

Telescope: 611

Frame prefix #: SP99B

Day of Week: Sunday

RA offset:

Focus: 3590 Humdty: 65% Sheet #: 1

Observers: Fink, Gandy, Hicks

Date MST/UT: June 02/03

Dec offset:

Tailpiece: 29 Balance: 300 Temp O/I: 42/44

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	GASPRA	6w	10mm	2120/866 2070	5:18	1543 49	-20 54 19	-1:04	1.77 Plat. GP: 276.7, 420 / 13000
002	"	"	"	2800/840				-0:51	1.73
003	"	"	"	2400	5:42			-0:40	1.71
004	"	"	4	2870				-0:28	1.69
005	"	"	4	3104				-0:17	1.68
006	"	"	4	2900				-0:05	1.67
007	"	"	"	3070		5"		+0:05	1.67
008	"	"	"	3500				+0:19	1.68
009	"	"	"	3070				+0:32	1.70 MOONrise
010	"	"	"	3237				+0:45	1.72
011	"	"	"	3070				0:57	1.75
011	"	"	"	?				?	4.2.1 (?)
012	B56441	1.0	"	5248		17:20:08	-19:20:11	-0:08	1.62
013	"	1.5	"	10600					
014	"	1.2	"	8300					

Telescope: 61"

Frame prefix #: SP91B Day of Week: Sunday

RA offset:

Focus: 3590 Humdty: Sheet #: 2

Observers: Fink, Grandy
#icks Date MST/UT: June 2/3

Dec offset:

Tailpiece: 24
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.)
015	BS6441	1.2	1 ^m "	7600				-0:04	1.62
016	"	"	"	8960					
017	BS6948	1.0	"	10275		18:38:27	-21:04:05	-1:10	1.79
018	"	0.8	"	10712					
019	"	0.7	"	8150				-1:06	1.78
020	"	0.7	"	7940					
021	"	0.7	"	8630					
022	"	"	"	7550					
023	"	"	"	8304					
024	"	"	"	9364					
025	"	"	"	9186					
026	"	"	"	6592				-0:57	1.75
027	BS 7235	0.1	"	7304		19:05:05	+13:50:22	-1:11	1.10
028	"	"	"	9806					
029				10884					moonlight in scope

Telescope: 61"

Mon: Problems w/ long camera

Frame prefix #: SP91B

Day of Week: Tue

RA offset:

Focus: 3860

Humdty: 53% Sheet #: 4

Observers: Fink Grundy
Hicks

Date MST/UT: June 4/5

Dec offset:

Tailpiece: 34.2

Balance: 306 Temp O/I: 52/57 (0.15 pm)

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.)
	Minsky Jrc 03		was	lost	because of instrument problems				
038	Takemizawa	6w	0.50	1060/2 Net 2125		13:57:30	+6:53:14	+0:16	1.11 60sec pul 2w photo 4w
039	"	12w	"	"		"	"	+0:29	1.12 ammonia in W
040	"	"	"	"		"	"	0:51	1.13
041	"	"	"	"		"	"	1:12	1.16
042	"	"	"	"		"	"	1:34	1.20 -1.25
043	RS 5270	1.0	0.50	9640		14:20:00	9 43 00	1:54	1.22
044	"	"	"	10200		"	"	"	"
045	"	0.8	"	7670		"	"	1:56	1.22
046	RS 6629	0.1	1.0 mm			17:47:30	2:41:53		1.16
047	"	"	"	5104		"	"	"	"
048	"	"	"	4934		"	"	"	"
049	"	"	"	4568		"	"	"	"
050	"	"	"	4752		"	"	"	"
051	BS 6998	1.0	0.25	9390		18:38:26	-21:03:53	-0:57	1.75

Dome touching

Telescope: 61"

Frame prefix #: SP91B

Day of Week: Tue

RA offset:

Focus: 3860 Humdty: 52% Sheet #: 5

Observers: Frank Grunig
Hicks

Date MST/UT: June 4/5

Dec offset:

Tailpiece: 34.2
Balance: 300 Temp O/I: 52/57 (8:15 PM)

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.)	
052	B56998	1.0	0.25	3757					Moon Rising	
053	"	"	"	9440						
054	"	"	"	8044						
055	"	"	"	10284						
056	"	1.0	0.25	10141						
057	"	"	"	9168						
058	"	"	"	8192						
059	"	"	"	9113						
060	"	"	"	7286				-0:50	1.74	
061	TRITON	660	0.25	3480		19:09:54	-21:38:57	-1:09	1.81	Aurora gone
062	"	"	"	4824					1.78	
063	"	"	"	4592				-1:45	1.75	
064	"	"	"	4810					1.73	
065	"	"	"	5008				-1:23	1.72	
066	"	"	"	3212				-1:12	1.71	cables caught on chair

Telescope:

Frame prefix #:

Day of Week: Tue

RA offset:

Focus: 3860 Humdty:

Sheet #: 6

Observers: Fink, Grandy
Hicks

Date MST/UT: June 4/5

Dec offset:

Tailpiece: 34.2

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.)
067	TRITON	600	0.25	4067				0:02 1.70	Lowered windscreen to block moon light
068	"	"	"	3968				0:14 1.71	
069	"	"	"	3481				0:25 1.72	
070	"	"	"	3940				0:37 1.73	
071	"	"	"	5184				0:49 1.75	
072	BS 7291	3.0	0.25	4480		19:15:06	-24:12:00	1:02 1.91	
073	"	"	"	13344					
074	"	2.0	0.25	7304					
075	"	"	"	7280					
076	"	"	"	5752					
077	"	"	"	9008					
078	BS 7637	1.0	"	7336		19:59:21	-9:59:27	7:27 1.37	
079	"	"	"	8408					
080	"	"	"	8914					
081	"	"	"	8922					

Telescope: 11"

Frame prefix #: SP913 Day of Week: Tue

RA offset:

Focus:

Humdty:

Sheet #: 7

Observers: Fink, Grandy
Hicks Date MST/UT: June 4/5

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.)
082	B57637	1.0	1.0	857					Darkslide in
083	"	"	"	10818				0:35	1.37
084	"	"	"	10976					
085	"	"	"	10916					
086	"	"	"	10272					
087	"	"	"	9448					
088	TITAN	7.0	1.0	8544		20:36:16	-19:00:43	+0:07	1.60
089	"	"	"	8160					
090	"	"	"	8384					
091	"	"	"	7316					
092	"	"	"	8452					
093	"	"	"	8648					
094	B58544	1.0	1.0	8595		22:26:13	-16:47:16	-1:27	1.68
095	"	"	"	7860					
096	"	"	"	7904					

Telescope: 61"

Frame prefix #: SP908

Day of Week: Wed

RA offset:

Focus: 3800

Humdty: 59

Sheet #: 9

Observers: Fink, Grandy
Hicks

Date MST/UT: June 5/6

Dec offset:

Tailpiece:

Balance:

Temp O/I: 75/48

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.)
100	T2K2	1200	0.50			13:51:35	6:43:57	2:36	1.40 <u>no annu</u>
101	"	"	"					2:58	1.51-1.77 ⁶⁰⁰ GP 277.7, 420 Plat: 180, 500
102	Wild 2	600	"		9:25	1729 12	-182004	1:38	1.79 ^{my big stick} MOONRISE 1:30AM
103	"	"	"	Net low obs	9:48			1:52	1.85 Plat: ²⁰⁰ 700 14mm
104	"	"	"	2060/760				2:03	1.92
105	hr B	"	"	Net 600	10:30	2121 57	-103129	-1:18	1.46 ^{Plat: 200} 700
106	Titan	700	"	NET 6560				-0:14	1.61
107	"	"	"	6130					
108	"	"	1.0mm	6900					
109	"	"	"	6500					
110	"	"	"	6800					
111	"	"	"	7106					
112	"	"	"	7200					1.60
113	(50/3/1000) B58041	1.0	"	9160		21:00:00	-4:46:26	-0:22	1.26
114	"	"	"	7500					

Titan

3.68 280.1

Telescope:

Frame prefix #: *SP 915* Day of Week: *Wed* RA offset: Focus: *3800* Humdty: *55* Sheet #: *10*
 Observers: *Fink, Grundy* Date MST/UT: *JUNE 516* Dec offset: Tailpiece:
Hicks Temp O/I: *43/45 (end of night)*

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.)
115	<i>B58041</i>	<i>1.0</i>	<i>1.0</i>	<i>7400</i>					
116	"	"	"	<i>8000</i>					
117	"	"	"	<i>8000</i>					
118	"	"	"	<i>6600</i>					
119	<i>B58148</i>	<i>1.0</i>	<i>1.0</i>	<i>5900</i>		<i>21:19:20</i>	<i>-26:23:30</i>	<i>-0:33</i>	<i>1.96</i>
120	"	"	"	<i>5000</i>					
121	"	"	"	<i>5500</i>					
122	"	"	"	<i>4700</i>					
123	"	<i>1.5</i>	"	<i>7200</i>					
124	"	"	"	<i>7600</i>					
125	"	"	"	<i>7200</i>					
126	"	"	"	<i>6800</i>					
127	<i>B57906</i>	<i>0.1</i>	"	<i>3800</i>		<i>20:39:16</i>	<i>15:52:06</i>	<i>0:17</i>	<i>1.05</i>
128	"	<i>0.2</i>	"	<i>8600</i>					
129	"	"	"	<i>8076</i>					<i>N₂ running low</i>
130	"	"	"	<i>8500</i>					

Telescope: 61"

Frame prefix #: SP91B

Day of Week: Thu

RA offset:

Focus: 3830

Humdty: 42

Sheet #: 11

Observers: Fink, Gouny
Hicks

Date MST/UT: June 6/7

Dec offset:

Tailpiece:

Temp O/I: 52/55

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.)
131	LEVY	600	0.5			8:34:53	18:05:14	+4:50	2.45 peak quiet; not peak dark jet
132	"	"	"	270 obs net	4:10			0:09	2.70 ^{60 sec} peak / 20 / 1100
133	"	"	"	300 obs net	4:11			5:12	3.02 3.37 end
134	B53750	1.0	"	1700					4.23 poorly centered
135	"	2.0	"	13600		9:27:29	-6:01:23	4:39	4.29
136	"	1.0	"	7650					4.36
137	"	"	"	6290					4.42
138	"	"	"	5400					4.48
139	B54529	1.0	0.5	5100					1.75
140	"	"	"	6450					1.77
141	"	1.0	"	5600					
142	"	1.5	"	6100		11:47:58	-10:46:20	2:31	1.78
143	"	"	"	7760					
144	"	"	"	9300					1.79
145	"	1.5	"	6760				2:52	1.96

Telescope:

Frame prefix #: SP91B Day of Week: Thur

RA offset:

Focus: 3830

Humdty:

Sheet #: 12

Observers: Fink, Grundy, Date MST/UT: June 6/7

Dec offset:

Tailpiece:

Balance: Temp O/I: 57/55

Hicks

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.)
146	BS4529	1.5	0.5	7400					
147	"	"	"	5800				2:54	1.98
148	"	"	"	6700					1.99
149	"	"	"	7100				3:07	2.11
150	"	"	"	10240				3:09	2.14
151	"	"	"	9740					2.15
152	"	"	"	8500	22 11400				2.16
153	GASPRA	600	1.0	net 2200 1100		15:39:48	-20:33:36	-0:25	1.67
154	"	600	1.0	2450				-0:14	1.67
155	"	"	"	2300					1.66
156	"	"	"	2400				+0:07	1.66
157	"	"	"	2300				+0:18	1.67
158	BS6269	1.0	1.0	9700		16:52:58	-20:24:16	-0:34	1.68 Bad D
159	"	"	"	11200					1.68
160	"	"	"	9180					

Telescope:

Frame prefix #: SP913

Day of Week: Thu

RA offset:

Focus: 3830

Humdty:

Sheet #: 13

Observers: Fink, Grandy
Hicks

Date MST/UT: June 6/7

Dec offset:

Tailpiece:

Balance:

Temp O/I: 49/53

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.)
161	B5626A	1.0	1.0	10256					
162	"	1.0	1.0	16900					
163	"	"	0.5	10900				-0:26	1.67
164-172	"	"	"					-0:18	1.66 (END)
173	B56629	0.1	1.0	5000		17:47:31	2:42:02	-1:04	1.20 Std.
174	"	"	"	6200					
175									killed down
179	GASPRA	600	1.0	2500				+1:31	1.85
180	"	"	"	2200				1:42	1.91
181	"	"	"	2900				1:54	1.97-2.05
182	TRITON	600	0.5mm	4870		19:09:44	-21:39:29	-1:12	1.82
183	"	"	"	6308				-1:00	1.79
184	"	600	0.5mm	6250				-0:49	1.76
185	"	"	"	5800				-0:39	1.74
186	"	"	"	6050				-0:20	1.72

Telescope: 61"

Frame prefix #: SP91B

Day of Week: Fri

RA offset:

Focus: 3870 Humdty: 37 Sheet #: 15

Observers: Fink, Brandy, Hicky

Date MST/UT: June 7/8

Dec offset:

Tailpiece: 34.3
Balance: 300 Temp O/I: 58/66

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.)
200	LEVY	600	0.5	130/770 Net 220		8 35 29	18 07 38	4:57	2.46 not quite dark 100w 60w Photometric
201	"	"	"	Net 220	3:57			5:02	2.72
202	"	"	"					5:13	5.03-3.34
203	BS4691	1.0	0.5	6400		12:14:46	-22:08:07	1:55	2.07
204	"	"	"	6070					
205	"	"	"	5000					2.11
206	"	1.5	"	7800					2.12
207	"	1.5	"	9500				2:37	2.47
208	"	"	"	9100				2:39	2.50
209	"	"	"	10800				2:40	2.52
210	"	"	"	4600				2:51	2.69
211	"	"	"	8600				2:56	2.77
212	"	"	"	8400				2:57	2.79
213	BS6269	1.0	0.50	9200		16 52 58	-20 24 35	0:07	1.66 214 215 216 217 9700 7000 8600 8100
-220	"	"	"					0:14	1.66 218 219 220 5300 4600 9000

Telescope: 61"

Frame prefix #: SP91R

Day of Week: *Friday*

RA offset:

Focus:

Humdty:

Sheet #: 16

Observers:

Date MST/UT: *June 7/8*

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.)
221	<i>M102</i>	<i>60</i>	<i>0.5</i>	<i>~600 Net</i>		<i>17 27 14</i>	<i>-18 20 0</i>	<i>0 39</i>	<i>1.57</i> <i>30s photo 500/13500</i>
222	"	<i>1200</i>	"	<i>~1800 Net</i>		"	"	<i>0 209</i>	<i>1.58</i> <i>filled down</i>
223	"	"	"	<i>~1800 Net</i>				<i>0 231</i>	<i>1.60</i> <i>some scattered light from coma</i>
224	"	"	"	"				<i>0 254</i>	<i>1.62</i>
225	<i>RS 7235</i>	<i>0.1</i>	<i>1.0</i>	<i>8100</i>		<i>19 05 04</i>	<i>13 50 25</i>	<i>+0 12</i>	<i>1.06</i> <i>215 220 227 218 810 740 870 810</i>
229	<i>van B</i>	<i>600</i>	<i>0.10</i>	<i>~700 Net</i>		<i>21 23 03</i>	<i>-10 28 04</i>	<i>-1 17</i>	<i>1.46</i> <i>-Plan just ring</i>
230	"	"	"			"	"	<i>-1 203</i>	<i>1.43</i> <i>change scattered light stray/stopped type</i>
231	"							<i>-0 240</i>	<i>1.39</i> <i>red light</i>
232	<i>TITAN</i>	<i>7.0</i>	<i>Dichro 1.0</i>	<i>6100</i>				<i>+0 23</i>	<i>1.62</i>
233	"	"	"	<i>5800</i>					
234	"	"	"	<i>4600</i>					
235	"	"	"	<i>6600</i>					
236	"	"	"	<i>4600</i>					
237	"	"	"	<i>6450</i>					

IMAGES

Frame prefix #: FR91B

Observers: Fink
Grundy
Hicks

Telescope: 61"

Day of Week: Sun/mon

Date MST/UT: 2/3

RA offset:

Dec offset:

Tailpiece 29.0 Coops

Focus:

Tailpiece: ~~29.0~~

Balance:

Humdty: 63% Sheet #: 1

Temp O/I: 41 / 45 °F

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)
LST off by about 10 hours, corrected: Initialized on Arcturus. (A few scattered clouds)									
FK4* Set guidepoint: (376.7, 420) focus: (3590)									
GASPRA 60 ^{B/dich} Peak 3600 Phot 27200 GAS911 B 3.6H A (Coops) δ = 0									
256 ²	1	GASPRA 30	B/dich	Phot 13000	5:20UT				DC voltage (bias) fluctuating
"	2	GASPRA 30	B/dich	13000	6:00UT				δ = -20 Getting low
	3	GASPRA 30	B/dich	13000	6:30UT				but still looks flat
	4	"	"	"	7:00				Bias < φ MOON UP
	5	"	"	"	7:13				screwed up!
	6	"	"	"	7:17				screwed up! cycled power
256	7	BS7235 .01	B/dich	too bright					(T = 43°/40°) δ = +13 Standard *
256 ²	7	SATURN .01	B/dich	Peak ~7000				-2:23	2.12 = sec z
	8	"	"	"				"	Great seeing
	9	" .02	"	Peak ~10000					
	10	"	"	11000	9:59				took a break 45min.
	12	"	"	"	10:01				

Tailpiece at 29.0

Telescope: 61"

Frame prefix #: FR91B

Day of Week: Tues, night

RA offset:

Focus: 3860 Humdty: 45% Sheet #: 3

Observers: Fink, Hicks,
Grundy

Date MST/UT: 4/5
netPeak phot

Dec offset:

Tailpiece: 34.2
Balance: 300 Temp O/I: 53/56°F

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.)	lsec	Bias	775	
	long camera is re-installed after a trip to Tucson.										3:20	Bias=772	
	Guidepoint: (378.5, 420)												
	LEVY	30 ^s	open	LEV91	BD5.GH	low in Western sky	$\delta = +18^\circ$	Bright star, no comet		3:30	774		
										3:42	781		
	Kowal-M	30 ^s	open	KOW91	BD5.GH	Southwest	$\delta = +1^\circ$	oops, precession was off. (No comet there)		3:53	778		
										4:02	778		
	Takamiz...	60 ^s	open	TAK91	BD5.GH	Transiting	$\delta = +7^\circ$			4:12	769		
										4:20	760		
256 ²	13	"	60 ^s	4128 open	peak = 3000 sky = 65000	4:28 ^{UT}							
		"	60 ^s	B/Dichr	net peak: 200	4000 phot.		Photometry varies ~20%		4:44	752		
"	14	"	"	"		5:14 ^{UT}		sky level doesn't		5:02	752		
"	15	"	"	"		5:14 ^{UT}				5:55	761		
"	16	"	"	"		6:16 ^{UT}				6:19	763		
128 ²	17	BS 5270 solar type	0.05	"	(header is wrong)	6:27	focus 3850	9:43:00	1:54	sec z = 1.22			
"	18	"	"	"	Blue Dichroic		"	"	"				
"	19	"	"	"	is in.		"						
"	20	"	.02	Open			focus 3950		2:06	sec z = 1.25			
"	21	"	.02	"			"						
"	22	"	.02	"			"			sec z = 1.25			

IMAGES

Telescope: 61"

Moon is up.

Frame prefix #: FR91B

Day of Week: Tues

RA offset:

Focus: 3850

Humdty: 47% Sheet #: 4

Observers: Fink, Hick, Grundy

Date MST/UT: 4/5 UT

Dec offset:

Tailpiece: 34.2

Balance: 300

Temp O/I: 49/53°F

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.)
23	RUSSEL 1	60	open		6:53	Could not find comet			RUS91B05.GH (378.5, 420) 6:42 751 6:52 751
"	"	"	"		7:13				Aurora borealis up N! 7:37 718 7:46 718
	BS 6229		B/Dichr			17:47:30	2:41:53		
	Slit →	1/4 mm		→	Guidepoint:	(377.5, 420.0)		new focus: 3833	7:58 723
25	Triton	15 sec	B/Dichr	~3500	37000	8:30 UT			
26	"	"	"			8:52 UT			
27	"	"	"			9:29 UT			
28	"	"	"			10:02 UT			
29	"	"	"			10:30 UT			
30	TITAN	.1 sec	"	15,000	110,000	11:14	$\delta = -19$		
31	"	"				11:16			
32	"	.01				11:19			Dawn 11:21 679 11:32 666

256²

512²

IMAGES

Telescope: 61"

Frame prefix #: FR91B

Day of Week: Wednesday

RA offset:

Focus: 3800

Humdty: 59% Sheet #: 5

Observers: Fink, Hicks, Grund

Date MST/UT: 5/6 UT

Dec offset:

Tailpiece: 34.2

Balance:

Temp O/I: 43/48 °F

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
	Telescope has been reset due to electrical storms in afternoon.									5:39 678 5:44 651 5:51 584
	Guidepoint: (377.7, 420), focus: 3800, Scattered clouds are around.									5:53 563 5:57 583 6:00 567
256 ²	33	TAKAMIZ.	60	Open	2400 net peak 61000 phot	6:41	low in west	$\delta = +7$	TAK91B/GH	6:38 600
"	34	"	60	B/Dichr	180 net pk 3600 phot	7:17	13:51:35	+6:43:57	72:36 Sec Z = 1.40	lightning in Nbr
"	35	"	60	B/Dichr	"	7:38			1.67	7:42 637
512 ²	36	Pluto	60	Open		8:01	15:20:18.5	+2:20:2.0	+2h	
256 ²	37	Neptune	15	Red	5000 phot	8:15			Open, red, V, Blue	
"	38	"	"	"	(Neptune saturated)	8:18	19:09:52	-21:38:20	-1:18	8:21 635
512 ²	39	RUSSEL 1	60s	Open		8:27		-9°	Not saved	T ₉₁ = 43/47 °F Moon rise
	40	"	"	"		8:47	shift south 30'		Saved	"
	41	"	"	"		8:57	Not saved		Saved, not found	"
512 ²	39	WILD 2	60s	Open	saturated 489,000 phot				Bright comet, busy star field	
	X	"	30s	B/Dichr	14000 ph					
256 ²	40	"	"	"		9:51				
	41					10:08				10:13 641

Telescope: 61"

1/2 Moon is up

Frame prefix #: FR91B

Day of Week: Wednesday

RA offset:

Focus:

Humdty:

Sheet #: 6

Observers: Fink, Hicks, Grundy

Date MST/UT: 5/6 UT

Dec offset:

Tailpiece:

Temp O/I:

(377.7, 420)

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.)
256 ²	42	Van B	60	Open	10000 peak 210000		East, south	$\delta = -10^\circ$		
"	42	"	30	"			Bright comet,		empty field	
"	43	"	30	B/Dichr	350 peak 7000 ph		21:21:51	-10:31:29		
512 ²	43	SATURN	.1	B/Dichr	1100 11000	10:48			Titan is East	Sat 91B06.GH
									T = 43/46 °F	
									Humidity = 54%	
									Close at 4:30 AM MST	

IMAGES

Telescope: 61"

(removed $\delta = -.003$ rate)
Very clear evening

Frame prefix #: FR91B Day of Week: Thursday

RA offset:

Focus: 3830 Humdty: 40% Sheet #: 7

Observers: FINK, HICKS, GRUNDY Date MST/UT: 6/7 UT

Dec offset:

Tailpiece:
Balance: Temp O/I: 54/57°F

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.)	1 sec Bias
///	Guidepoint	(377.7, 420)		focus:	3832	(set in western sky)		on an Fk 4 star		2:43 686 3:01 699
///	LEVY	30	Open	2600 net peak 78000 phot		4 hours over, low in west	$\delta = +18^\circ$	Comet is there.	LEV91BØ7.6H	3:18 695 3:35 706 4:21 707
///	"	60	B/Dichr	350 net 11000 phot		nice, empty star field,		moderately bright comet		4:34 721 5:12 713 5:23 713
///	Gaspra	60	B/Dichr	2800 Peak 23000			$\delta = -20^\circ$			
256 ²	44	30	"	1000 net peak 11000 phot	5:43					
"	45	"	"		6:15	intermission for (comp) std stars, topping dewar off				6:58 690
"	46	"	"	11000 pho	7:27			(Star very close)		7:11 686
"	47	"	"		8:06			(contaminated photometry)		8:11 659
"	48 Triton	15	B/Dichr	contaminated 35000 pho	8:22				TR91BØ7.6H	
"	49	"	"	33000 pho	8:40			Blue Photometry is suspect due to Neptune image bleeding?		
"	50	"	"	33000 pho	9:00					
"	51	"	"	33000	9:26					
"	52	"	"		10:02				MOON rise	
"	53	"	"		10:32					10:36 678
512 ²	54 TITAN	.1	B/Dichr		10:48				Greatest eastern elongation	

Humid = 41% T = 46/50°F Dawn

IMAGE

Telescope: 61"
 Frame prefix #: FR91B Day of Week: Friday
 Observers: FINK, GRUNDY, Rick Date MST/UT: 7/8 UT

RA offset:
 Dec offset:
 Focus:
 Tailpiece:
 Balance:
 Humdty:
 Temp O/I:

Sheet #: 8

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	same guidepoint	(377, 420)	focus	3870					Bias 3:32 720
55	LEVY	30	OPEN	3000 n.pk 88000 phot					
55	Levy	60	B/Dichr		4:05 ^{UT}			5:13	sec Z = 3.03
56	SA85C	10s	OPEN			17:15:06.4	14:54:36	-1:15	GP 400, 454 1.10
57	SA85N1	200	OPEN			17:15:06.4	14:58:36	-1:04	OFFSET 4' N 1.12
58	SA85N2	200	OPEN			17:15:06.3	15:04:34	-1:05	OFFSET 6' N 1.09
59	SA85N3	200	OPEN				15:10:32	-0:58	1.08
60	SA85N4	300	OPEN				15:16:31		1.07
61	SA85N5	300	OPEN				15:22:29		1.06
61	WILDZ	30	B/Di	Phot 3495 .mxy	1300 sly	780			GP 377.7 420
62	WILDZ	30	B/Di		1:00 ^{am}				
63	SA85C	10s	OPEN		9:24	17:15:06.4 17:15:03.3	14:54:36.0 14:54:18.	+1:52	GP 400, 454 1.17
64	SA85N1	200	OPEN	11,000	9:28	1	14:58:18		
65	SA85N2	200	OPEN	11,400	9:34		15:04:17	2:00	1.10
66	SA85N3	200	"				15:10:16		
67	SA85N4	300	"	17000			15:16:16		

Telescope:

61

Frame prefix #: SP91B

Day of Week: Fri

RA offset:

Focus: 3870

Humdty:

Sheet #: 9

Observers: Fink Gundy
Hick

Date MST/UT: 7/8 June

Dec offset:

Tailpiece:

Balance: 200 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.)
68	SABSN5	300	OPEN	17500	9:51		15:22:15	2:12 1:23	
/	VANB	60	OPEN						6P 377.7 420
/	VANB	30	1/2 Dich	Max 1050	sky = 780		Photo 6800		
256 ² 69	TITAN	.1	1/2 Dich	10200 ph	11:24 ^{UT}				
512 ² 70	FLAT	.03	OPEN	11:32	13000 counts		Vanac = 60		11:29 657
" 71	"	"	"	11:33					
" 72	"	"	"	11:34					
" 73	"	"	"	11:35					
256 ² 74	Dark	1		11:36					~662

Bias

IMAGES

Frame prefix #: FR91B

Telescope: 61"

Day of Week: Sunday

RA offset:

Focus: 3840

Humdty: 42%

Sheet #: 11

Observers: Fink, Grundy, Hicks

Date MST/UT: 9/10UT

Dec offset:

Tailpiece: 34.2

Balance: 299

Temp O/I: 55/58

75	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
		Several clouds have moved off, still more over Tucson.								4:02 4:11	611 588
		Keep guidpoint (377.7, 420) focus: (3840)									
		Then set up on a 9th mag G-type focus star									
		SAO 100859 → New guidepoint (377.5, 420)								501	624
		Pluto	30	open	sky =	Clouds roll in					
	75	Neptune	10	B/dichr							

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