-0:16	1.21 offset 2' South
✓ 190	Sf	340	"		10:36	19 3402	-1 52 32	-0:04	1.21 +20 to South
✓ 191	Ant ^{edge}	600	"	5060	10:48	19 3402	-1 21 29	+0:02	1.20
✓ 192	Sf	540	0.5		10:55	19 33 55	-1 55 16	+0:14	1.21 can see dark base 22 to South
✓ 193	Ant	500	"	5260	11:04	32 48	-1 23 00	+0:22	1.21 Central dark phase in star disk more bright! at edge of disk
✓ 194	RS 7589 ^{#17}	1.0	"	3600		19 51 38	11 35 02		
✓ 195	"	"	"	6700				+0:19	1.07
✓ 196	"	1.5	"	10176					
✓ 197	"	"	"	8860					
✓ 198	"	"	"	11120					
✓ 199	"	"	"	10016				-0:24	1.08
✓ 200	RS 7637	1.0	"	10500	19 59 54	-9 23		-0:21	1.36
✓ 201	"	0.9	"	9060					
✓ 202	"			8300					
✓ 203	"	"	"	7600					
✓ 204	"	"	"	7300					
✓ 205	"	"	"	7300				-0:33	1.36

Telescope: 61"

Frame prefix #: SP90C

Day of Week: Saturday

RA offset:

Focus: 5760 Humdty: 42% Sheet #: 17

Observers: Fink, Lynn

Date MST/UT: May 26/27

Dec offset:

Tailpiece: 39.3

Balance: 400 Temp O/I: 46/49

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.)
✓ 206	B55853	0.8	1.0um	8400				-9:52 1-25	
✓ 207	"	"	"	4210				" "	hazy cloud
✓ 208	⁶⁹⁹⁸ B56098	0.9	1.0um	9840					blurred cloud on left for watches but then cleared.
✓ 209	"	0.8	"	8800		18 3822 ✓	-21 09 06	-1:29 1:87	
✓ 210	"	"	"	9040					
✓ 211	"	"	"	7000					
✓ 212	"	"	"	7500					
✓ 213	"	"	"	7300					
✓ 214	"	"	"	8200					
✓ 215	"	"	"	8100				-1:29 1:84	
✓ 216	Triton	600	1.0um	5800 ?	8:33	19 01 06	-21 49 36	-1:32 1:92	perfectly clear
✓ 217	"	"	"	5900				-1:19 1:86	
✓ 218	"	"	"	7000				-1:07 1:82	vg sharp profile
✓ 219	"	"	"	7500	9:08			-0:56 1:78	vg sharp profile
✓ 220	"	"	"	7736				-0:45 1:76	

-0:35 1:74

Telescope: 61"

Frame prefix #: SP90C

Day of Week: Saturday

RA offset:

Focus:

Humdty:

Sheet #: 18

Observers: Fily, Lyndy

Date MST/UT: May 26/27

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.)
#10 ✓ 221	Triton	600	L ₀	8210	9:28			-0:55	1.74 superb photo!
#11 ✓ 222	"	"	"	8100				-0:22	1.72 "
#12 ✓ 223	"	"	"	7910	9:13			-1:71	nice & clear
#13 ✓ 224	"	"	"	6770	10:09			+0:04	1.71 ^{no dust} ^{no wind} ^{steady} ^{good night!}
#14 ✓ 225	"	"	"	7840	10:23			+0:17	1.72
#15 ✓ 226	"	"	"	7570				+0:29	1.73
#16 ✓ 227	"	"	"	7180	10:45			0:40	1.75 good exp
✓ 228	BS 7291	0:30	"	5900				0:40	1.86
✓ 229	"	1:0	"	7390				0:43	1.86
✓ 230	"	"	"	7970					
✓ 231	"	"	"	7910					
✓ 232	"	"	"	7970					
✓ 233	BS 7637	0:30	"	8800	11:11				
✓ 234	"	"	"	7000				+0:09	1.36
✓ 235	"	"	"	7650					

Telescope:

Lance Wilkin

Frame prefix #: SPWC

Day of Week: Sunday

RA offset:

Focus: 3782

Humdty: 42% Sheet #: 20

Observers: Fink, Gandy

Date MST/UT: May 27/28

Dec offset:

Tailpiece: 342

Balance: 40 Temp O/I: 50/59

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.)
✓ 249	Wald 4	12ws	0.5	3000/m		100248	134110	2245	1-35
✓ 250	"	"	"	2910	4209	49	9501	3206	1-05
✓ 251	"	"	"	2940	4250			5227	1-58 full H ₂ O+ rings had no structure
✓ 252	R57813	0-8s	1.0m	8160		144336	23139		
✓ 253	"	"	"	8900				-1.17	1-22
✓ 254	"	"	"	9700					zone large and partial inner curve
✓ 255	"	"	"	9300					not perfectly photometric but close.
✓ 256	"	"	"	8500					
✓ 257	"	"	"		5231			-1.12	1-21
✓ 258	Pluto	6w	"	5850					1-21
✓ 259	"	"	"	5760				-0.17	1-21
✓ 260	"	"	"	6270	6207			-0.05	1-20
✓ 261	"	"	"	5660	6219			-0.06	1-20
✓ 262	"	"	"	5840	6231			+0.18	1-21
✓ 263	"	"	"	5200	6143			-0.30	1-21

IMAGES

Frame prefix #: **FR 90C**

Observers: Fink, Gandy, Karkash, weaver

Telescope: 61"

Day of Week: Sunday 20/21 UT

Date MST/UT:

RA offset:

Dec offset:

Focus: 3795 Humdty: 44% Sheet #: 1

Tailpiece: 34.3

Balance: 400 Temp O/I: 45/49

Ins: 300

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.)
								bias:	RA: -.0065
									Dec: -.003
	FK4 *			3,360 UT	focus = 3795	old readout		Guidepoints: (371.3 420)	
						(New focus = 3650)			
	Pluto			31 pixels	from nearest west neighbor				
1 ⁵¹²	Pluto	60	B/Dich	Phot ~ 70000	5:25				Guide history file
2 ²⁵⁶	"	"	"		5:42				= PLU90C21.GH
3	"	"	"	69000	6:00				
4	"	"	"		6:18				
	COMP star					BS	5853		
5	Pluto	60	B/Dich	7000	6:44				
6	"	"	"	75000	7:01				
7	"	"	"	73000	7:15				
8	"	30	"	36000	7:29				

filter slide:

open H₂O+ 6250 cont Blue

Telescope: 61"

Frame prefix #: TR90C

Day of Week: Sunday

RA offset:

Focus: 3794 Humdty: 46% Sheet #: 2

Observers: Gandy, Fink

Date MST/UT: 20/21

Dec offset:

Tailpiece:
Balance: Temp O/I: 43/47
lis: 301

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.)
7	Comp star			BS		5853	at	1mm	⊗ .5mm
8	Standard Star			BS					
8	Comp Star			BS		6269	at	.5, 1mm	
9	Triton	5sec	B/dich	Phot 8200	8:41				TR190C21.GH
10	"	"	"	8880	8:56				T = 45/48°
11	"	"	"	8681	9:08				sec 1.87 @ 9:06
12	"	"	"	9289	9:19				very slight clouds
13	"	"	"	9100	9:30				" "
14	"	"	"	8164	9:43				
15	"	"	"	4842	9:59		a	cloud	AM = 1.73
15	Comp Star			BS		7291	at	1mm, .5mm	
15						RA	- .167		AUS90C21.GH
15						Dec	- .117	Dec = +14	
16	Austin	5sec	B/dich	15000	10:26				
17	"	30sec	"	87000	10:27				

Telescope: 61"

Frame prefix #: FR90C Day of Week: Thursday

RA offset: 2

Focus: Humdty: 43% Sheet #: 6

Observers: Fink, Grundy Date MST/UT: 24/25

Dec offset:

Tailpiece: 34.3

Balance: Temp O/I: 55/58

Iris: 301

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.)
/				2 forest					fires on mount Lemmon are smoking
/				up the					air to the west. (WLD90C24.6H)
/	P/Comet WILD4								Guidepoints (371, 420)
/					$\alpha = +.010$		$\delta = -.010$		(We're looking into the
2562	35	WILD4	30	^{Photometry} 10800	3:23				Smoky western sky
"	36	"	"	11500	3:35				Tail extends ESE
	37	"	"	11100	3:46				
	38	"	"	11200	3:58				Gusty winds tonight
	39	"	"	11000	4:08				
	40	"	"	11500	4:18				
	41	"	"	11400	4:31				
	42	"	60	OPEN Peak 20000	4:45			3:34	sec2-1.62
	43	PLUTO	30	^{B/Dichr} 32600	5:44				A STAR JUST NORTH
	44	"	"	32100	5:57				OF PLUTO
	45	"	"	32800	6:11				

Telescope: 61"

Guidepoint (371,420)

Frame prefix #: FR90C

Day of Week: THURSDAY

RA offset:

Focus:

Humdty: 43% Sheet #: 7

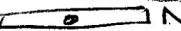


Observers: Fink, Gwady

Date MST/UT: 24/25

Dec offset:

Tailpiece:

Temp O/I: 49/52

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.)	
46	PLUTO	30s	B/ndr	Photometry 32400	6:21				(not saved?)	
46	"	"	"	33000	6:30				371,420 S  N	
47	"	"	"	32800	6:40				Austin  366.3, 520s  N	
48	"	"	"	32200	6:55				Guidepoints, $\alpha = -.179$ bias rates $\delta = -.140$	
49	AUSTIN	120	H α	3600/1100				-2:43	1.52	
50	"	300	H α	3600				-2:37	1.49	these looky ring?
51	"	"	cut	3100				-2:26	1.43	good ring.
52	"	"	"	2700				-2:13	1.38	prim cut ring good/infund
53	"	"	NH α	3300				-2:04	1.35	look good S12+S12
54	"	"	"	3300/1120				-1:57	1.32	
55	"	"	"	3114/1100				-1:52	1.31	
56	"	"	cut	2600/1100				-1:45	1.24	
57	"	"	"	2700/1100				-1:38	1.21	
58	"	"	H α	2944/1100				-1:33	1.20	

Telescope: 61"

Frame prefix #: FR90C Day of Week: Friday

RA offset: zero

Focus: 3813

Humdty: 40.5% Sheet #: 9

Observers: Fink, Grundy Date MST/UT: 25/26

Dec offset: -65°

Tailpiece:

Balance:

Temp O/I: 51°/55°

Iris = 301

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.)
70	FLAT	.8s	NH ₂	3600	2:55				Variac = 85
71	"	"	"	3600	2:57				δ offset = -65°
72	"	"	"	3500	2:58				Dome flats
73	"	"	"	3600	2:59				
74	"	.8s	Cont.	3300	3:01				
75	"	"	"	3300	3:02				
76	"	"	"	3300	3:03				
77	"	"	"	3300	3:04				
78	"	.8s	H ₂ O ⁺ (N)	3500	3:06				
79	"	"	"	3400	3:08				
80	"	"	"	3400	3:08				
81	"	"	"	3500	3:09				
82	"	.8s	H ₂ O ⁺ (old)	6400	3:12				
83	"	"	"	6400	3:13				
84	"	"	"	6300	3:14				

Telescope: 61"

Frame prefix #: FR90C

Day of Week: SATURDAY

RA offset:

Focus: 3775

Humdty: 43% Sheet #: 11

Observers: Grundy, Fink

Date MST/UT: 26/27

Dec offset:

Tailpiece:

Balance: 400

Temp O/I: 45/48

Ins = 301

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.)
91	Comet CKN	60s	B/Dichr	3300	4:26				$\dot{\alpha} = -.0065$
92	track test	240s	"		6:28		2 Pixel/sec		rate $\dot{\delta} = +1.857 \pi/sec$
93	track test	480s	"		6:39		1 Pixel/sec		rate $\dot{\delta} = -.933$
94	"	1000s	"		7:01		.5 Pix/sec		rate $\dot{\delta} = -.468$
						$\dot{\alpha} = -.0065, \dot{\delta} = -.003,$		focus = 3775	
95	Triton	5s	B/Dichr	^{Phot} 8200	8:33				Note the star competing
96	"	5s	"	7600	9:03				w/ Triton. Just to N,
97	"	"	"	8200	9:35				(lower # in spectrum)
98	"	"	"	8100	10:00				
99	"	"	"	8300	10:30				
100	"	"	"	8000	10:52				
101	TITAN	.1	"	^{Phot} 9592	11:42				
/ (Saturn)									
/									
/									

