

Telescope: 61"

Sheet #: 1

Frame prefix: SP98E

Focus: 4730

Iris: 300

Tailpiece: N-S

Humidity: 47%

Temp: 68/64

Observers: Fevig, Collins

Balance: 350/3500

Guidepoint: 344.77, 398.8

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	We got a		very	late start		due to	two problems:		① The guiding
X	camera's shutter		was sticking	and		② the spectral camera	needs to be remounted.		
001	1998 MS2	1200	0.5	Net ~ 800 2500/1700/1650	6:52	18:05:26.7	-03:09:30	1.23	LHA PA -00:15 -4.9
002	"	"	"	Net ~ 800 2560/1730/1540		130.0	107:49	1.23	+00:16 +2.3
003	"	"	"	Net ~ 800 2520/1680/1500	7:34	127.5	106:03	1.23	+00:27 +9.9
004	"	"	"	Net ~ 850 2550/1680/1500	7:55	127.9	104:23	1.25	+00:48 +17.0
005	"	"	"	Net ~ 800 2680/1660/1460	8:15	128.1	102:42	1.28	+01:08 +23.5 in image
006	"	"	"	Net ~ 900 2620/1680/1420	8:36	128.4	101:02	1.36	+01:29 +29.3
007	"	"	"	Net ~ 850 2500/1650/1440	8:57	128.7	-02:59:22	1.39	+01:50 +34.4
008	"	"	"	Net ~ 850 2500/1630/1430	9:17	129.1	157:41	1.51	+02:10 +38.8
009	"	"	"	Net ~ 800 2450/1660/1420	9:38	129.4	156:02	1.56 → 1.69	+02:31 +42.5
010	Comp BS 7672	1.3	1.0	19K	10:09	20:04:02	+17:03:57	1.07	Slit width = 1.0 mm Header wrong
011	"	"	"	21K	10:10			1.07	
012	"	"	"	23K	10:12			1.07	
013	"	"	"	22K	10:13			1.08	
014	"	"	"	24K	10:14			1.08	
015	"	"	"	25K	10:15			1.08	
016	"	"	"	20K	10:16			1.08	Header correct
017	Std BS 7906	0.3	"	26K	10:24	20:39:32.4	+15:53:49	1.06	
018	"	"	"	27K	10:26			1.06	
019	"	"	"	26K	10:26			1.06	
020	"	"	"	20K	10:27			1.06	
021	"	"	"	23K	10:28			1.06	

Image OK.

Telescope: 61"
Sheet #: 3

Focus: 4760
Iris: 300
Tailpiece: N-S
Balance: 350

Humidity: 47%
Temp: 66/63
Guidepoint: 349, 388

Frame prefix: SP18e

Observers: Fern, Fik.

K - counts

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.	Vmag
036	BS 5885	0.1	1.0	27 ^k 25, 26, 24	3:58	15:16:55.4	-09:22:38	1.34	Solar	2.60
040	BS 5734	2.0	"	22 ^k 17, 17, 17	4:09:59	15:24:26.8	+37:21:31	1.01	Solar	6.50
044	BS 5793	0.05	"	19 ^k 14, 14, 21	4:19:20	15:34:36.9	+26:43:20	1.01	Standard	2.22
048	BS 5868	0.4	"	25 ^k 21, 24, 23	4:28	15:46:22.0	+07:21:28	1.10	Solar	4.42
052	BS 5968	0.8	"	20 ^k 20, 24, 23	4:37	16:00:58.5	+33:18:42	1.00	Solar	5.41
056	BS 5996	2.0	"	25 ^k 19, 23, 25	4:45	16:06:58.3	-14:04:04	1.45	Solar	6.32
060	BS 6060	1.0	"	20 ^k 21, 25	4:52	16:15:32.2	-08:21:55	1.32	Solar	5.50
064	BS 6063	1.0	"	24 ^k 22, 25, 26	5:01	16:14:36.7	+33:51:55	1.00	Solar	5.63
068	BS 6212	0.1	"	21 ^k 11, 11, 07	5:11	16:41:13.2	+31:36:27	1.01	Solar	2.81
072	BS 6269	1.2	"	25 ^k 25, 22, 22	5:22	16:53:19.8	-20:25:00	1.67	Solar	5.87
076	BS 6441	2.5	"	25 ^k 20, 20, 24	5:31	17:20:28.9	-19:20:10	1.65	Solar	6.51
080	BS 6629	0.2	"	14 ^k 24, 23, 21	5:41	17:47:49.1	+02:42:17	1.79	Standard	3.75
084	1998 MS2	12.0	0.50	250/150/150	5:59	18:06:17.7	-01:22:30	1.25		
085	"	11	4	220/150/150	6:20	17:29	20:55	1.22		
086	"	11	11	220/150/150	6:41	18:1	19:20	1.21		
087	"	11	11	220/150/150	7:01	18:3	17:47	1.20		
088	BS 5868	0.5	1.0	34 ^k 30, 31, 32	7:32	15:46:20.9	+07:21:36	1.44	Solar	4.42
092	BS 7001	0.01	"	36 ^k 32, 26	7:49	18:36:52.5	+38:47:16	1.01	Standard	0.02

Tape #1 thru 050

Airmass standard

AM: Std

Sheet #: 4

Focus: 4760
Iris: 300
Tailpiece: N-S
Balance: 350/3500

Telescope: 61"
Date: June 27/28
Saturday
K-counts

Frame prefix: SP98E

Observers: Fevig, Fink

Humidity: 47%
Temp: 66/63

Guidepoint: 344.8, 398.8

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.	V_{max}
096										
-099	BS 7162	0.7	1.0	25 ^K 23 22, 22	8:00	18:56:57.5	+32:54:07	1.00	Solar LHA +00:04 PA +123.0	5.21
-100										
-103	BS 7272	3.0	"	27 ^K 19, 28	8:11	19:09:00.3	+34:36:09	1.00	Solar +00:04 +159.4	6.74
104										
-107	BS 7235	0.08 0.12	"	12 ^K 18, 20, 20	8:21	19:05:19.9	+13:51:45	1.06	Standard +00:17 +11.8	2.99
108										
-111	BS 7291	2.0	"	22 ^K 19, 19, 18	~ 8:32	19:15:27.5	-24:11:08	1.82	Solar +00:19 +4.9	6.25
112										
-115	BS 5868	0.4	"	26 ^K 26, 23, 25	8:41	15:46:21.0	+07:21:44	2.01	Solar +03:57 +56.9	4.42
116										
-119	BS 7503	1.5	"	27 ^K 27, 26, 27	8:54	19:41:46.1	+50:32:46	1.05	-Wrong name in header - Solar +00:14 +170.1	5.95
-120										
-123	BS 7504	2.0	"	30 ^K 29, 28, 26	9:01	19:41:49.1	+50:32:19	1.06	Solar +00:22 +165.0	6.20
124										
-127	BS 7569	1.5	"	20 ^K 22, 22, 20	9:13	19:51:58.8	+11:37:41	1.07	Solar +00:23 +14.0	6.12
128										
-131	BS 7637	1.2	"	21 ^K 18, 20, 20	9:21	19:59:42.2	-09:57:33	1.36	Solar +00:23 +7.5	5.87
132										
-135	BS 5868	0.4	"	26 ^K 21, 24, 22	9:31	15:46:21.6	+07:21:59	3.02 3.10	Solar +04:47 +58.4	4.42
136										
-139	BS 7672	1.2	"	24 ^K 25, 23, 23	9:39	20:04:01.6	+17:04:06	1.05	Solar +00:37 +27.8	5.79
140										
-143	BS 7914	2.5	"	29 ^K 27, 25, 26	9:47	20:40:40.6	+19:55:49	1.02	Solar +00:09 +9.6	6.45
144										
-147	BS 7906	0.25	"	21 ^K 23, 22, 22	9:54	20:39:33.6	+15:54:24	1.04	Standard +00:17 +13.2	3.77
148										
-151	BS 7994	2.5	"	22 ^K 27, 27, 30	10:04	20:53:00.7	-11:34:42	1.39	Solar +00:13 +4.3	6.37
152	C/LINEAR	300	1.0	Net ~ 9K 10500/1250/120	10:21	22:50:52.3	+53:42:60	1.12	LHA PA Note slit -01:27 -135.4 width = 1.0 stars	Many stars
153	"	"	0.5	Net ~ 8K 9500/1220/1200	10:43	15:1:07.2	143:17	1.10	-01:05 -144.9 slit width = 0.5	
154	"	120	"	Net ~ 3K 4400/1220/1210	10:49	110.9	121	1.09	-00:59 -147.6	
155	"	"	"	Net ~ 3K 4500/1210/1210	11:01	119.9	131	1.09	-00:45 -154.2	5.79
156	"	300	"	9000/1230/1210	11:08	24.4	136	1.08	-00:40 -157.6	6.10
157	"	"	"	10000/1210/1210	11:14	28.3	140	1.08	-00:34 -160.5	

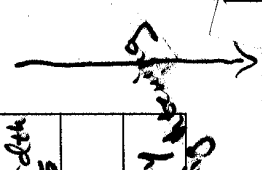
Tape #2 thru 100

AM Std

AM Std

Tape #3 thru 150

Tape #4



Telescope: 61" Sheet #: 5

Focus: 4700
Iris: 3.0
Tailpiece: N-S
Balance: 3.50

Humidity: 42%
Temp: 70/65

Guidepoint: 3448, 3888

Frame prefix: SP98e

Date: Sun 28/29

Observers: Terry, Fik

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Photo	UT time Start	RA α	Dec δ	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
158	4183 Camo	60	0.50	660/180/1430 not 9.00	3:31:50	14:18:38.7	-27:32:40	2.10	+00:23 PA possibly slight
159	"	120	"	1090/200/1700 not 9.00	3:34	14:18:38.7	3230	2.02	+02:37 +9.1
160	"	11	"	1060/200/1420	4:06	14:18:38.7	3227	2.09	w:12 +19.2
161	"	"	"	1200/200/1380	4:28	14:18:38.7	3225	2.18	-29 01:20 +19.1
	repacked telescope; perspective!			deleted	1st 50 images				158k to 369k free
162	1498 M03	120	0.50	2020/100/1300 not 9.00	5:11	16:42:58.6	08:45:58	1.14	-00:25 -11.0
163	"	"	"	2200/150/1350	5:35	16:42:58.6	08:45:58	1.14	-00:04 -1.7
164	"	60	0.50	1075/180/1200 60 min exposure to arrive at telescope after 5:54	5:54	16:42:58.6	08:45:58	1.14	+00:16 +7.5
165	"	120	"	2000/140/1350 not 9.00	6:05	16:42:58.6	08:45:58	1.15	+00:28 +12.2
166	"	"	"	2200/140/1300	6:26	16:42:58.6	08:45:58	1.16	w:48 +23.6
167	"	"	"	2200/140/1280	6:56	16:42:58.6	08:45:58	1.21	with star for photo +30.8
168	"	"	"	2290/147/1274		16:42:58.6	08:45:58	1.25	+01:39 +36.5
169	"	"	"	2340/150/1284	07:37	16:42:58.6	08:45:58	1.31	Extremely close approach to dim star +02:06
170	Comp BS 7914	2.0	1.0	20K	8:15	20:40:42.2	+19:55:30	1.08	S14 width wrong in header
171	"	"	"	20K	8:17			1.07	
172	"	"	"	22K	8:18			1.07	
173	"	"	"	28K	8:19			1.07	
174	"	"	"	26K	8:20			1.07	
175	"	"	"	23K	8:20			1.07	
176	"	"	"	24K	8:20			1.07	

very late

Extremely close approach to dim star

S14 width wrong in header

Sheet #: 6

Telescope: 61"
 Focus: 4770
 Iris: 300
 Tailpiece: N-S
 Balance: 350

Humidity:
 Temp:

Guidepoint: 344.8, 398.8

Frame prefix: SP98E
 Date: June 28/29
 Sunday

Observers: Fevig, Collins, Fink

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.
177	Comp BS 8314	1.5	1.0	2.6K	8:31	21:44:32.4	+14:45:38	1.20	
178	"	"	"	2.4K	8:32			1.20	
179	"	"	"	2.2K	8:32			1.20	
180	"	"	"	2.3K	8:33			1.20	
181	"	"	"	2.5K	8:34			1.19	
182	Comp BS 5868	0.4	"	2.5K	8:43	15:46:21.3	+07:21:42	2.09	
183	"	"	"	2.1K	8:44			2.10	
184	"	"	"	2.0K	8:45			2.12	
185	"	"	"	2.7K	8:45			2.13	
186	"	"	"	2.7K	8:46			2.14	
187	"	"	"	2.4K	8:48			2.17	
188	"	"	"	1.8K	8:49			2.18	
189	Steel BS 7906	0.25	"	2.3K	8:55	20:39:34.3	+15:54:17	1.05	
190	"	"	"	2.1K	8:56			1.05	
191	"	"	"	2.1K	8:56			1.05	
192	"	"	"	2.5K	8:57			1.05	
193	"	"	"	1.9K	8:58			1.05	
194	1036 Ganymed	180	0.25	Net ~ 22K 23K/1240/1220	9:22	22:27:39.6	+43:01:50	1.11	
195	"	"	"	Net ~ 25K 26K/1230/1230	9:26			1.10	
196	"	"	"	Net ~ 18K 19K/1220/1220	9:30	22:27:41.2	+43:02:13	1.10	LHA PA Guiding striking in -01:50 -107.3 Dec. Waiting for star to pass.
197	"	"	"	Net ~ 16K 17K/1240/1240	9:56	22:44.1	+03:02	1.06	-01:24 -116.1 Guiding still striking
198	"	"	"	Net ~ 17K 18K/1230/1230	10:06	22:45.3	+34	1.05	-01:14 -120.1 in Dec. Guiding still striking
199	C/LINEAR	300	"	Net ~ 6K 7300/1240/1240	10:26	23:07:45.3	+53:50:13	1.13	Very close approach to stars, -01:35 -132.2 Guiding OK, waiting for stars to pass.
200	"	"	"	Net ~ 6K 7600/1240/1240	10:42	23:06.4	+20	1.11	-01:19 -139.0
201	"	"	"	Net ~ 5K 6900/1240/1240	10:48	23:00.5	+23	1.11	Very close approach to 3 stars, -01:13 = 141.7 Maybe bad spectrum.

