

Telescope: 61"

Sheet #: 1

Frame prefix: SP98B

Focus: 3810

Iris: 300

Tailpiece: N-S

Balance: 350

Date: Mar 22/23

Sunday night

Humidity: 63%

Seeing: ~1"

Observers: Fevig, Collins

Temp: 44/40

Guidepoint: 350.8, 393.5

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA α	Dec δ	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
X	Hazy weather			and computer problems			did not allow		us to begin
X	until 5:15 UT.								
001	6037 1988 EG	1200	0.5	~500 Net 2700/2170/1660	6:09	10:12:05.5	+09:03:24	~1.10	Cirrus Clouds
002	"	"	"	~500 Net 2530/2020/1490	6:39	10:12:07.0	+09:03:38	1.13	Cirrus Clouds LHA = +1:07 PA = +31.6
003	"	"	"	~600 Net 2720/2150/1680	7:00	10:12:08.2	+09:03:49	1.16	Cirrus Clouds LHA = +1:28 PA = +38.4
004	"	"	"	~400 Net 2660/2120/1630	7:21	10:12:09.6	+09:03:59	1.21 → 1.27	Cirrus Clouds ... guiding is difficult LHA = +1:49 PA = +43.6
005	Comp BS4277	1.3	1.0	21K	7:53	10:59:20.6	+40:26:51	1.07	Cirrus LHA = +1:33 PA = +106.1
006	"	"	"	21K	7:54	"	"	1.07	
007	"	"	"	22K	7:56	"	"	1.07	
008	"	"	"	23K	7:58	"	"	1.07	
009	"	"	"	24K	7:59	"	"	1.08	
010	"	"	"	24K	8:00	"	"	1.08	
011	"	"	"	24K	8:01	"	"	1.08	
012	Comp BS3625	3.5	1.0	23K	8:12	09:08:42.9	+33:52:36	1.45	
013	"	"	"	21K	8:12	"	"	1.46	LHA = +3:45 PA = +75.5
014	"	"	"	22K	8:12	"	"	1.46	
015	"	"	"	24K	8:15	"	"	1.46	
016	"	"	"	20K	8:16	"	"	1.47	
017	"	"	"	19K	8:17	"	"	1.47	
018	"	"	"	18K	8:18	"	"	1.48	
019	1862 Apollo	1200	0.5	~300 Net 2350/2050/1420	8:37	13:13:30.4	+00:09:29	1.18	Cirrus Clouds LHA +00:03 PA = +1.6
X	Persistent Cirrus			is causing us to			shut down early		

Cirrus



Telescope: 61"

Frame prefix: SP98B

Date: Mar 23/24
Monday Night

Humidity: 58%
Temp: 45/40

Sheet #: 2
Seeing ≈ 2"
Guidepoint: 350.8, 393.5

Observers: Fevig, Collins

Focus: 3800
Iris: 300
Tailpiece: N-S
Balance: 350

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA α	Dec δ	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
020	Kowal 2	1200	0.5	Net ~200 2300/2100/1300	3:26	03:48:50	+13:55:33	2.11 → ~2.57	Light cirrus... variable guiding photo. LHA = +4:23 PA = +60.6
X	Extremely weak			spectrum					Guiding phot. is variable & weak. Increasing
X	circus at higher airmass.								We move on to Hartley 2
X	Hartley 2			is much brighter than Kowal 2.					It is passing, though, through
X	a busy star field			necessitating short exposures.					
021	Hartley 2	600	0.5	Net ~400 1910/1470/1300	4:11	05:33:08.4	+08:08:52	1.64 → ~1.74	Possible light cirrus. Diffuse object in field besides comet. LHA = +3:21 PA = +55.3
X	Waiting for Hartley 2 to pass by a star.								
022	Hartley 2	600	0.5	Gray rack having up. Kicked me out of ARGOS. Lost image	4:53	05:33:11	+08:08:59	1.89	Possible light cirrus LHA = +3:43 PA = +56.6
022	Gray rack acting up.	1200	0.5	Kicked me out of ARGOS. Lost image	4:51	05:33:13.7	+08:09:06	2.04	LHA = +4:01 PA = +57.5
022	6037 1988 EG	1200	0.5	Net ~650 2570/1900/1730	5:38	10:13:49.0	+09:12:28	1.09	LHA = +00:08 PA = +4.6
023	"	"	"	Net ~650 2370/1670/1520	5:59	10:13:50.3	+09:12:38	1.09	LHA = +00:29 PA = +15.5
024	"	"	"	Net ~700 2360/1630/1430	6:21	10:13:51.5	+09:12:48	1.11	LHA = +00:51 PA = +25.4
025	"	"	"	Net ~650 2250/1570/1370	6:42	10:13:52.6	+09:12:56	1.14	LHA = +1:21 PA = +33.4
026	"	"	"	Net ~700 2200/1490/1370	7:03	10:13:53.7	+09:13:05	1.17	LHA = +1:33 PA = +59.8
027	"	"	"	Net ~650 2180/1500/1320	7:24	10:13:54.9	+09:13:13	1.22	LHA = +1:53 PA = +49.7
028	"	"	"	Net ~650 2240/1570/1370	7:45	10:13:56.2	+09:13:21	1.28	Star in frame LHA = +2:14 PA = +48.6
029	"	"	"	Net ~700 2270/1550/1400	8:06	10:13:57.4	+09:13:29	1.36	LHA = +2:36 PA = +51.8
030	1862 Apollo	1200	0.5	Net ~700 2220/1550/1400	8:37	13:11:46.3	+00:19:22	1.18	LHA = +00:09 PA = +4.0

Sheet #: 3

Frame prefix: SP98B

Focus: 3800

Iris: 300

Humidity:

Tailpiece: N-S

Temp:

Guidepoint: 350.8, 393.5

Telescope: 61"

Date: Mar 23/24
Monday Night

Observers: Fevig, Collins

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA α	Dec δ	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
031	1862 Apoll6	1200	0.5	Net ~ 750 2320/1540/1340	8:59	13:11:44.7	+00:19:35	1.19	LHA PA +00:31 +12.5
032	"	"	"	Net ~ 850 2440/1590/1340	9:20	13:11:43.0	+00:19:45	1.21	+00:52 +19.9
033	"	"	"	Net ~ 750 2320/1540/1340	9:41	13:11:41.2	+00:19:56	1.24	+1:13 +26.7
034	"	"	"	Net ~ 750 2320/1540/1340	10:01	13:11:39.5	+00:20:06	1.28	+1:33 +32.5
035	"	"	"	Net ~ 800 2300/1570/1360	10:22	13:11:37.8	+00:20:16	1.34	+1:54 +37.6
036	"	"	"	Net ~ 600 2470/1660/1310	10:43	13:11:36.0	+00:20:26	1.42	+2:16 +41.8
037	Comp B57914	3.0	1.0	23K	11:14	20:40:46.7	+19:54:32.7	2.24	-4:41 -63.1
038	"	"	"	25K	11:15	"	"	2.22	
039	"	"	"	28K	11:16	"	"	2.21	
040	"	"	"	23K	11:17	"	"	2.19	
041	"	"	"	23K	11:18	"	"	2.18	
042	Comp B57968	0.8	"	26K	11:36	16:00:57.9	+33:17:56	1.00	
043	"	"	"	28K	11:38	"	"	1.00	
044	"	"	"	25K	11:39	"	"	1.00	
045	"	"	"	25K	11:40	"	"	1.00	
046	"	"	"	27K	11:40	"	"	1.00	
047	"	"	"	28K	11:41	"	"	1.00	
048	"	"	"	25K	11:42	"	"	1.00	
090	Comp B57914	2.5	1.0	24K	12:06	20:40:48.7	+19:54:45.6	1.24	Note: File SP98B049
051	"	"	"	25K	12:11	"	"	1.63	
052	"	"	"	25K	12:12	"	"	1.61	
053	"	"	"	24K	12:13	"	"	1.60	
054	"	"	"	25K	12:13	"	"	1.59	
055	Std B57225	0.15	1.0	26K	12:23	19:05:23.7	+13:50:38.8	1.18	
056	"	"	"	29K	12:27	"	"	1.18	
057	"	"	"	24K	12:28	"	"	1.17	
058	"	"	"	29K	12:28	"	"	1.17	
059	"	"	"	25K	12:29	"	"	1.17	

Top*1



is junk

Sheet #: 4

Frame prefix: SP98B

Focus: 3800

Iris: 300

Tailpiece: N-S

Balance: 350

Humidity:

Temp:

Guidepoint: 3508, 393.5

Telescope: 61"

Date: Mar 23/24

Monday Night

Observers: Fevig, Collins

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA α	Dec δ	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
060	Comp BS 5868	0.	1.0	26K	12:37	15:46:20.2	+07:20:48	1.20	
061				27K	12:38			1.20	
062				24K	12:39			1.20	
063				26K	12:40			1.20	
064				28K	12:41			1.21	
065				31K	12:42			1.21	
066				26K	12:42			1.21	
X	At dawn we noticed haze over all parts of the sky. This may have adulterated								
X	data taken earlier.								

Monday
12:40

Telescope: 61"

Sheet #: 5

Frame prefix: SP98B

Date: March 24/25

Humidity: 63%

Seeing ~ 1.5"

Guidepoint: 350.2,

Observers: Fink, Fevig, Collins

Temp: 36/41

Focus: 3790 ^{check} 3540

Iris: 300

Tailpiece: N-S

Balance: 350

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA α	Dec δ	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
067	Knud 2	943	0.50	260/240/180	5:12	3:52:13.2	+13 58 29	1.93	2400 ^{pan} pan ^{through} Darkside in with 257 seconds to go
068	"	1200	"	2330/2200/1540	5:41	3:52:17.7	38	2.36	+4.11 PA +60.4
069	"	"	"	2970/2100/1470	4:02	3:52:20.9	43	2.84	+4.57 PA +60.4
070	Hartley 2	1200	0.50	Net ~ 650 2500/1800/1400	4:29	05:36:17.0	+08:14:25.9	1.80	+3.40 PA +56.5
071	"	"	"	Net ~ 700 2500/1840/1390	4:50	05:36:19.7	+08:14:36.4	2.03	+4.01 PA +57.5
072	"	"	"	2580/1860/1350	5:11	05:36:22.6	+08:14:44	2.36	+4.21 PA +58.2
073	6037 1988 E6	1200	0.50	Net ~ 600 2200/1590/1370	5:52	10:11:30.4	+09:20:52	1.09	+00:24 PA +12.9
074	"	"	"	Net ~ 550 2400/1580/1370	6:13	31.5	21:00	1.11	+00:45 PA +23.2
075	"	"	"	Net ~ 500 2110/1570/1370	6:34	32.6	21:09	1.13	Star in image +1:06 PA +31.7
076	"	"	"	Net ~ 450 2060/1590/1360	6:55	33.7	21:17	1.16	+1:27 PA +38.4
077	"	"	"	Net ~ 500 2070/1560/1370	7:16	34.8	21:24	1.21	+1:48 PA +43.7
078	"	"	"	Net ~ 500 2080/1550/1350	7:37	35.9	21:32	1.26	+2:09 PA +47.8
079	"	"	"	Net ~ 500 2070/1560/1380	7:58	37.0	21:39	1.34	+2:30 PA +51.0
080	BS 4534	0-10	Low	28K	8:55	11:48:56.6	14 34:18	1.13	+1:34 +46.6
081	"	"	"	26K	8:27	"	"	"	"
082	"	"	"	26K	8:34	"	"	1.14	"
083	"	"	"	24K	8:39	"	"	"	"
084	BS 4027	2-0	1.0	25K	8:48	10:16:20.5	28:40:46.5	1.36	3.17 PA 72.2
085	"	"	"	25K	8:50	"	"	1.37	"
086	"	"	"	24K	"	"	"	1.58	"
087	"	"	"	26K	"	"	"	"	"
088	"	"	"	24K	8:52	"	"	1.39	3.125 72.0
089	"	"	"	25K	8:52	"	"	"	"

This was a clear night.

Sheet #: 6

Telescope:

Frame prefix: sp98b

Focus: 3540

Date: Tue-

Iris:

Humidity: 65%

Tailpiece:

Temp: 36/41

Observers: Fink, Feny

Guidepoint:

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA α	Dec δ	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
090	BS 5834	2.0	1.0	24K	9:06	141 10' 10.4	+23 15 42.16	1.05	-0:55 PA - 526
091	"	"	"	25K	"	"	"	"	"
092	"	"	"	25K	"	"	"	"	"
093	"	"	"	24K	"	"	"	"	"
094	"	"	"	24K	9:12	"	"	1.05	"
095	"	"	"	23K	"	"	"	"	"
096	BS 3625	2.0	1.0	20K	9:20	910 11' 44	+33 15 22.38	2.08	"
097	"	"	"	19K	9:22	"	"	2.09	"
098	"	"	"	17K	9:31	"	"	2.21	+C05 PA 675
099	"	"	"	17K	"	"	"	2.22	"
100	"	"	"	19K	9:38	"	"	2.35	"
101	"	"	"	17K	9:40	"	"	2.36	"
102	"	"	"	18K	"	"	"	2.51	"
103	"	"	"	18K	9:49	"	"	2.52	+C24
104	Apollon	12.0	0.8	Not clear 240/170/140	10:02	13:09:50.6	00 30 21.8	1.30	+01:40 PA 342 bright star before
105	"	1	"	2 170/140	10:24	48.8	35.1	1.36	02:02 52.3 bright stars dark double in at 50% stop 43.6 star in field
106	"	8.5	"	210/160/140	10:45	"	"	1.45	02:23
107	"	12.0	"	Not clear 220/170/140	11:10	47.8	57.1	1.80	02:48 47.1 good exp
108	"	"	"	Not clear 220/170/140	11:31	"	"	1.73	47.7 good exp.
109	"	"	"	2 190/150	11:52	41.6	31:18	1.93	3:31 51.9 star edge
110	"	"	"	5 170/140/100	12:13	40.7	51:25	2.20	2:28-2:31 51.6 peak edge
	Weed night		"	-	circus	meat off	all night		Round 25
	PH night		"	-	meat	PH top in fog	all night		6" of new moon March 26
	Fog night		"	-	part. clear about 40%	part. very steam cloud	copy in at March 27		
					meat	packed up	~ 10 pm		

Tape #2
↓

Tape #3
↓

FR
Frame prefix: 980

Telescope: 61"
Date: Mar 22/23
Sunday Night

Focus: 3810
Iris: 300
Tailpiece: N-S
Balance: 350

Observers: Feing, Collins

Sheet #: 1

Humidity: 63

Temp: 40/44

Guidepoint: 350.8, 313.5

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA α	Dec δ	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
001- 1988 EG	6037 1988 EG	45	B/Di	300	16:18	10:12:10.5	09:03:27	1.11	Very odd light in lower right hand corner of images VFMO in frame 28
036	"	"	"	Variable 200	07:59	10:12:10.7	+09:04:06	1.26	
037- 043	B54277	0.07	"	18K	7:52	10:59:20.5	+40:26:55	1.07	
044- 049	B53625	0.15	"	15K	8:11	09:08:44.5	+33:53:21	1.44	
050	1862 Apollo	45	"	150	8:37	13:13:30.4	+00:09:29	1.18	Impossible to guide on same frames... too much cirrus
→057	"	"	"	"	8:55	13:13:29.2	+00:09:39	1.19	
X	Shutting down due to persistent cirrus,								

Cirrus Clouds →

seeing ~ 2.0"

Sheet #: Z

Telescope: 6.1"
Focus: 3800
Iris: 300
Tailpiece: M-3
Balance: 350

Humidity: 58
Temp: 45/40

Frame prefix: 980

Guidelight: 350.8, 393.5

Observers: Fevig, Costin's

Humidity: 58

Temp: 45/40

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA α	Dec δ	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
058	P/Kowal 2	45	B/Di	140/1409/72K	03:25	3:48:49.8	+13:55:32	2.1	
059	"	"	"	90/1522/41K	03:28	"	"	2.15	variable guiding photometry light cirrus
060	"	"	"	103/1544/87K	03:51	"	"	2.57	
061	P/Hartley 2	45	"	460/1398/140K	04:08	05:33:07.8	+08:08:50	1.62	Note: Hartley is much brighter than P/Kowal
062	"	"	"						
063	"	"	"	578/1434/60K				1.69	
064	"	"	"		04:22			1.73	
065	"	"	"	indist/1414/150K	04:25			1.75	
066	"	"	"	573/1439/60K	04:31			1.82	
067	"	"	"	476/1459/48K	04:44			1.93	
068	"	"	"	433/1470/47K	04:53			2.08	
069	"	"	"	469/1460/75K	04:59			2.13	
070 → 147	6037 1988 EG	60	B/Di	Peak = 400 Peak = 15K Avg = 1150	5:33	10:13:48.7	+09:12:19	1.09 → 1.96	odd light (reflection of stars) lower right corner of images
143 → 147	1862 Apollo	60	B/Di	Peak = 350 Peak = 17K Avg = 1160	8:33	13:11:46.8	+00:19:18.0	1.718	Name in header wrong
149 → 210	"	"	"			"	"	→ 1.52	Name in header correct
211 → 215	B55968	0.15	"	13K				1.00	
216 → 221	B57914	0.25	"	18K				1.79	
222 225	B57235	0.005	"	12K					Name in header wrong

in

