

Start of FAST Run

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>4290</u>		
Observer: <u>P. Berlind</u>		Grating: <u>3002, 3" slit; binby 4</u>		Date: <u>1/11/96</u>		
PI: <u>Geller/Falco</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	clear
11-20	FLAT			0	6s	clear
21-30	sky			0	2s	clear
31	COMP			↑	5s	
32-33	N7331	22:34.46.9	+34:09:43	0	2m	6:30
34	COMP			↑		fast foc = 1020
35-37	H1721706b	22:54	+62:27	0	5s	
38	COMP			↑		
39-41	M31	00:42	+41:15	0	30s	
42	COMP			↑		
43-44	M31obj	00	+41:15	0	30s	
45	COMP			↑		poor seeing
46	MARKESS	00:03	+19:55	6	90s	
47	COMP			↑		6:45
48	S22.063122	23:32.65	+12:57:11	3	10m	comp to E @ row 47
49	COMP			↑		extended H α emission to W
50	S22.063172	23:13	+12:58	3	9m	*'s on slit
51	COMP			↑		
52	S22.063535	23:26	+12:59	3	8m	seeing improved
53	COMP			↑		
54	S22.063525	23:09	+13:01	3	8m	cute galaxy
55	COMP			↑		
56	S22.063928	23:21	+13:01	3	8m	
57	COMP			↑		
58	S22.064404	23:15	+13:03	3	8m	
59	COMP			↑		H α mag 25.0 + 18.6 companion
60, 62, 64, 66	O212p735	02:12.49	+73:35:40	31	15m	binby 2; slit pos = 93°; 2" slit
61, 63, 65, 67	COMP			↑	5-10s	25.0 @ row 72; COMP row 80
68	K032.17	01:46	+33:52	1	8m	W E
69	COMP			↑		

1.17

8.85

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>3002</u>		Page: <u>4291</u>	
PI: <u>Huchra</u>			Date: <u>1/11/96</u>			
Number	Object	R.A.	Dec.	I/R	Exp	Comments
70	Ki0380097e	01-49	+35-52	1	5m	
71	COMP			↑		
72	Ki0400157eN	01-51	+34-07	1	4m	triple δ -N
73	COMP			↑		
74	Ki0380097	01-49	+35-53	1	5m	halo of bright nearby galaxy also on d.f.E
75	COMP			↑		
76	K037.07	01-48	+35-25	↑	7m	
77	COMP			↑		seeing worse ~2"
78	Ki0400157eS	01-51	+34-07	1	12m	South comp of #72 H α
79	COMP			↑		nice star
80	M73	01-49	+38-40	1	4m	Fstar; no sign of fuzz
81	COMP			↑		in pair seeing
82	Ki0350058e	01-48	+36-34	1	10m	
83	COMP			↑		
84	Ki0360078e	01-48	+36-30	1	9m	
85	COMP			↑		
86	Ki0400048e	01-51	+37-40	1	9m	
87	COMP			↑		seeing improved
88	Ki0360058e	01-48	+36-39	1	7m	
89	COMP			↑		
90	Ki0390018eS	01-50-45	+33-57-57	1	7m	strong H α
91	COMP			↑		
92	Ki0390018eN	01-50-44	+33-58-25	1	8m	
93	COMP			↑		
94	Ki0330088e	01-47-01	+36-01	1	10m	
95	COMP			↑		
96	Ki0400157e	01-51	+34-07	1	8m	
97	COMP			↑		moon is up
98	07369p3220	07-36	+32-19	1	10m	H α etal
99	COMP			↑		

60 inch Telescope Log		Spectrograph: <u>FAST</u>				Page: <u>4292</u>
Observer: <u>PB</u>		Grating: <u>3002</u>				
PI: <u>Huchra</u>		Date: <u>1/11/96</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
100	07366p2951	07:36	+29:51		9m	H α
101	COMP			↑		
102	07313p3035	07:31	+30:35		10m	redo from 12/27 #96
103	COMP			↑		H α
104	07374p2148	07:37	+26:48		10m	
105	COMP			↑		Moon: 12:10 -03
106	07375p4747	07:37	+47:47		15m	H α
107	COMP			↑		bright sky
108	07376p2923	07:37	+29:23		12m	H α
109	COMP			↑		
110	07387p2053	07:38	+20:53		15m	H α
111	COMP			↑		
112	07395p4528	07:39	+45:28		7m	
113	COMP			↑		
114	07409p4028	07:40	+40:27		10m	H α
115	COMP			↑		
116	07412p2809	07:41	+38:09		8m	H α
117	COMP			↑		
118	07425p2406	07:42	+24:06		8m	H α
119	COMP			↑		
120	07426p4630	07:42	+46:30		8m	H α
121	COMP			↑		
122	07426p4651	07:42	+46:52		9m	H α
123	COMP			↑		
124	07429p2849	07:42	+28:49		8m	H α
125	COMP			↑		
126	07438p4759	07:43	+47:59		8m	H α
127	COMP			↑		
128	07441p2225	07:44	+22:25		5m	
129	COMP			↑		

had problems with reidentify on files 105 + 107.
 File 105 is particularly ~~poor~~ bad. Many
 lines removed, high residuals. Tried an identify
 + ^{had} reidentify on 105, but the results weren't any
 better.

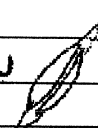

60 inch Telescope Log

Observer: PBPI: GellerSpectrograph: FASTGrating: 300LDate: 1/11/96Page: 4293

Number	Object	R.A.	Dec.	L/R	Exp	Comments
130	314.018272	09:47	+27:20	3	10m	
131	COMP			↑		
132	314.019293	09:28	+27:23	3	10m	
133	COMP			↑		
134	314.020068	09:30	+27:29	3	4m	
135	COMP			↑		
136	314.021422	09:30	+27:32	3	10m	
137	COMP			↑		
138	314.027420	09:27	+27:50	3	8m	nice seeing bright moon
139	COMP			↑		
140	314.088179	09:25	+31:06	3	10m	sup ⁺ V-gal
141	COMP			↑		
142	314.105050	09:33	+32:16	3	10m	
143	COMP			↑		
144	314.101894	09:32	+32:03	3	10m	
145	COMP			↑		
146	314.101450	09:36	+32:02	3	8m	
147	COMP			↑		
148	314.100902	09:30	+31:59	3	12m	H _α
149	COMP			↑		
150	314.095902	09:40	+31:39	3	10m	H _α
151	COMP			↑		
152	314.090468	09:46	+31:18	3	9m	
153	COMP			↑		
154	314.095540	09:51	+30:58	3	10m	
155	COMP			↑		
156	314.082229	09:32	+30:48	3	10m	H _α
157	COMP			↑		
158	314.078331	09:38	+30:35	3	9m	
159	COMP			↑		

60 inch Telescope Log

Observer: PBPI: GellerSpectrograph: FASTGrating: 3002Date: 11/19/96Page: 4294

Number	Object	R.A.	Dec.	L/R	Exp	Comments
160	314.077087	09:37	+27:31	3	9m	
161	COMP			↑		
162	314.029018	09:52	+27:55	3	9m	
163	COMP			↑		
164	314.022053	09:57	+27:31	3	9m	
165	COMP			↑		
166	314.019870	09:46	+27:22	3	9m	H α
167	COMP			↑		
168	314.019174	09:47	+27:23	3	11m	finishes the plate!
169	COMP			↑		
170-171	Ferze 31	10:36	+43:21	1	60s	
172	COMP			↑		
173	MRK421	11:01	+58:22	6	4m	
174	COMP			↑		
175	N4051	12:00	+44:48	6	2m	H α all over the chip
176	COMP			↑		broad spiral arms!
177	N4151	12:08	+39:41	6	30s	
178	COMP			↑		
179-180	H244	13:21	+36:23	1	45s	
181	COMP			↑		
182	MRK279	13:51	+69:35	6	90s	
183	COMP			↑		
184	N5548	14:15	+25:22	6	2m	6:20 ok
185	COMP			↑		
186-187	N 586C	15:05	+55:57	0	2m	just lane narrow 
188	COMP			↑		
189-198	BIAS			0	0s	clear @ dawn
199-208	FLAT			0	6s	
209-218	BIAS			31	0s	bim by 2 slit needs
219-228	FLAT			31	16s	2" slit, bim by 2 
229-232	DARK			0	15m	bim by 4

60 inch Telescope Log

Observer: PBPI: GellerSpectrograph: FASTGrating: 3000; 3" slit; bmbuy4Page: 4295Date: 1/12/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BTAS	slow		0	0s	ccd dewar re-aligned
11-20	FLAT	"		0	6s	today due to 1 pix
21-27	sky	"		0	2s	line tilt / →
28	COMP			↑	5s	new fastfoc=1200
29-33	HD12623	02:02	+62:56	0	7s	def + hal looks good
34	COMP			↑		
35-37	M31	00:40	+40:59	0	30s	
38	COMP			↑		
39-40	M31/sky	00:46	+40:59	0	30s	} spec focus jumped
41	COMP			↑		
42	MRK335	00:03	+19:55	6	90s	refocus
43	COMP			↑		
44	S22.064557	23:12	+13:03	3	9m	fastfoc still = 1200
45	COMP			↑		
46	S22.064420	23:23	+13:02	3	9m	Hx
47	COMP			↑		delay to ap for Falco object
48	46.013075	01:55	+10:30	3	8m	-no go-
49	COMP			↑		
50	S22.065011	23:25	+13:04	3	10m	Hx
51	COMP			↑		
52	S22.066194	23:25	+13:05	3	9m	
53	COMP			↑		
54	46.013320	01:04	+10:31	3	9m	
55	COMP			↑		Venus sets ruby red
56	46.014295	01:03	+10:35	3	10m	
57	COMP			↑		
58	46.014433	00:44	+10:31	3	9m	
59	COMP			↑		
60	46.01522	00:50:23	+10:36:14	3	10m	
61	COMP			↑		

41, 43, 45, + 47 have
FWHM of 7.5;
others are ~ 5.8

9.00
1.16

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>4296</u>		
Observer: <u>PB</u>		Grating: <u>3000</u>				
PI: <u>Geller/Huchra</u>		Date: <u>1/12/96</u>				
Number	Object	R. A.	Dec.	L/R	Exp	Comments
62	466.014981EJ	00:50	+10:36	3	6m	E+W Comps
63	COMP			↑		
64	466.014972Y	01:04	+10:37	3	9m	
65	COMP			↑		
66	K10350088e	01:48	+36:07	1	3m	str; faint fuzz to S
67	COMP			↑		
68	K10420088e	01:45	+36:07	1	5m	
69	COMP			↑		
70	K03514	01:48	+37:46	1	10m	
71	COMP			↑		
72	K1035017e	01:48	+36:53	1	9m	
73	COMP			↑		
74	M0148 p36536	01:48	+36:53	1	5m	F South Comp both stars
75	M0148 p36531	"	"	1	5m	K North Comp
76	COMP			↑		
77	K03509	01:48	+36:00	1	9m	
78	COMP			↑		
79	K10400157	01:51	+37:05	1	9m	
80	COMP			↑		file seeing
81	K10420097e	01:45	+35:50	1	9m	
82	COMP			↑		
83	K10391010e	01:50	+36:49	1	10m	
84	COMP			↑		
85	K10380088e	01:49	+37:53	1	10m	
86	COMP			↑		
87	K10410127e	01:51	+37:20	1	10m	
88	COMP			↑		
89	K10370068e	01:49	+35:23	1	15m	Hd
90	COMP			↑		
91	K10300107e	01:45	+34:56	1	10m	

20" C
3.2" 7

1.637m 64" 5"

60 inch Telescope Log

Observer: PBSpectrograph: FASTGrating: 302Page: 4297PI: Plucinsky/HuchraDate: 1/21/86

Number	Object	R.A.	Dec.	L/R	Exp	Comments
92	COMP			↑		
93	RXJ0635p2231A	06:35:03	+22:31:15	40	15m	
94	COMP			↑		
95	RXJ0635p2231B	06:35	+22:31	40	10m	
96	COMP			↑		
97	RXJ0635p2231D	06:35	+22:31	40	20m	C NE of D slit Rs = 62
98	COMP			↑		C = row 37 D = row 35
99, 100	Hiltner 600	06:42	+06:11	0	1m	
101	COMP			↑		
102	07433p2413	07:43	+24:13	1	15m	moon's up H _α
103	COMP			↑		
104	07433p4705	07:43	+47:05	1	12m	H _α
105	COMP			↑		
106	07435p2650	07:43	+26:50	1	12m	H _α
107	COMP			↑		
108	07438p3425	07:43	+34:25	1	10m	H _α
109	COMP			↑		
110	07443p3720	07:44	+37:20	1	9m	weak H _α
111	COMP			↑		
112	07445p4343	07:44	+43:42	1	8m	H _α
113	COMP			↑		
114	07449p4440	07:44	+44:40	1	8m	H _α
115	COMP			↑		
116	07451p2301	07:45	+23:01	1	4m	a few clouds out
117	COMP			↑		
118	07435p2742	07:45	+27:42	1	8m	H _α
119	COMP			↑		
120	07469p2609	07:46	+26:09	1	9m	stopped by clouds
121	COMP			↑		here
122	315.017192	07:56	+27:50	3	9m	Moon 13 -7°

21000 km/s $z = 0.06$

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>4298</u>		
Observer: <u>PB</u>		Grating: <u>3002</u>		Date: <u>1/12/96</u>		
PI: <u>Geller</u>						
Number	Object	R. A.	Dec.	L/R	Exp	Comments
123	COMP			↑		clouds moving through
124	315.018575	10:05	+27:58	3	12m	H α bright sky
125	COMP			↑		
126	315.056239	09:59	+31:40	3	8m	H α lots of cloud
127	COMP			↑		
128	315.058877	10:05	+29:58	3	9m	
129	COMP			↑		decreasing clouds
130	315.058657	10:07	+31:56	3	10m	star 3" E of nucleus H α
131	COMP			↑		
132	315.021136	10:03	+28:13	3	9m	
133	COMP			↑		clouds moved off to N
134	315.013451	09:58	+27:29	3	8m	
135	COMP			↑		
136	315.022559	10:04	+28:21	3	9m	
137	COMP			↑		
138	315.023104	10:04	+28:21	3	9m	
139	COMP			↑		
140	315.024577	09:58	+28:32	3	9m	
141	COMP			↑		
142	315.026639	09:59	+28:44	3	9m	
143	COMP			↑		
144	315.019565	10:13	+28:03	3	15m	H α LSB 2070 pix
145	COMP			↑		
146, 150	315.026988	10:20	+28:42	3	9m	x2, 12m
147, 151	COMP			↑		front comp to W
148	315.047181	09:57	+30:42	3	10m	
149	COMP			↑		
152	315.047880	09:56	+30:44	3	9m	H α
153	COMP			↑		
154	315.048750	09:53	+30:51	3	9m	

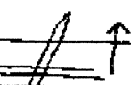
60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>4299</u>	
Observer: <u>PB</u>				Grating: <u>3000</u>			
PI: <u>Geller</u>				Date: <u>1/12/96</u>			
Number	Object	R. A.	Dec.	L/R	Exp	Comments	
155	COMP			↑			
156	315.050810	09:53	+31:04	3	7m	Hz	
157	COMP			↑			
158	315.051138	10:01	+31:07	3	10m		
159	COMP			↑			
160	315.052089	09:57	+31:12	3	9m		
161	COMP			↑			
162	315.055501	10:07	+31:35	3	9m		
163	COMP			↑			
164-165	Feige 34	10:34	+43:21	0	1m		
166	COMP			↑			
167	N4151	12:08	+39:41	6	30s		
168	COMP			↑			
169	MRK 279	13:51	+69:33	6	90s		
170	COMP			↑			
171	N5548	14:15	+25:22	6	2m		
172	COMP			↑			
173	12596p 2757	12:57	+27:57	1	3m		
174	COMP			↑			
175, 176	Feige 66	12:34	+25:20	0	45s		
177	COMP			↑		a few scattered clouds	
188-187	BIAS			0	0s	☉ seen	
188-197	FLAT			0	6s		

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>4300</u>		
Observer: <u>PB</u>		Grating: <u>3002, 3514, 6mby4</u>		Date: <u>1/13/96</u>		
PI: <u>All/Geller</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	clear skies!!
11-20	FLAT			0	6s	
21-25	sky			0	2s	5%6
26	COMP			↑	5s	
27-30	HD7561	01:16	+25:46	0	3s	
31	COMP			↑		
32-35	HD7350	00:46	+46:14	0	10s	
36	COMP			↑		
37-39	HD5235	00:54	+58:33	0	10s	
40	COMP			↑		
41-43	M32	00:39	+40:35	0	30s	
44	COMP			↑		
45-47	M31	00:40	+40:59	0	30s	
48	COMP			↑		
49-50	M31 sky	00:40	+42	0	30s	
51	COMP			↑		
52-54	HD21086b	22:54	+62:37	0	5s	
55	COMP			↑		
56	MRK 335	00:00	+19:55	6	90s	
57	COMP			↑		
58,59	Z2SM280	00:41	+41:05	0	4m	
60	COMP			↑		
61	S22.065897	23:21	+13:07	3	8m	H _α
62	COMP			↑		
63	S22.065258	23:16:49	+13:05	3	9m	H _α
64	COMP			↑		
65	S22.066627	23:15:07	+13:10	3	9m	H _α
66	COMP			↑		
67	S22.067160	23:26	+13:11	3	9m	nice lines
68	COMP			↑		

nice 8.86
for 1.16

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>PB</u>		Grating: <u>300L</u>			Page: <u>4301</u>	
PI: <u>Geller/Koranyi/Huchra</u>		Date: <u>1/13/66</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
69	S22.067833	23:21	+13:14	3	9m	H α
70	COMP			↑		
71	S22.069301	23:24	+13:18	3	12m	H α
72	COMP			↑		
73	S23.065723	23:49	+13:11	3	12m	
74	COMP			↑		
75	S23.058428	23:55	+12:48	3	8m	H α ; redo from 12/27
76	COMP			↑		Seeing worse
77	S23.058274	23:51	+12:48	3	10m	H α
78	COMP			↑		
79	465.011779	00:36	+10:35	3	9m	VEGUS sets 8:35
80	COMP			↑		RT system crashed! focus jumped!
81	465.011685	00:29	+10:35	3	8m	strong H α
82	COMP			↑		Note: 2 objects on slit ↓
83	465.011351A/B	00:31	+10:33	3	10m	object 1 = 465.011351 = row 30 A
84	COMP			↑		object 2 = 465.011359 = row 59 B
85	awm7_2.172	02:57	+41:31	35	20m	redo from 12/28
86	COMP			↑		Note: After RT system crash;
87	K034.05	01:47	+37:33	1	10m	fast fix size 1200; but 1200 is not!
88	COMP			↑		focus really is 1200; move to
89	K1034.0088e	01:47	+36:15	1	12m	H α 1100 then back to 1200
90	COMP			↑		
91	K039.07	01:50	+35:36	1	20m	H α
92	COMP			↑		
93	K10300078	01:45	+36:29	1	10m	Nice
94	COMP			↑		
95	K041.14	01:51	+37:39	1	20m	4 objects on slit
96	COMP			↑		
97	K037.07	01:46	+36:53	1	15m	
98	COMP			↑		* on slit to W

File 82
only off from

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>3002</u>		Page: <u>4302</u>	
PI: <u>Falco / Geller / Huchra</u>			Date: <u>11/3/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
99	K10400048e	01-51	+37-42	1	10m	H α
100	COMP			↑		
101	K10410018e	01-51	+33-56	1	12m	
102	COMP			↑		
103	07117p3813	07-11	+38-13	1	20m	H α @ pix 2051
104	COMP			↑		faint edge on gal: 
105	0806p350	08-09-38.9	+34-55-37	41	10m	binby 2
106	COMP			↑		3 objects on slit
107, 109	0718p374	07-22-016	+37-22-286	41	15m	row 82 → 76
108, 110	COMP			↑		→ • • • H α @ pix 2607!
111, 113	0707p424	07-10-44.3	+42-20-55	41	15m	QSO Lase
112, 114	COMP			↑		moon rise
115	315.037944	10-19	+29-45	3	9m	
116	COMP			↑		
117	315.041921	10-14	+30-10	3	8m	
118	COMP			↑		
119	315.042016	10-19	+30-08	3	10m	H α
120	COMP			↑		
121	315.042380	10-12	+30-13	3	6m	Wow - AGN!
122	COMP			↑		stellar nucleus w/ fuzz
123	315.044505	10-18	+30-24	3	10m	+ companions
124	COMP			↑		c τ = 16,000 km/sec
125	315.045049	10-10	+30-29	3	9m	
126	COMP			↑		
127	315.050633	10-09	+31-04	3	8m	
128	COMP			↑		
129	315051380	10-15	+31-26	3	9m	finishes the plate!
130	COMP			↑		
131	Z3219A	10-29-02	+27-28-55	1	10m	Seyfert
132	COMP			↑		

1.16
8.86

60 inch Telescope Log
 Observer: PB
 PI: Geller

Spectrograph: FAST
 Grating: 300R
 Date: 1/13/96

Page: 4303

Number	Object	R.A.	Dec.	L/R	Exp	Comments
133	316.006595	10:37:12	+26:31:75	3	7m	
134	COMP			↑		
135	316.006806	10:24	+26:33	3	7m	
136	COMP			↑		Weak features
137	316.026719N	10:24	+28:02	3	4m	Well defined nucleus
138	316.026719S	10:24	+28:01	3	10m	Weak H α
139	COMP			↑		
140	316.026719Y	10:25	+28:00	3	7m	
141	COMP			↑		
142	316.033533	10:46	+28:28	3	8m	
143	COMP			↑		
144	316.033650	10:45	+28:29	3	7m	
145	COMP			↑		
146	316.033605	10:23	+28:29	3	10m	
147	COMP			↑		
148	316.026699	10:24	+28:01	3	9m	
149	COMP			↑		
150	316.000526	10:34	+26:05	3	10m	
151	COMP			↑		
152	316.002465	10:40	+26:12	3	10m	H α
153	COMP			↑		
154	316.00318	10:35	+26:15	3	12m	H α
155	COMP			↑		
156	316.00894	10:25	+26:28	3	10m	
157	COMP			↑		Windy
158	316.007539	10:36	+26:35	3	8m	
159	COMP			↑		
160	316.007601	10:36:11	+26:36:22	3	8m	
161	COMP			↑		
162	316.009849	10:20	+26:45	3	8m	Weak H α

Moon: 13:50 -10

60 inch Telescope Log

Observer: PJBSpectrograph: FASTGrating: 3002Page: 4304PI: Geller/KemmanDate: 1/13/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
163	COMP			↑		
164	316.00974	10:28	+76:47	3	15m	Hk
165	COMP			↑		
166	316.015432	10:37	+77:12	3	9m	
167	COMP			↑		
168	316.016690	10:42	+77:16	3	8m	
169	COMP			↑		
170	316.018743	10:44	+77:27	3	9m	
171	COMP			↑		
172	N5548	14:15	+25:22	6	2m	
173	COMP			↑		
174	MRK279	13:51	+69:33	6	90s	
175	COMP			↑		
176	N461	12:08	+39:41	6	30s	
177	COMP			↑		
178	TXCUn	12:42	+37:02	12	1m	
179	COMP			↑		
180-182	TCrB	15:57	+24	12	2.5, 5, 20s	
183	COMP			↑		
184-186	AG Dra	16:01	+66	12	2-20s	
187	COMP			↑		
188-189	HZ44	13:21	+36:23	0	1m	
190	COMP			↑		
191-192	Fer34	10:36	+43:21	0	1m	
193	COMP			↑		
194-197	RW Hya	13:31	-25:07	12	1s-10s	
198	COMP			↑		
199-200	M84	12:25	+12:53	0	30s	clear + windy @ dawn
201	COMP			↑		
202-203	M86	12:26	+12:57	0	30s	
204	COMP			↑		
205-214	BIAS			0		
215-224	FLAT			0	6s	
225-244	Bias + Flats in bin by 2 mode			41	12s	

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>300L; 3" slit; binby4</u>		Page: <u>4305</u>	
PI: <u>Geller/Kirshner</u>			Date: <u>1/14/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	
11-20	FLAT			0	6s	
21-30	BIAS			2	0s	binby 2
31-40	FLAT			2	12s	binby 2
41-45	sky	Zenith		0	2s	
46	COMP			↑		
47-51	HD4744	00:47	+30:10	0	5s	def + trl NE*
52	COMP			↑		
53-55	M32	00:40	+40:35	0	30s	clouds in the west
56	COMP			↑		windy - 20-25 mph
57-59	HD217086	22:54	+62:27	0	5s	
60	COMP			↑		
61	MRK 335	00:03	+19:55	6	90s	
62	COMP			↑		
63,64	158m213	00:40	+40:50	0	4m	M31 glob.
65	COMP			↑		
66	S22.068584	23:15:46	+13:17	3	12m	
67	COMP			↑		
68	S22.068584	23:12:35	+13:16:76	3	15m	H _α
69	COMP			↑		
70	S22.069305	23:21	+13:18	3	15m	H _α
71	COMP			↑		
72	S22.070605	23:23	+13:22	3	10m	
73	COMP			↑		
74	S22.071945	23:09:11	+13:27	3	15m	USB finishes the plate!
75	COMP			↑		
76,78	SN1995ak	02:45:48	+03:13:50	2	30m	x2 binby 2
77,79	COMP			↑		
80	470.033916	02:29:	+11:50	3	10m	binby 2 to separate comps
81	COMP			↑		H _α HI region?

bin 6 + 198
 flat 209 + 242
 1.167
 89.1

[Handwritten signature]

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>4306</u>
Observer: <u>PRB</u>				Grating: <u>300L</u>		
PI: <u>Geller/Kirshner</u>				Date: <u>1/14/86</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
82	470.032463	02:34	+11:43	3	10m	
83	COMP			↑		
84	470.032133	02:34:54	+11:42	3	8m	
85	COMP			↑		
86	470.031723	02:28	+11:40	3	7m	
87	COMP			↑		
88	470.02053	02:22	+11:25	3	8m	H α
89	COMP			↑		
90,92,94	SNR95bd	04:45	+11:04	2	15m	*3 binlog 2
91,93,95	COMP			↑		
96,97	Hiltner 600	06:42	+02:11	0	1m	
98	COMP			↑		
99	470.056674	02:28:05	+12:01:26	3	7m	
100	COMP			↑		
101	470.055186	02:44	+11:53	3	8m	
102	COMP			↑		
103	470.035915	02:42	+11:56	3	10m	H α
104	COMP			↑		
105	470.057167	02:41	+12:02	3	7m	
106	COMP			↑		110, 112, 113, 114
107	07469p2745	07:46	+27:45	1	8m	H α
108	COMP			↑		
109	07470p2745	07:47	+27:45	1	5m	
110	COMP			↑		
111	07477p4827	07:47	+48:26	1	5m	
112	COMP			↑		
113	07469p4123	07:46	+41:23	1	10m	
114	COMP			↑		
115	07464p4408	07:46	+44:08	1	10m	H α
116	COMP			↑		

60 inch Telescope Log

Observer: PBPI: Falco/Kirshner/GellerSpectrograph: FASTGrating: 3002Page: 4307Date: 11/4/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
117	0932p367	09:35:31.8	+36:33:17.6	41	20m	binby 2 18.5m gso
118	COMP			↑		H889 Z=2.84 nice lines!
119,121	SNPASal	09:50:55.9	+33:33:09	2	15m	x2 wow
120,122	COMP			↑		
123,125	1038p430	10:38:18.2	+42:44:28	41	20m	x2
124,126	COMP			↑		
127	Z3219B	10:29:03	+27:27:57	1	15m	
128	COMP			↑		
129	316.012027	10:30	+26:57	3	15m	binby 4 ↓
130	COMP			↑		
131	316.019039	10:29	+27:28	3	5m	Seyfert!
132	COMP			↑		
133	316.019150	10:29	+27:29	3	7m	
134	COMP			↑		
135	316.023631	10:44	+29:45	3	7m	
136	COMP			↑		
137	316.024034	10:30	+27:50	3	6m	imremained
138	COMP			↑		
139	316.024436	10:45	+27:49	3	10m	Hk
140	COMP			↑		
141	316.025184	10:21	+27:54	3	7m	
142	COMP			↑		
143	316.029803	10:31	+28:15	3	7m	
144	COMP			↑		
145	316.030229	10:36	+28:17	3	7m	
146	COMP			↑		
147	316.031771	10:43	+28:22	3	7m	
148	COMP			↑		
149	316.035881	10:41	+28:38	3	15m	
150	COMP			↑		

15 bin 3 ↓

318-8086

318-8

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>300R</u>		Page: <u>4308</u>	
PI: <u>Geller/Wilkes</u>			Date: <u>11/4/6</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
151	316.035337	10:36	+28:40	3	9m	H α
152	COMP			↑		
153	316.035344	10:20	+28:40	3	9m	H α
154	COMP			↑		
155	316.050046	10:38	+29:51	3	8m	
156	COMP			↑		
157	316.050104	10:19	+29:51	3	8m	
158	COMP			↑		
159	316.050760	10:25	+29:56	3	7m	
160	COMP			↑		
161	316.052869	10:36	+30:06	3	10m	
162	COMP			↑		
163	316.056861	10:30	+30:28	3	9m	
164	COMP			↑		
165	316.059136	10:37	+30:39	0	9m	
166	COMP			↑		
167	PG 1402 p 261	14:05	+35:55	4S	3m	1.5" slit
168	COMP			↑		
169	PG 1440 p 356	14:40	+35:26	4S	3m	
170	COMP			↑	8s	
171	PG 1402 p 261			4S	3m	5" slit
172	COMP			↑		great seeing; photometric
173	PG 1440 p 356			4S	3m	
174	COMP			↑	3s	
175/176	HZ44	13:23	+36	0	1m	5" slit; photometric
177	COMP			↑	3s	
178/179	Ferrel	14:09	+50:21	0	1m	
180	COMP			↑	3s	
181	316.061274	10:30	+30:51	3	7m	3" slit L
182	COMP			↑		

60 inch Telescope Log

Observer: PB/CPPI: WilkesSpectrograph: FASTGrating: 300Date: 1/14/96Page: 4309

Number	Object	R.A.	Dec.	L/R	Exp	Comments
183	MRK421	11:01	+38:28	6	4m	3" slit!
184	COMP			↑		
187	N4051	12:00	+44:48	6	2m	
188	COMP			↑		
185	N4151	12:08	+39:41	6	30s	
186	COMP			↑		
189	MRK279	13:51	+69:33	6	90s	
190	COMP			↑		
191	N5548	14:15	+25:22	6	2m	
192	COMP			↑		
193-195	M101	14:05	+91:20	1	30s	Junk
196	COMP			↑		
197-206	BIAS			0	0s	
207-216	FLAT			0	6s	
217-226	BIAS			2/41	0s	binby 2
227-236	FLAT			2/41	12s	binby 2
237-246	FLAT			6	12s	binby 4; 1.5" slit
247-256	FLAT			6	3s	5" slit
						nice night.

TOTAL P.06

60 inch Telescope Log
 Observer: PANTOJA
 PI: FAST COMBO

Spectrograph: FAST
 Grating: 3" binby 4 Page: 4310
 Date: 1/15/96

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	cloudy evening
11-20	FLAT			0	6s	
21-30	BIAS					binby 2
31-40	FLAT					binby 2
41-45	SKY					change binby 4
46-50	HD 1918				5s	defocus & trail
51	COMP				↑	
52-54	M31	00 40 00.0	40 59 42		30s	
55	COMP				↑	
56-58	BDp 284211	21 48 57.1	29 37 48		30s	massey standard AGN man.
59	COMP				↑	
60	MRK 335	00 03 45.1	19 55 27		90s	cloudy
61	COMP				↑	
62	AXPer	01 33 06.0	+54 00 18		4s	symbiotic
63	COMP				↑	
64	AXPer	01 33 06.0	+54 00 18		60s	symbiotic
65	COMP				↑	
66-75	BIAS				0s	
76-85	FLAT				6s	

NO
bin x 2

no comp for stars

54 0.63
bin 0.08

60 inch Telescope Log		Spectrograph: <u>FAST</u>				Page: <u>4315</u>	
Observer: <u>PANTOJA</u>		Grating: <u>3"</u>					
PI: <u>COMBO</u>		Date: <u>01/18/96</u>					
Number	Object	R.A.	Dec.	L/R	Exp	Comments	
1-10	BIAS				0s	binby 2	
11-20	FLAT				6s		
21-30	BIAS				0	binby 4	
31-40	FLAT				6s		
41-45	Sky				6s		
46	COMP			↑			
47-50	HD 4744	00 47 05.3	30 10 21		5s	dofocus & trail	
51	COMP			↑			
52-54	163m 217	00 40 33.3	41 11 02		400s		
55	COMP			↑			
56-57	M32	00 39 58.2	40 35 30		60s		
58	COMP			↑			
59	Mrk 335	00 03 45.1	19° 55 27		90		
60	COMP			↑			
61	470.036825	02 24.23.31	12 01 50.9		900s		
62	COMP			↑			
63	470.036893	02 22.13.22	12 01 47.9		900s		
64	COMP			↑			
65	470.037035	02 34 02.13	12 02 28.2		17m		
66	COMP						
67	470.037654	02 40 57.61	12 04 24.9		900s	gal + star	
68	COMP						
69	W127	05 21 49.0	32 16 48		900s		
70	COMP			↑			
71	W126	05 21 52.0	32 17 48		900s		
72	COMP			↑			
73	W128	05 21 56.0	32 16 48		900s		
74	COMP			↑			
75	W130				900s		
76	COMP			↑			

69 - forced velocity to 7123 ± 71 - ?
 (program preferred -11 km/s)

7.67
 1.00

60 inch Telescope Log Observer: <u>PANTOJA</u> PI: <u>COMBO</u>	Spectrograph: <u>FAST</u> Grating: <u>3"</u> Date: <u>01/18/96</u>	Page: <u>4316</u>
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Number	Object	R. A.	Dec.	L/R	Exp	Comments
77	W129	05 22 20.0	32 18 39		900	
78	COMP			↑		
79	07487p3247	07 49 41.91	32 41 15		900s	
80	COMP			↑		
81	07497p3953	07 49 44.19	39 52 27		900s	
82	COMP			↑		
83-84	SN1995F	09 04 57.4	59 55 58.7		30 m	binby 2
85	COMP			↑		
86-87	Hiltner 600	06 42 37.2	02 11 25		60s	
88	COMP			↑		
89	07501p3240	07 50 05.27	32 40 26		900s	binby 4
90	COMP			↑		
91	07507p2422	07 50 42.0	24 22 00		900s	
92	COMP			↑		
93	07512p4621	07 51 10.0	46 20 56		900s	
94	COMP			↑		
95	07513p2815	07 51 18.0	28 15 00		900s	
96	COMP			↑		
97-98	FEIGE 34	10 36 41.2	48 21 50		60s	
99	COMP			↑		
100-101	N3379	10 45 11.4	12 50 48		180s	
102	COMP			↑		
103	317.000979	11 02 45.29	26 02 06.8		900s	
104	COMP			↑		
105	317.001046	10 49 28.98	26 02 21.7		600s	
106	COMP			↑		
107	317.001090	11 02 51.68	26 02 29.7		900s	
108	COMP			↑		
109	317.001091	11 08 07.73	26 01 01.5		900s	
110	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>4317</u>	
Observer: <u>PANTOJA</u>				Grating: <u>3"</u>			
PI: <u>COMBO</u>				Date: <u>01/18/96</u>			
Number	Object	R. A.	Dec.	L/R	Exp	Comments	
111	317.003709	10 54 59.02	26 14 17.2		600s		
112	COMP			↑			
113	317.003795	11 03 06.57	26 13 56.2		600s		
114	COMP			↑			
115	317.003800	11 04 36.21	26 13 33.0		720s		
116	COMP			↑			
117	317.004035	10 47 52.82	26 15 03.2		600s		
118	COMP			↑			
119	317.004196	10 51 44.41	26 16 22.9		720s		
120	COMP			↑			
121	317.005148	10 50 29.34	26 20 33.6		600s		
122	COMP			↑			
123	317.005320	11 09 20.34	26 19 09.6		900s		
124	COMP			↑			
125	317.005376	11 11 35.14	26 18 26.6		600s		
126	COMP			↑			
127	317.005433	11 11 39.06	26 18 40.6		900s		
128	COMP			↑			
129	317.005572	10 49 16.52	26 22 11.4		600s		
130	COMP			↑			
131	Mrk 421	11 01 40.6	38 28 43		240s		
132	COMP			↑			
133	N4051	12 00 36.4	44 48 35		120s		
134	COMP			↑			
135	N4151	12 08 01.1	39 41 01		30s		
136	COMP			↑			
137	Mrk 279	13 51 53.6	69 33 13		90s		
138	COMP			↑			
139	N5548	14 15 43.5	25 22 01		120s		
140	COMP						

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>4311</u>		
Observer: <u>PANTOJA</u>		Grating: <u>3"</u>				
PI: <u>COMBO</u>		Date: <u>1/16/96</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS				0s	binby 4
11-20	FLAT				6s	
21-30	BIAS				0s	binby 2
31-40	FLAT					binby 2
41-45	Sky				6s	binby 4
46	COMP			↑		focus ok.
47-51	HD4744	00 47 05.3	30 10 21		5s	wind 15mph defocus & trans
52	COMP			↑		
53-55	M31	00 40 00.0	40 59 42		30s	
56	COMP			↑		
57	ZAnd	23 31 15.3	48 32 32		1s	cloudy - winds 18 mph
58	COMP			↑		
59	ZAnd	23 31 15.3	48 32 32		30s	
60	COMP			↑		
61	FEIGE 24	02 32 30.9	03 30 51		30s	cloudy
62	COMP			↑		
63	FEIGE 24	02 32 30.9	03 30 51		60s	cloudy
64	COMP			↑		
65	G191B2B	05 01 31.5	52 45 52		30s	cloudy 18-20 mph wind
66	COMP			↑		
67	G191B2B	05 01 31.5	52 45 52		60s	
68	COMP			↑		
69	G191B2B	05 01 31.5	52 45 52		90s	
70	COMP			↑		
71	G191B2B	05 01 31.5	52 45 52		60s	cloudy
72	COMP			↑		
73	FEIGE 24	02 32 30.9	03 30 51		30	
74	COMP			↑		
75-76	Hiltner 600	06 42 37	02 11 25		60s	
77	COMP			↑		

60 inch Telescope Log		Spectrograph: <u>FAST</u>				Page: <u>4313</u>
Observer: <u>PANTOJA</u>		Grating: <u>3"</u>				Date: <u>01/17/96</u>
PI: <u>COMBO</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS				0s	winds 15-25mph
11-20	FLAT				6s	
21-30	BIAS				0s	binby 2
31-40	FLAT				6s	binby 2
41-45	Sky				6s	binby 4
46	COMP			↑		focus ok
47-50	HD4744	00 47 05.3	30 10 21		60s	winds defocus, trail
51	COMP			↑		
52-55	M32	00 39 58.2	40 35 30		60s	20-25mph
56	COMP			↑		
57-58	158m 213	00 40 30.2	40 50 06		4m	
59	COMP			↑		
60	Mrk 335	00 03 45.1	19 55 27		90s	cloudy
61	COMP					
62	HBC 359	04 00 48.6	26 02 43		900s	
63	COMP			↑		
64	HBC 24	04 11 08.61	28 20 26.9		900s	
65	COMP			↑		
66	SN1996A	05 10 47.1	-3 00 25.5		900s	binby 2
67	COMP			↑		
68	SN1996A	05 10 47.1	-3 00 25.5		600s	poor seeing
69	COMP			↑		
70	SN1996A				600s	
71	COMP			↑		
72	Hiltner 600	06 42 37.2	02 11 25		30s	
73	COMP			↑		
74	Hiltner 600	06 42 37.2	02 11 25		60s	
75	COMP					
76	SN1996A	05 10 47.1	-3 00 25.5		900s	binby 2
77	COMP			↑		

8.92

1.18

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>4319</u> <i>ka</i>		
Observer: <u>PANTOJA</u>		Grating: <u>3'</u>				
PI: <u>COMBO</u>		Date: <u>01/19/96</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS				0s	binby 4 cloudy, wind 10-15 mph
11-20	FLAT				6s	binby 4
21-30	BIAS				0s	binby 2
31-40	FLAT				6s	binby 2
41-45	SKY				6s	binby 4
46	COMP					focus ok
47-49	HD 4744	00 47 05.3	30 10 21		60s	defocus & trail
50	COMP			↑		
51-53	HD 12623	02 02 18.77	62 56 03.8		30s	defocus & trail
54	COMP			↑		
55-57	M31	00 40 00.0	40 59 42		30s	
58	COMP			↑		
59-61	225m 280	00 41 45.1	41 05 01		300s	
62	COMP					
63	Mrk 335	00 03 45.1	19 55 27		90s	
64	COMP			↑		
65-67	M32	00 39 58.2	40 35 30		60s	
68	COMP			↑		
69	SN 1995 bb	00 16 17.64	12 24 53.4		20m	binby 2
70	COMP					
71	470.037945	02 43 57.99	12 05 07.5		900s	binby 4
72	COMP			↑		
73	470.038470	02 26 30.36	12 08 55.6		600s	
74	COMP			↑		
75	470.038991	02 21 48.73	12 10 54.5		900s	
76	COMP			↑		
77	470.039982	02 31 53.34	12 14 58.6		600s	
78	COMP			↑		
79	W124	05 22 29.0	33 00 18		900s	
80	COMP			↑		

8.76
1.14

60 inch Telescope Log

Observer: PANTOJA

PI: COMBO

Spectrograph: FAST

Grating: 3"

Date: 01/19/96

Page: 4320

Number	Object	R.A.	Dec.	L/R	Exp	Comments
81	W183	06 19 39.2	13 59 54		900s	
82	COMP			↑		
83	W202	06 30 45.0	09 16 12		900s	
84	COMP			↑		
85	W203	06 31 48.0	09 07 01		900s	
86	COMP			↑		
87	W205	06 32 18.0	06 55 48		900s	
88	COMP			↑		
89	07514p2838	07 51 24.0	25 38 00		900s	
90	COMP			↑		
91	07515p2556	07 51 30.0	25 56 00		900s	
92	COMP			↑		
93	07523p2706	07 52 18.0	27 06 00		900s	
94	COMP			↑		
95	07524p2752	07 52 27.84	27 52 08		900s	
96	COMP			↑		
97	07526p4537	07 52 37.85	45 37 04		17m	Space shuttle entry spectacular
98	COMP			↑		
99	07527p4410	07 52 44.54	44 10 20		900s	
100	COMP			↑		
101	07530p2734	07 53 04.47	27 33 45		900s	
102	COMP			↑		
103	07530p4541	07 53 00.0	45 41 00		900s	
104	COMP			↑		
105	N3079	09 58 34.8	55 55 24		300s	
106	COMP			↑		
107	317.005979	10 49 22.07	26 24 09.3		900s	
108	COMP			↑		
109-118	BIAS				0s	
119-128	FLAT				6s	

60 inch Telescope Log	Spectrograph: <u>FAST</u>	Page: <u>4322</u>
Observer: <u>PANTOJA</u>	Grating: <u>3"</u>	
PI: <u>COMBO</u>	Date: <u>01/20/96</u>	

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	BIAS				0s	binby 4
11-20	FLAT				6s	
21-30	BIAS				0s	binby 2
31-40	FLAT				6s	binby 2
41-45	sky				6s	binby 4
46	COMP			↑		
47-49	HD1918	00 21.0 00.0	44 48 00		60s	defocus & trail
50	COMP			↑		
51-53	HD12623	02 02 18.77	62 56 03.8		30s	defocus & trail
54	COMP			↑		
55-57	MB1	00 40 00.0	40 59 42		60s	
58	COMP			↑		
59-61	158m 213	00 40 30.2	40 50 06		300s	
62	COMP			↑		
63	Mr K 335	00 03 45.1	19 55 27		90s	
64	COMP			↑		
65	SN1995bb	00 16 17.64	12 24 53.4		1200s	binby 2
66	COMP			↑		
67	470.040084	02 34 04.54	12 15 32.4		900s	binby 4
68	COMP			↑		
69	470.040507	02 28 58.49	12 17 27.7		900s	
70	COMP			↑		
71	470.041409	02 39 35.46	12 20 20.3		900s	
72	COMP			↑		
73	470.041669	02 27 23.96	12 22 05.3		1020s	
74	COMP			↑		
75	470.042112	02 39 44.32	12 23 15.3		1020s	
76	COMP			↑		
77	470.043847	02 38 18.24	12 30 52.2		17m	
78	COMP			↑		

8.78
1.15

60 inch Telescope Log

Observer: PANTOJAPI: COMBOSpectrograph: FASTGrating: 3"Page: 4323Date: 01/20/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
79	W181	06 21 05.5	14 31 55		900s	
80	COMP			↑		
81	W197	06 20 49.0	09 58 00		17m	
82	COMP			↑		
83	W142	05 44 57.6	31 52 28		17m	
84	COMP			↑		
85	W141	05 43 40.5	31 50 28		900s	
86	COMP			↑		
87	W148	05 47 49.0	29 26 10		17m	
88	COMP			↑		
89	W172	06 16 51.0	17 45 37		900s	
90	COMP			↑		
91	W190	06 30 38.90	12 05 56		900s	
92	COMP			↑		
93-94	Hiltner 600	06 42 37.2	02 11 25		30s	binby 2
95	COMP			↑		
96	317.007662	11 11 05.63	26 29 49.6		900s	binby 4
97	COMP			↑		
98	317.007748	11 10 07.68	26 30 31.3		900s	
99	COMP			↑		
100	317.008053	10 55 53.14	26 34 41.9		900s	
101	COMP			↑		
102-103	N 3379				180s	
104	COMP			↑		
105	07531 p2701	07 53 05.92	27 00 33		600s	
106	COMP			↑		
107	07531 p4414	07 53 09.18	44 14 04		600s	
108	COMP			↑		
109	07531 p4601	07 52 59.64	46 01 28		600s	
110	COMP			↑		

60 inch Telescope Log

Observer: PANTOJA

PI: COMBO

Spectrograph: FAST

Grating: 3"

Page: 4324

Date: 01/20/96

Number	Object	R. A.	Dec.	L/R	Exp	Comments
111	07532p4602	07 53 13.18	46 01 19		600s	
112	COMP			↑		
113	07537p2831	07 53 42.0	29 31 00		600s	
114	COMP			↑		
115	07543p2600	07 54 19.12	26 01 46		600s	
116	COMP			↑		
117	317.008482	10 48 12.55	26 36 07.2		900s	
118	COMP			↑		
119	317.008866	11 08 57.18	26 35 46.8		900s	
120	COMP			↑		
121	317.009132	11 09 08.10	26 37 38.8		900s	
122	COMP			↑		
123	317.009940	11 11 38.17	26 40 58.0		900s	
124	COMP			↑		
125	317.010164	10 47 49.55	26 44 45.1		900s	
126	COMP			↑		
127	317.010285	11 08 04.7	26 44 0.9		900s	
128	COMP			↑		
129	317.011945	10 53 56.59	26 54 30.9		900s	
130	COMP			↑		
131	317.012663	11 07 42.51	26 56 09.8		900s	
132	COMP			↑		
133	317.014827	11 10 29.77	27 05 27.3		900s	
134	COMP			↑		
135	317.015558	11 07 51.46	27 09 50.4		900s	
136	COMP			↑		
137-138	Feige 34	10 36 41.1	43 21 50		60s	
139	COMP			↑		
140-141	HZ 44	13 21 19.0	36 23 39		120s	
142	COMP			↑		

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>P. Berling</u>		Grating: <u>3002; 3" slit; bin by 4</u>			Page: <u>4326</u>	
PI: <u>Briceno/Geller</u>		Date: <u>1/21/96</u>				
Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	Cirrus
11-20	FLAT			0	6s	Cirrus
21-25	sky			0	2s	Cirrus
26	COMP			↑	5s	
27-31	M31	00:46	+40:59	0	30s	lots of variable clouds
32	COMP			↑		
33-37	M31 sky	00:40	+40:30	0	30s	
38	COMP			↑		
39-40	225m 280	00:41	+41:05	0	4m	↑ clouds
41	COMP			↑		
42-46	HD 217086	22:54	+62:27	0	5s	↓ #41 is good
47	COMP			↑		
48-49	MRK 335	00:03	+19:55	6	2m	
50	COMP			↑		
51-52	PGC 025134	02:05	+13:22	0	3m, 5m	weak; Messier
53	COMP			↑		
54	HBC 369	04:11	+28:05	38	5m	
55	COMP			↑		
56	HBC 373	04:15	+28:12	38	5m	
57	HBC 373 NE	04:18:47	+28:20:09	38	2m	1' NE of HBC 373
58	COMP			↑		
59	HBC 31	04:15	+28:05	38	4m	
60	COMP			↑		
61	HBC 383	04:18	+26:50	38	5m	nebulous star
62	COMP			↑		
63	470.044744	02:16	+12:35	3	8m	HK
64	COMP			↑		Cirrus +
65	470.045444	02:35	+12:37	3	10m	HK @ pix 2092 - weak
66	COMP			↑		more clouds
67, 69	470.046178	02:31	+12:41	3	10m	x2 those pesky clouds!

8.599

1.12

60 inch Telescope Log

Observer: PBPI: Kenyan PMS StarsSpectrograph: FASTGrating: 3002Page: 4327Date: 11/21/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
68,70	COMP			↑		clouds ↓
71	HBCm351	03:49	+24:30	30	2m	
72	HBCm352	03:51	+31:59	30	90s	SW*
73	COMP			↑↓		
74	HBCm353	03:51	+31:59	30	2m	NE*
75,77	HBCm354	03:51	+25:28	30	4m, 7m	NW* +2
76	HBCm355	03:51	+25:28	30	4m	SE*
78	COMP			↑		
79	HBC356	04:00	+25:44	30	5m	
80	COMP			↑		
81	HBCm358m359	04:00	+26:42	30	10m	359 is E of 358
82	COMP			↑		
83	U735Tau	04:11	+28:09	30	2m	
84	FmTau	04:11	+28:05	30	10m	
85	COMP			↑		
86	Anon!	04:10	+28:08	30	10m	
87	COMP			↑		
88,90	CWTau	04:11	+28:03	30	10m	1m a hole in the clouds!
89	COMP			↑		
91	FNTau	04:11	+28:20	30	3m	
92	COMP			↑		
93	471.027243	02:43	+10:42	3	12m	garbage clear/clouds.
94	COMP			↑		
95	LKa3	04:11	+27:45	30	1m	
96	COMP			↑		
97	FPTau	04:11	+28:38	30	90s	
98	FOTau	04:11	+28:05	30	4m	
99	COMP			↑		
100,101	CXTau	04:11	+26:40	30	90s, 6m	long exposure for blue lines
102	COMP			↑		K,H et al

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4328</u>	
Observer: <u>PB</u>			Grating: <u>2022</u>		Date: <u>1/21/96</u>	
PI: <u>Kenyon/Barton/Geller</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
103	LKCa4	04:13	+28:20	30	2m	cloudy!
104	COMP			↑		seeing not so great 2"
105,106	LYTan	04:14	+28:13	30	5m	(one star only!)
107	COMP			↑		look at all these lines
108	LKCa5	04:14	+28:25	30	5m	stars fade in + out
109	COMP			↑		→ (3 min cloud; 2 min star)
110	V410Tan	04:15	+28:20	30	1m	
111	COMP			↑		
112,113	DDTan	04:15	+28:09	30	8m	+2
114	COMP			↑		
115	DRTan	04:14	+6:53	30	8m	stopped by clouds
116	COMP			↑		
117,118	Feep34	10:34	+43:21	1	60s	open again
119	COMP			↑		
120	grS341-gal101	09	+22	33	12m	He clearing?????
121	COMP			↑		
122	grS341-gal102	09:11	+22:26	33	12m	
123	COMP			↑		windy
124	grS341-gal107	09:10	+23:07	33	10m	
125	COMP			↑		still plenty of clouds around
126	grS341-gal105	09:11	+23:00	33	10m	poor seeing
127	COMP			↑		
128	grS341-gal106	09:11	+23:02	33	12m	stopped by clouds again
129	COMP			↑		
130	316.066870	10:37:49	+31:21	3	15m	
131	COMP			↑		
132	316.068022	10:43	+31:25	3	12m	
133	COMP			↑		
134	316.076473	10:20	+32:12	3	15m	
135	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4329</u>	
Observer: <u>PB</u>			Grating: <u>300R</u>			
PI: <u>Geller/Wilkes</u>			Date: <u>1/21/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
136	316.07181Z	10:41-229	+31:46:48	3	15m	No clouds + poor seeing
137	COMP			↑		
138	316.064878	10:44	+31:08	3	15m	
139	COMP			↑		
140,142	PG1402p261	14:05	+25:55	45	5m	1.5" slit x2
141	COMP			↑	3s	
143,144	PG1440p356	14:40	+35:36	45	5m	RT system crashed!!!
145	COMP			↑	8s	dekey few minutes -
146	PG1402p261	14:05	+25:55	45	5m	5" slit
147	COMP			↑	3s	(no TLS window)
148	PG1440p356	14:40	+35:36	45	5m	∴ reset controllers
149	COMP			↑	3s	note: #145 slightly out of
150,151	Ferze 98	14:36	+27:42	0	1m	focus due to RT crash
152	COMP			↑		#143,144 @ good focus
153,154	H244	13:21	+76:23	0	1m	
155	COMP			↑		
156	N5548	14:15	+25:22	6	2m	3" slit
157	COMP			↑		
158	MRK279	13:51	+69:33	6	90s	
159	COMP			↑		
160	N4151	12:08	+39:41	6	30s	
161	COMP			↑		
162	N4051	12:00	+44:48	6	2m	
163	COMP			↑		
164	MRK421	11:01	+38:28	6	4m	
165	COMP			↑		clouds all over
166-169	SUMK	12:43	+61:05	0	10s	@ dawn
170	COMP			↑		
171-180	BEAS			0	0s	
181-190	FLAT			0	6s	
191-200	FLAT			45	12s	1.5" slit
201-210	FLAT			45		5" slit
211-214	DARK					

out of focus?

60 inch Telescope Log

Observer: P. Bertino

PI: Geller

Spectrograph: FAST

Grating: 300R

Date: 1/23/96 1/20/96

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	B7AS			0	0s	rain
11-20	FLAT			0	6s	snow
21	320.052968	12:14:35	+28:17:19	3	10s	sleet
22	COMP			↑		open at 5am!
23	320.033723	12:08	+28:19	3	8m.	clearing after our storm. poor seeing
24	COMP			↑		
25-34	B7AS			0	0s	mountain cloud
35-44	FLAT			0	6s	formed - close.....

NO FILE 20 ON TAPE - UNABLE TO READ (IT WAS TRASHED) 1.18
8.975

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PBerlind</u>			Grating: <u>300L, 3" slit, binog 4</u>		Page: <u>4331</u>	
PI: <u>Geller</u>			Date: <u>1/23/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	Cirrus around
11-20	FLAT			0	6s	Steve Amato adjusted
21-25	sky			0	2s	FAST cool electronics
26	COMP			↑	5s	today; no noticeable
27-31	sigJet	02:19:18	-02:59:00	0	2s	changes
32	COMP			↑		
33-36	RTr:	02:37:00	+34:16:00	0	5s	
37	COMP			↑		
38-42	HD217086	22:54	+62:27	0	5s	
43	COMP			↑		
44-46	M32	00:39	+40:35	0	30s	
47	COMP			↑		Seeing 2"++
48	MRK335	00:03	+49:55	6	90s	
49	COMP			↑		
50	IES2344p514	23:47:05	+51:42:16	99	5m	Weekes/Buckley
51				↑		
52	46S.011857	00:44	+10:34	3	10m	H α et al + absorption features
53	COMP			↑		
54	46S.011919	00:35	+10:36	3	10m	
55	COMP			↑		
56	46S.013747	00:42	+10:44	3	10m	H α
57	COMP			↑		
58	46S.014616	00:43	+10:48	3	10m	H α
59	COMP			↑		
60	46S.016545	00:43	+10:58	3	9m	H α
61	COMP			↑		
62	46S.016580	00:34	+11:00	3	12m	H α
63	COMP			↑		
64	46S.016774	00:43	+10:59	3	9m	
65	COMP			↑		

Moon 23:30 +0

nd noise 8.91

gain 1.17

P.02

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4332</u>	
Observer: <u>PB</u>			Grating: <u>3002</u>			
PI: <u>Geller & Barton</u>			Date: <u>1/23/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
66	470.046825	02:49	+12:42	3	10m	H _α
67	COMP			↑		
68	470.046826	02:20	+12:43	3	10m	* on slit
69	COMP			↑		
70	470.046955	02:30:47	+12:44:51	3	10m	* poor seeing on slit
71	COMP			↑		
72	470.046886	02:30:44	+12:44:31	3	10m	H _α
73	COMP			↑		
74	470.047240	02:29	+12:46	3	12m	
75	COMP			↑		
76	470.048490	02:40	+12:50	3	10m	
77	COMP			↑		
78	470.048800	02:23	+12:52	3	10m	H _α
79	COMP			↑		blasted by bright headlights - γ-ray
80	470.049438	02:39	+12:54	3	10m	
81	COMP			↑		
82	470.049701	02:38	+12:56	3	10m	main set
83	COMP			↑		
84	470.049847	02:26	+12:57	3	15m	H _α
85	COMP			↑		
86	470.049894	02:22	+12:57	3	10m	H _α
87	COMP			↑		seems improving
88	470.050678	02:49	+12:59	3	10m	H _α
89	COMP			↑		jump the planet.
90	gr5341-gr103	09:11:07	+22:43	33	10m	
91	COMP			↑		
92	gr5341-gr104	09:10	+22:44	33	12m	H _α
93	COMP			↑		
94	gr5341-gr108	09:09	+22:23	33	15m	
95	COMP			↑		

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>PB</u>		Grating: <u>3002</u>		Page: <u>4333</u>		
PI: <u>Barton & Geller</u>		Date: <u>1/23/66</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
96	gr5341gal109	09:09	+22:39	33	9m	
97	COMP			↑		
98	gr5341gal110	09:08	+22:42	33	15m	nice strong emission lines
99	COMP			↑		
100	gr5341gal111	09:11	+22:37	33	14m	H α
101	COMP			↑		
102	gr5341gal112	09:11	+22:55	33	9m	blue + lines
103	COMP			↑		
104	gr5341gal113	09:12	+22:56	33	15m	H α pix 2170
105	COMP			↑		
106	gr5341gal114	09:11	+22:57	33	9m	H α et al
107	COMP			↑		
108	gr5341gal115	09:08	+23:05	33	9m	H α pix 2198
109	COMP			↑		
110	gr5341gal116	09:09	+23:17	33	8m	LH
111	COMP			↑		
112	gr5341gal117	09:11	+22:47	33	1m	stars - K
113	COMP			↑		
114	gr5341gal118	09:11	+22:34	33	7m	H α
115	COMP			↑		
116	gr5341gal119	09:08	+22:48	33	10m	blue + lines
117	COMP			↑		
118	gr5341gal120	09:10	+22:27	33	15m	H α
119	COMP			↑		
120	gr5341gal123	09:11	+22:47	33	10m	H α
121	COMP			↑		
122	316.061240	10:24	+31:06	3	6m	H α
123	COMP			↑		
124	316.061356	10:31	+20:51	3	7m	
125	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4334</u>	
Observer: <u>PB</u>			Grating: <u>3001</u>			
PI: <u>Geller</u>			Date: <u>1/23/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
126	316.060417	10:41:41.6	+30:44	3	10m	finishes the plate! (list 3)
127	COMP			↑		
128	317.006571	10:47	+26:26	3	15m	huge+very LSB
129	COMP			↑		↳ garbage
130	317.016235	11:11	+27:1	3	5m	
131	COMP			↑		
132	317.016925	11:02	+27:18	3	5m	
133	COMP			↑		
134	317.017892	11:09	+27:20	3	5m	
135	COMP			↑		
136	317.018316	11:00	+27:25	3	6m	
137	COMP			↑		
138	317.018173	10:57	+27:29	3	4m	
139	COMP			↑		
140	317.019699	11:12	+27:28	3	4m	
141	COMP			↑		
142,146	317.020012	11:12	+27:30	3	5m	10m reduce *146 x2
143,147	COMP			↑		
144	317.020240	11:10	+27:32	3	6m	
145	COMP			↑		
148	317.020767	11:12	+27:34	3	5m	
149	COMP			↑		
150	317.020921	10:45	+27:37	3	3m	H _α
151	COMP			↑		
152	317.021451	11:12	+27:37	3	3m	
153	COMP			↑		
154	317.021477	11:12	+27:37	3	4m	
155	COMP			↑		
156	317.021994	11:12	+27:40	3	5m	
157	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>300L</u>		Page: <u>4335</u>	
PI: <u>Geller/Wilkes</u>			Date: <u>1/23/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
158	317.022156	11:04	+27:43	3	15m	relative humidity = 7%
159	COMP			↑		H _α p12040
160	317.023001	11:00	+27:48	3	4m	
161	COMP			↑		
162	317.023448	10:45	+27:49	3	15m	LSB H _α
163	COMP			↑		
164	317.024094	11:12	+27:50	3	6m	interesting line shapes
165	COMP			↑		H _α ; O II; H _β broadened
166	317.026953	11:10	+28:05	3	5m	
167	COMP			↑		
168	317.029121	11:02	+28:11	3	10m	H _α
169	COMP			↑		
170	317.028994	10:58	+28:15	3	5m	
171	COMP			↑		nice seeing
172	317.028172	11:10	+28:13	3	6m	
173	COMP			↑		
174	321.078186	12:54:47	+30:22:40	3	12m	H _α
175	COMP			↑		
176	PG1402p261	14:02	+26:06	45	3m	1.5" slit
177	COMP			↑	8s	
178	PG1440p356	14:40	+35:36	45	3m	
179	COMP			↑	8s	
180	PG1402p261	14:02	+26	45	3m	5" slit
181	COMP			↑	3s	clear
182	PG1440p356	14:40	+35	45	3m	
183	COMP			↑	5s	
184-185	Feige 98	14:36	+27:42	0	1m	
186	COMP			↑		
187-188	H244	13:21	+76:23	0	1m	
189	COMP			↑		

60 inch Telescope Log

Observer: PB
 PI: Geller/Wilkes

Spectrograph: FAST
 Grating: 300R
 Date: 1/23/96

Page: 4336

Number	Object	R.A.	Dec.	L/R	Exp	Comments
190	320.005580	12:21	+27:23	3	7m	3" slit
191	COMP			↑		
192	320.014000	12:16	+27:05	3	6m	
193	COMP			↑		
194	N4151	12:09	+39:41	6	30s	
195	COMP			↑		
196	MRK279	13:51	+69:33	6	90s	
197	COMP			↑		
198	N 5548	14:15	+25:22	6	2m	
199	COMP			↑		
200-201	N4406B	12:28	+12:46	0	3m	
202	COMP			↑		
203-204	Feyz66	12:34	+25:20	0	30s	
205	COMP			↑		clear @ dawn
206-207	RLrB	15:48	+29:09	0	30s	
208				↑		
209-218	ISIAs			0	0s	
219-228	FLAT			0	6s	3" slit
229-238	FLAT			45	12s	1.5" slit
239-248	FLAT			45	3s	5" slit

60 inch Telescope Log

Observer: P. Berlin
 PI: Kemp/Geller

Spectrograph: FAST
 Grating: 3002, 3° slit, 6mbly 4
 Date: 1/24/96

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	Steve Amato adjusted
11-20	FLAT			0	6s	FAST electronics again
21-25	SKY			0	2s	today; looks ok
26	COMP			↑	5s	
27-30	63TAM			0	5s	
31	COMP			↑		some cirrus to N+W
32-35	HD217086	22:54	+62:27	0	5s	
36	COMP			↑		
37-40	AG Reg	21:51	+12:37	12	6-3s	
41	COMP			↑		
42-45	Z And	23	+48:49	12	1-30s	
46	COMP			↑		
47-49	RAgr	23:43	-15:17	12	15-15s	
50	COMP			↑		
51-53	Fergello	23:17	-05:26	0	1m	
54	COMP			↑		
55	MRK335	00:05	+19:55	6	90s	
56	COMP			↑		
57-60	EG And	00:44	+40:44	12	14s	
61	COMP			↑		
62-64	AX Per	01:33	+54:40	12	2-60s	
65	COMP			↑		
66-68	G F1132B	05:01	+52:45	0	90s	
69	COMP			↑		
70-72	UVAur	05:48	+32:27:51	12	140s	
73	COMP			↑		
74	470.050270	02:20	+12:59	3	10m	
75	COMP			↑		
76	470.051198	02:28	+13:03	3	10m	
77	COMP			↑		

8.53
1.16

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>3000</u>		Page: <u>4338</u>	
PI: <u>Geller/Kirshner</u>			Date: <u>1/24/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
78	470.052861	02:57	+13:10	3	7m	* pW
79	COMP			↑		
80	470.053325	02:57	+13:12	3	7m	
81	COMP			↑		
82	470.053364	02:21	+13:12	3	8m	
83	COMP			↑		clouds...
84	470.054013	02:29	+13:15	3	8m	
85	COMP			↑		
86	470.053991	02:33	+13:15	3	10m	Hd
87	COMP			↑		
88	470.053717	02:42	+13:13	3	12m	Hc
89	COMP			↑		
90	470.054037	02:42	+13:14	3	9m	more clouds
91	COMP			↑		
92	470.054560	02:29	+13:18	3	8m	
93	COMP			↑		
94	470.055147	02:23	+13:20	3	8m	
95	COMP			↑		
96	470.055548	02:19	+13:21	3	12m	Hk
97	COMP			↑		
98	470.056341	02:26	+13:25	3	7m	
99	COMP			↑		finishes the plate!
100	470.053007	02:26	+13:33	3	5m	Hd redo from 12/28 #54
101	COMP			↑		seeing 2"
102, 104, 106, 108	SNP95bd	04:45:21	+11:04:02	2	15m	bin by 2 x4
103, 105, 107, 109	COMP			↑		seeing 1.5"
110-111	Hiltner 60	06:42	+02:11	0	45s	bin by 4
112	COMP			↑		
113	07517p4224EW	07:54	+42:24	1	8m	of triplet!
114	COMP			↑		2 galaxies on slit 1 has H α

Moon 00:30 +4°

60 Inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>4339</u>	
Observer: <u>PB</u>				Grating: <u>300L</u>			
PI: <u>Huchra/Barton/Kirshner/Geller</u>				Date: <u>1/24/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments	
115	07548p3958	07:51	+39:58	1	15m	He ← He	
116	COMP			↑		one of those!	
117	gr 5341 gal 25	09:08:51	+23:05:53	33	20m		
118	COMP			↑		Moon set	
119	gr 5341 gal 22	09:10:11	+22:45:49	33	15m	He Clouds Gone	
120	COMP			↑		Nice Seeing	
121	Z 32 RC DE	10:29:39	+27:29:19	1	20m	slit rotated to PA=135°	
122	COMP			↑		C=row 20 D=row 55	
123,125,127	SN 1993J	09:19	+69:15	2	20m	E=row 70	
124,126,128	COMP			↑	8s	→ kinlog 2	
129	317.029832	11:10	+28:20	3	7m		
130	COMP			↑			
131	317.030383	11:02:44	+28:25:03	3	6m		
132	COMP			↑			
133	317.046995	10:59	+29:18	3	5m		
134	COMP			↑			
135	317.046986	10:50	+29:48	3	4m		
136	COMP			↑			
137	317.046757	11:08	+29:48	3	12m	He	
138	COMP			↑			
139	317.046879	11:04	+29:49	3	4m		
140	COMP			↑			
141	317.047111	10:59	+29:52	3	6m		
142	COMP			↑			
143	317.047181	10:59	+29:53	3	5m		
144	COMP			↑		W-A=22K E=32K (H+)	
145	317.047436	11:00	+29:53	3	7m	comp 3" bE 00	
146	COMP			↑			
147	317.047400	10:49	+29:53	3	7m	He	
148	COMP			↑			

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>PB</u>		Grating: <u>300L</u>			Page: <u>4310</u>	
PI: <u>Geller</u>		Date: <u>1/24/96</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
149	317.047999	11:01	+29:56	3	9m	HA
150	COMP			↑		
151	317.048590	11:05	+29:58	3	5m	strong HA
152	COMP			↑		
153	317.049278	11:00	+30:03	3	6m	
154	COMP			↑		
155	317.049704	11:05	+30:04	3	6m	
156	COMP			↑		
157	317.049711	10:52	+30:05	3	7m	
158	COMP			↑		
159	317.050981	10:51	+30:12	3	6m	
160	COMP			↑		
161	317.051870	10:58	+30:17	3	6m	
162	COMP			↑		
163	317.052049	10:49	+30:17	3	6m	
164	COMP			↑		
165	317.052894	11:00	+30:22	3	6m	
166	COMP			↑		
167	317.054820	10:47	+30:32	3	4m	
168	COMP			↑		
169	317.054743	11:05	+30:31	3	9m	
170	COMP			↑		
171	317.054532	11:12	+30:28	3	8m	
172	COMP			↑		
173	317.054759	10:43	+30:32	3	4m	
174	COMP			↑		
175	317.055768	10:47	+30:37	3	3m	cute companion 10" SW
176	COMP			↑		
177	317.055900	10:47	+30:38	3	4m	
178	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>3002</u>		Page: <u>4341</u>	
PI: <u>Geller/Wilkes</u>			Date: <u>1/24/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
179	317.056872	11:09	+30:42	3	7m	
180	COMP			↑		
181	317.057100	11:10	+30:42	3	4m	
182	COMP			↑		
183	317.060715	11:08	+31:03	3	5m	
184	COMP			↑		
185	317.061353	10:43	+31:07	3	5m	H _α
186	COMP			↑		
187	317.061508	10:47	+31:09	3	10m	superposed star off slit ⊗
188	COMP			↑		
189	317.061724	11:08	+31:09	3	5m	
190	COMP			↑		
191	317.061857	11:08	+31:10	3	5m	nice H _α
192	COMP			↑		
193	PG1402 p261	14:02	+26:06	45	4m	1.5" slit ↓
194	COMP			↑		
195	PG1440 p356	+14:40	+38:36	45	3m	
196	COMP			↑		
197	PG1440 p356	+14:40	+38:36	45	3m	5" slit ↓
198	COMP			↑		clear; nice seeing < 1.5"
199	PG1402 p261	+14:02	+26:06	45	3m	
200	COMP			↑		
201-202	Fer98	14:36	+27:42	0	1m	
203	COMP			↑		
204-205	HZ14	13:21	+36:23	0	1m	
206	COMP			↑		
207	320.017329	12:22	+27:18	3	6m	3" slit ↓
208	COMP			↑		
209	320.018888	12:24	+27:23	3	6m	
210	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4342</u>	
Observer: <u>PB</u>			Grating: <u>3000</u>			
PI: <u>Wilkes</u>			Date: <u>1/24/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
211	MRK21	11:01	+39:28	6	5m	
212	COMP			↑		
213	N4051	12:00	+44:48	6	2m	
214	COMP			↑		
215	N4151	12:08	+39:41	6	30s	
216	COMP			↑		
217	MRK219	13:51	+69:33	6	90s	
218	COMP			↑		
219	N 5548	14:15	+25:22	6	2m	
220	COMP			↑		
221-224	70Um	13:28	+13:47	0	2s	
225	COMP			↑		
226-227	N5866	15:05	-55:57	0	90s	nize dust lane
228	COMP			↑		
229-238	BIAS			0	0s	
239-248	FLAT			0	6s	3" slit
249-258	BIAS			2	0s	bin by 2
259-268	FLAT			2	12s	bin by 2
269-278	FLAT			45	12s	1.5" slit bin by 4
279-288	FLAT			45	3s	5" slit
						crystal clear down

60 inch Telescope Log

Observer: P BerlinelPI: GellerSpectrograph: FASTGrating: 3000, 3" slit, binlog 4Page: 4343Date: 1/25/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-4	DARK			0	15m	clear skies
5-14	BIAS			0	0s	overhead; some
15-24	FLAT			0	6s	cloud to West
25-29	sky			0	2s	6:05
30	COMP			↑	5s	3" slit ↓
31-35	HD217060	22:54	+62:27	0	5s	
36	COMP			↑		
37-41	HD2623	02:02	+62:56	0	5s	
42	COMP			↑		
43-47	HD17578	02:45	+56:52	0	4s	
48	COMP			↑		
49-51	M32	00:39	+40:35	0	30s	
52	COMP			↑		
53-55	M31	00:40	+40:59	0	30s	
56	COMP			↑		
57-58	M31 sky	00:40	+40:59	0	30s	to West
59	COMP			↑		
60-61	163m217	00:40	+41:11	0	4m	
62	COMP			↑		
63	MRK335	00:03	+19:55	6	90s	
64	COMP			↑		
65	471.052836	02:50:11	+11:55:54	3	10m	
66	COMP			↑		
67	471.053375	02:53	+11:55	3	10m	
68	COMP			↑		
69	471.052854	02:51	+11:53	3	10m	
70	COMP			↑		
71	471.052810	02:44	+11:52	3	10m	
72	COMP			↑		
73	471.052877	02:53	+11:52	3	15m	clouds!

revised 8.65
Jan 1.16

60 inch Telescope Log

Observer: PBPI: GellerSpectrograph: FASTGrating: 300Page: 4344Date: 1/25/96

Number	Object	R.A.	Dec.	I/R	Exp	Comments
74	COMP			↑		Seeing ~2"
75	471.050115	02:46	+11:46	3	12m	
76	COMP			↑		
77	471.050528	02:46	+11:47	3	9m	
78	COMP			↑		
79	471.049547	02:52	+11:48	3	10m	H α
80	COMP			↑		
81	471.049327	02:53	+11:47	3	10m	H α
82	COMP			↑		
83	471.0495083	03:00	+11:41	3	10m	
84	COMP			↑		
85	471.045792	02:48	+11:36	3	12m	* on slit
86	COMP			↑		
87	471.045212	02:50	+11:35	3	9m	H α
88	COMP			↑		
89	471.044398	02:58	+11:33	3	6m	
90	COMP			↑		
91	471.044043	02:45	+11:32	3	9m	
92	COMP			↑		
93	471.043665	03:02	+11:30	3	5m	
94	COMP			↑		
95	471.040717	03:00	+11:24	3	10m	H α ● bright star next by!
96	COMP			↑		
97	471.037401	03:04	+11:16	3	10m	H α
98	COMP			↑		
99	471.034983	02:49	+11:11	3	5m	star + faint galaxy *
100	COMP			↑		
101	471.034021	03:04	+11:07	3	15m	H α
102	COMP			↑		
103	471.033498	02:54	+11:07	3	10m	

→ cannot separate

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>300</u>		Page: <u>4345</u>	
PI: <u>Huchra/Geller</u>			Date: <u>1/25/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
104	COMP			↑		Jump that plane
105	07548p411a	07:54	+44:10	1	10m	H _α
106	COMP			↑		Poor seeing
107	07548p411b	07:54	+44:11	1	4m	-very energetic cosmic ray
108	COMP			↑		
109	07555p3300	07:55	+32:59	1	3m	
110	COMP			↑		
111	07562p2257	07:56	+22:57	1	5m	
112	COMP			↑		
113	07568p2656	07:56	+26:55	1	7m	
114	COMP			↑		
115	07572p3048	07:57	+30:48	1	7m	H _α
116	COMP			↑		
117	07576p2557	07:57	+25:56	1	5m	Poor seeing still
118	COMP			↑		
119	07578p2102	07:57	+23:02	1	15m	H _α
120	COMP			↑		moonset
121	07580p2656	07:58	+26:56	1	6m	no clouds
122	COMP			↑		
123	07582p2721	07:59	+27:21	1	6m	
124	COMP			↑		
125	317.031227	10:46	+28:28	3	6m	H _α
126	COMP			↑		
127	317.032060	10:53	+28:34	3	15m	H _α
128	COMP			↑		
129	317.032227	10:46	+28:28	3	8m	H _α
130	COMP			↑		
131	317.031595	11:03	+28:30	3	5m	nice
132	COMP			↑		
133	317.032055	11:08	+28:31	3	3m	

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>43/6</u>		
Observer: <u>PB</u>		Grating: <u>3002</u>		Date: <u>1/25/95</u>		
PI: <u>Geler</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
134	COMP			↑		
135	317.032788	11:12	+28:34	3	10m	Seeing 2.5-3"
136	COMP			↑		
137	317.034419	11:11	+28:42	3	4m	wh hwh
138	COMP			↑		
139	317.062549	11:09	+31:13	3	3m	
140	COMP			↑		
141	317.062963	11:07	+31:16	3	7m	
142	COMP			↑		
143	317.064057	11:02	+31:23	3	10m	
144	COMP			↑		
145	317.064168	11:05	+31:23	3	6m	
146	COMP			↑		
147	317.064480	11:12	+31:22	3	10m	
148	COMP			↑		
149	317.065161	11:12	+31:26	3	7m	
150	COMP			↑		
151	317.065710	11:12	+31:29	3	8m	NOT LONG ENOUGH
152	COMP			↑		
153, 159	317.066081	11:09	+31:32	3	6m, 12m	x2
154, 160	COMP			↑		
155	317.066367	10:51	+31:36	3	7m	H/d
156	COMP			↑		
157	317.066757	10:43	+31:36	3	5m	
158	COMP			↑		
161	317.066663	11:06	+31:36	3	6m	
162				↑		
163	317.066785	11:11	+31:35	3	10m	Hu
164	COMP			↑		
165	317.069325	11:03	+31:51	3	6m	

649

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4317</u>	
Observer: <u>PB</u>			Grating: <u>3002</u>			
PI: <u>Geller</u>			Date: <u>1/25/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
166	COMP			↑		
167	317.070886	11:02	+32:59	3	8m	H _α
168	COMP			↑		
169	317.071502N	11:08	+32:01	3	8m	N
170	COMP			↑		
171	319.071502S	11:08	+32:00	3	8m	S
172	COMP			↑		
173	317.07279S	11:01	+32:08	3	7m	
174	COMP			↑		
175	317.073163	10:59	+32:11	3	8m	
176	COMP			↑		
177	317.07342W	10:50	+32:11	3	10m	NW Camp H _α
178	COMP			↑		
179	317.07342E	10:50	+32:11	3	8m	SE Camp
180	COMP			↑		
181	317.073763	10:50	+32:11	3	7m	finishes the plate!
182	COMP			↑		
183	320.019011	12:25	+27:24	3	10m	H _α
184	COMP			↑		
185	320.020303	12:12	+27:30	3	6m	
186	COMP			↑		
187	320.020651	12:10	+27:31	3	7m	
188	COMP			↑		
189	320.023217	12:20	+27:40	3	7m	
190	COMP			↑		
191	320.023767	12:03	+27:40	3	7m	
192	COMP			↑		
193	320.024615	12:10	+27:45	3	8m	
194	COMP			↑		
195	320.024892	12:02	+27:41	3	6m	

60 inch Telescope Log			Spectrograph: <u>FAST</u>			Page: <u>4348</u>
Observer: <u>PB</u>			Grating: <u>2002</u>			
PI: <u>Wilkes</u>			Date: <u>1/25/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
196	COMP			↑		
197	PG1402p261	14:02	+26:06	45	5m	1.5" slit
198	COMP			↑	8s	
199	PG1440p356	14:40	+35:36	45	4m	clear; seeing = 2.25"
200	COMP			↑	8s	
201	PG1440p356	14:40	+35:36	45	3m	5" slit ↓
202	COMP			↑	5s	
203	PG1402p261	14:02	+26:06	45	3m	
204	COMP			↑		
205-206	Feige 98	14:36	+27:42	0	1m	
207	COMP			↑		
208-209	H244	13:21	+76:23	0	1m	
210	COMP			↑		
211	12213p0422	12:23	+04:06	1	10m	3" slit H _α em
212	COMP			↑		
213	13062p0452	13:06	+04:37	1	6m	H _α
214	COMP			↑		
215	N5548	14:13	+25:22	6	2m	
216	COMP			↑		
217	MRK279	13:51	+69:33	6	90s	
218	COMP			↑		
219	N7151	12:08	+39:41	6	30s	
220	COMP			↑		no clouds ↓ dawn
221-224	47UMA	10:59	+40:25	0	2s	
225	COMP			↑		
226-235	BIAS			0	0.5	
236-245	FLAT			0	6s	3" slit
246-255	FLAT			45	12s	1.5" slit
256-265	FLAT			45	3s	5" slit

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>P. Berliand</u>			Grating: <u>3000; 3" slit, baby</u>		Page: <u>4349</u>	
PI: <u>Huchra</u>			Date: <u>1/26/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
110	DIPS			0	0s	circus all over
11-20	FLAT			0	6s	bright moon
21-25	SKY			0	2s	
26	COMP			↑	5s	
27-31	H1D217086	22:54	+62:27	0	5s	
32	COMP			↑		
33-35, 37-39	M32	02:39	+40:35	0	30s	
36, 40	COMP			↑		
41-43	M31	02:40	+40:59	0	30s	
44	COMP			↑		
45-46	M31/sky	02:40	+40:00	0	20s	
47	COMP			↑		
48	MRK335	02:07	+19:55	6	90s	
49	COMP			↑		
50, 51	225m280	00:41	+41:05	0	4m	
52	COMP			↑		
53	KI 038088eA	01:49	+36:15:06	1	10m	fuzz from another gal
54	COMP			↑		also on slit
55	KI 04100256e	01:51	+34:09	1	10m	
56	COMP			↑		
57	KI 0350107	01:48	+36:37	1	10m	
58	COMP			↑		
59	122	01:47	+36:33	1	10m	
60	COMP			↑		
61	K0411.03	01:52	+34:17	1	10m	≅ 2700 km/sec
62	COMP			↑		
63	121	01:49	+36:33	1	12m	em
64	COMP			↑		
65	K040.06	01:50	+37:27	1	12m	bright star on slit
66	COMP			↑		

Moon: 2:10 +11°

9.19

1.22

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PS</u>			Grating: <u>300L</u>		Page: <u>4350</u>	
PI: <u>Pantaja/Kemp</u>			Date: <u>1/26/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
67	02797	03:34	+23:07	43	5m	
68	COMP			↑		
69	02999	04:13	+23:23	43	6m	weak extended H α em
70	COMP			↑		
71	02967	04:06	+26:52	43	10m	H α
72	COMP			↑		
73	03021	04:18	+26:00	43	6m	
74	COMP			↑		
75	03024	04:19	+27:11	43	5m	
76	COMP			↑		
77	03095	04:32	+18:14	43	4m	
78	COMP			↑		
79	03096	04:33	+19:50	43	3m	clouds to N+W
80	COMP			↑		
81	03099	04:33	+20:30	43	6m	
82	COMP			↑		
83	a100	05:03	+30:46	43	20m	very LSB + huge
84	COMP			↑		what a monster!
85	03631	06:58	+29:57	43	6m	powerhouse emission all over
86	COMP			↑		
87	03634	06:58	+44:12	43	5m	
88	COMP			↑		
89	03760	07:11	+06:09	43	7m	* on slit
90	COMP			↑		
91	03768	07:12	+06:40	43	8m	bright star on slit
92	COMP			↑		
93-95	BX Mon	07:22	-63:30	12	1, 5, 60s	
96	COMP			↑		
97	03950	07:36	+02:20	43	4m	
98	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>300R</u>		Page: <u>4351</u>	
PI: <u>Pantaja/Huchra/Koranyi/Falco</u>			Date: <u>1/26/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
99	03111	07:21	+23:17	43	3m	
100	COMP			↑		
101	03939	07:31	+20:05	43	4m	H _α
102	COMP			↑		
103	07584 p2621	07:58	+26:21	1	9m	
104	COMP			↑		
105	07592 p2124	07:59	+21:24	1	10m	H _α - weak; pec
106	COMP			↑		
107	07596 p2301	07:59	+23:01	1	10m	H _α
108	COMP			↑		clouds moving in from W.
109	07599 p2153	08:00	+27:53	1	9m	H _α
110	COMP			↑		1.5" slit; binby 2
111, 114	NGC 2363A	09:28:43.4	46:11:24	1	10m	star 1.3"N + 0.5"W of
112, 115	COMP			↑	8s	eastern knot of NGC 2363
113	NGC 2363 B	random star	to confirm	row #	3m	the star is at row 72
116	NGC 2363 C	1.5" South of files		111, 114	4m	clouds!
117	COMP			↑		
118, 120	H909 p5311	09:09:27.5	+53:11:52	37	10m, 30m	binby 1; 2" slit; PA = 113.2°
119, 121	COMP			↑		excellent seeing!!
122	mkw10.01 b	11:39:57	09:44:24	35	12m	some thin clouds moon set
123	COMP			↑		3" slit binby 4
124	mkw10.01	11:39	+09:43	35	8m	
125	COMP			↑		
126	mkw10.02	11:39	+09:58	35	9m	
127	COMP			↑		
128	mkw10.03	11:39	+10:48	35	12m	N
129	COMP			↑		
130	mkw10.04	11:39	+10:48	35	8m	S
131	COMP			↑		
132	mkw10.05	11:39	+10:59	35	10m	weak

111 + 114 have two object -
both with em; have
colored them E + W

0.57 / pixel

Number	Object	R.A.	Dec.	L/R	Exp	Comments
133	COMP			↑		
134	mkw10-06	11:39	+10:24	35	9m	Ha
135	COMP			↑		
136	mkw10-07	11:39	+10:40	35	5m	
137	COMP			↑		
138	mkw10-09	11:39	+10:45	35	10m	
139	COMP			↑		
140	mkw10-10	11:40	+10:25	35	10m	
141	COMP			↑		
142	mkw10-13	11:40	+10:48	35	10m	
143	COMP			↑		
144	mkw10-14	11:40	+10:48	35	10m	
145	COMP			↑		
146	mkw10-15	11:40	+10:44	35	10m	
147	COMP			↑		
148	320.025517	12:15	+27:49	3	7m	finally: 15R
149	COMP			↑		
150	320.025906	12:14	+27:51	3	6m	
151	COMP			↑		
152	320.026452	12:07	+27:51	3	7m	
153	COMP			↑		
154	320.026552	12:05	+27:52	3	5m	
155	COMP			↑		
156	320.026578	12:03	+27:53	3	10m	Ha
157	COMP			↑		
158	320.029190	12:14	+28:03	3	8m	
159	COMP			↑		
160	320.029614	12:22	+28:04	3	5m	
161	COMP			↑		
162	320.030558	12:10	+28:06	3	5m	

60 inch Telescope Log

Observer: PBPI: Koranyi/GellerSpectrograph: FABGrating: 300LDate: 1/26/96Page: 4352

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>4353</u>		
Observer: <u>PS</u>		Grating: <u>300</u>				
PI: <u>Geller/Wikes</u>		Date: <u>1/26/96</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
163	COMP			9		
164	320.030661	12:23	+28:09	3	5m	
165	COMP			1		
166	320.03127	12:04	+28:09	3	6m	
167	COMP			↑		
168	320.031386	12:09	+28:09	3	4m	
169	COMP			↑		
170	320.031558	12:15	+28:12	3	6m	
171	COMP			↑		
172	320.032270	12:04	+28:14	3	6m	
173	COMP			1		
174	320.032418	12:07	+28:14	3	4m	
175	COMP			1		
176	320.032533	12:28	+28:14	3	8m	Wow! AGN
177	COMP			1		
178	320.033067	12:12	+28:18	3	5m	
179	COMP			↑		
180	320.033145	12:14	+28:18	3	5m	
181	COMP			↑		
182	320.033445	12:20	+28:19	3	5m	
183	COMP			↑		
184	320.033693	12:22	+28:20	3	4m	
185	COMP			1		
186	PG1402 p261	14:02	+35:06	45	5m	1.5" slit ↓
187	COMP			1		excellent seeing
188	PG1440 p356	14:40	+35:36	45	4m	
189	COMP			↑		
190	PG1440 p356	14:40	+35:36	45	3m	5" slit ↓
191	COMP			1		clear skies
192	PG1402 p261	14:02	+35:06	45	3m	
193	COMP			↑		

cal/25
230

60 inch Telescope Log

Observer: PBPI: WilkesSpectrograph: FASTGrating: 3002Date: 1/26/96Page: 4354

Number	Object	R. A.	Dec.	L/R	Exp	Comments
194-198	Feige 98			0	1m	5" slit ↓
196	COMP			↑		
197-199	HZ 44	13:21	+36:23	0	1m	
199	COMP			↑		
200	NSS 48	14:15	+25:22	6	2m	3" slit ↓
201	COMP			↑		
202	MRK 279	13:51	+69:33	6	90s	
203	COMP			↑		
204-206	NH 51	12:08	+39:41	6	30s, 15s	
205	COMP			↑		
206-215	BIAS			0	0s	
216-218	FLAT			0	6s	
216-235	BIAS			31	0s	binby 1 for Emilio
236-245	FLAT			31	30s	2" slit; binby 1
246-255	BIAS			1	0s	binby 2 - for Kuck's object
256-265	FLAT			1	20s	1.5" slit; binby 2
266-275	FLAT			45	12s	1.5" slit; binby 4
276-285	FLAT			45	6s	5" slit; binby 4
						clouds to far south & west of dawn

Please pay attention to numbers, especially when there is diff. slit width + the file name!

Moon @ On Jan 28 UT 02^h 46^m
+ 13° 57'

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>T Lappin</u>		Grating: <u>3000 3" slit</u> bin by Page: <u>4355</u>				
PI: <u>Kenyon</u>		Date: <u>27 Jan 96</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					Cirrus everywhere
11-20	FLAT					moving fairly fast
21-25	sky				2.5	@ 6:05 pm MST
26	comp			↑		
27-31	HD217086	22 54 49.0	+622735	0	5s	
32	comp			↑		
33-35	M31	00 40 00.0	+405942	0	30s	
36	comp			↑		
37-39	M31 sky	00 42 48	+412415	0	30s	
40	comp			↑		
41-43	M32	00 39 58.2	+403530	0	30s	
44	comp			↑		
45-47	M32	00 39 58.2	+403530	0	30s	
48	comp			↑		
49	NGC 335	00 03 45.1	+195527	6	90s	
50	comp			↑		
51	HBC 360	04 01 42.1	+215011	30	10m	
52	comp			↑		
53	HBC 362	04 02 33.8	+214305	30	10m	
54	comp			↑		
55	LkCa1	04 10 08.5	+281135	30	10m	Cirrus everywhere - halo
56	comp			↑		around moon, all stars
57	CZ Tau	04 15 25.6	+280944	30	10m	fuzzy
58	comp			↑		
59	HBC 372	04 15 29.4	+165130	30	10m	
60	comp			↑		
61	Hubble 4	04 15 40.9	+281254	30	7m	
62	comp			↑		
63	HBC 376	04 15 59.1	+171601	30	7m	still cirrus
64	comp					

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>J Lappin</u>			Grating: <u>3000, 3" slit, binby 4</u> Page: <u>4356</u>			
PI: <u>Kenyon/Briseno</u>			Date: <u>27 Jan 96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
65	BPTau	04 16 08.1	+28 59 13	30	7m	thicker cirrus moving in
66	comp			↑		
67	V819 Tau	04 16 19.9	+28 19 03	30	10m	clouds for a while
68	comp			↑		
69	LkCa7	04 16 37.8	+27 42 28	30	10m	
70	comp			↑		
71	DE Tau	04 18 49.8	+27 48 05	30	10m	clouds in + out
72	comp			↑		
73	RY Tau	04 18 50.9	+28 19 35	30	5m	saturated
74	comp			↑		
75	HD283572	04 18 52.5	+28 11 07	30	5m	saturated
76	comp			↓		
77	HD283572	04 18 52.5	+28 11 07	30	3m	saturated
78	HD283572	04 18 52.5	+28 11 07	30	1m	some pixels > 25,000
79	comp			↑		
80	RY Tau	04 18 50.9	+28 19 35	30	1m	ok
81	comp			↑		
82	T Tau	04 19 04.2	+19 25 05	30	1m	
83	comp			↑		
84	IP Tau	04 21 52.1	+27 05 08	30	10m	
85	comp			↑		
86	I 4872	04 22 14.0	+26 11 02	30	10m	clouds still
87	comp			↑		
88	FV Tau	04 23 49.9	+26 00 13	30	10m	
89	comp			↑		
90	HBC 60	04 30 45.67	+17 45 38.2	38	10m	
91	comp			↑		
92	HBC 62	04 30 54.68	+18 03 56.7	38	10m	clouds!
93	comp			↑		
94	HBC 398	04 29 17.16	+24 16 07.5	38	10m	

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>T Lappin</u>		Grating: <u>300L, 3" slit, binby 4</u>			Page: <u>4357</u>	
PI: <u>Briceno/Pantoja/Geller</u>		Date: <u>27 Jan 96</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
95	comp			↑		
96	HBC 417	04 33 15.41	+25 36 55.1	38	10m	
97	comp			↑		
98	+03-18-006	07 00 08.3	+18 33 34.0	43	10m	
99	comp			↑		
100	0318005	06 58 12.0	+19 42 00.0	43	20m	clouds - lost guide star
101	comp			↑		
	files 98 and 100 were originally both called +03-18-006. I tried renaming them with the correct names (0318006 and 0318005) but probably did it wrong.					
102	0700+1836	07 00 00.0	+18 36 00	43	15m	
103	comp			↑		
104	0702 p1854	07 02 00.0	+18 54 00	43	20m	circus still around
105	comp			↑		
106	318.000107	11 21 05.67	+26 05 39.1	3	10m	
107	comp			↑		
108	318.000367	11 31 37.86	+26 06 39.4	3	5m	
109	comp			↑		
110	318.000947	11 18 33.43	+26 10 42.5	3	10m	circus clearing out but
111	comp			↑		wind picking up, seeing
112	318.000951	11 32 53.06	+26 10 07.3	3	10m	not as good
113	comp			↑		
114	318.002001	11 11 22.77	+26 15 30.4	3	10m	
115	comp			↑		
116	318.002424	11 11 35.37	+26 18 27.9	3	10m	
117	comp			↑		
118	318.002459	11 11 39.31	+26 18 41.9	3	10m	

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>T Lappin</u>		Grating: <u>300L 3" slit binog 4</u>			Page: <u>4358</u>	
PI: <u>Geller</u>		Date: <u>1/27/96</u>				
Number	Object	R. A.	Dec.	L/R	Exp	Comments
119	Comp			↑		
120	318.002962	11 30 13.49	+26 23 46.9	3	10m	
121	Comp			↑		
122	318.004183	11 11 05.89	+26 29 46.3	3	10m	
123	Comp			↑		
124	318.004371	11 10 07.95	+26 30 31.7	3	10m	
125	Comp			↑		
126	318.004428	11 34 02.26	+26 32 24.0	3	10m	
127	Comp			↑		
128	318.005442	11 17 50.87	+26 39 35.9	3	10m	
129	Comp			↑		
130	318.005613	11 27 26.74	+26 40 50.1	3	10m	
131	Comp			↑		
132	318.005977	11 11 38.43	+26 40 58.8	3	10m	
133	Comp			↑		
134	318.006610	11 27 16.28	+26 46 55.7	3	10m	
135	Comp			↑		
136	318.006742	11 28 00.87	+26 47 50.5	3	10m	
137	Comp			↑		
138	N4151	12 08 01.1	39 41 01	6	30s	
139	Comp			↓		
140	N4151	12 08 01.1	39 41 01	6	15s	
141	Mrk 279	13 51 53.6	69 33 13	6	90s	
142	Comp			↑		
143	N5548	14 15 43.5	25 22 01	6	2m	
144	Comp			↑		
145	H244	13 21 19.0	36 23 39	0	1m	
146	Comp			↑		
147-156	FLAT					Cirrus @ Sunrise
157-166	BIAS					

- end -

Moon Jan 29 0h UT: $\alpha = 03^h 36^m$
 $\delta = +16^\circ 19'$

60 inch Telescope Log		Spectrograph: FAST				
Observer: <u>T Lappin</u>		Grating: <u>3002, 3" slit, bin by 4</u>			Page: <u>4359</u>	
PI: <u>Briceno</u>		Date: <u>28 Jan 96</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					currus @ sunset but improving
11-20	FLAT					since ~5 pm
21-25	sky				2s	
26	comp			↑		taken ~10 minutes after skys
27-31	HD 217086	22 54 49	+62 27 35	0	5s	
32	comp			↑		
33	MRK 335	00 03 45	+19 55 27	6	90s	
34	comp			↑		
35-37	M 31	00 40 00	+40 59 42	0	30s	
38	comp			↑		
39-41	M 31 sky	00 42 47	+41 12 26	0	30s	telescope position recorded
42	comp			↑		
43-47	M 32	00 39 58	+40 35 30	0	30s	
48	comp			↑		
49	HBC 409	04 32 20	+22 48 16	38	8m	
50	comp			↑		
51	HBC 68	04 36 17	+22 42 02	38	8m	
52	comp			↑		
53	HBC 72	04 43 59	+16 54 40	38	8m	
54	comp			↑		
55	HBC 73	04 44 05	+16 57 19	38	8m	brighter star of pair;
56	comp			↓		star to E near slit
57	HBC 424	04 44 05	+16 57 19	38	10m	fainter star of pair; star
						to E near slit (bright star saturate)
58	HBC 425	04 51 30	+17 05 07	38	10m	
59	comp			↑		
60	HBC 427	04 52 51	+30 16 20	38	4m	
61	comp			↑		
62	HBC 46	04 27 49	+24 35 56	38	10m	
63	comp			↑		

advised 8.9
gain 1.2

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>T Lappin</u>		Grating: <u>300l, 3" slit, bin by 4</u>		Page: <u>4360</u>		
PI: <u>Briceno/Kenyan</u>		Date: <u>28 Jan 96</u>				
Number	Object	R. A.	Dec.	L/R	Exp	Comments
64	HBC 47	04 28 22	+24 04 29	38	10m	
65	comp			↑		
66	HBC 59	04 30 32	+26 03 34	38	10m	
67	comp			↑		
68	HBC 64	04 32 20	+22 26 06	38	10m	
69	comp			↑		
70	V892 Tau	04 15 34	+28 12 02	30	10m	cirrus still visible
71	comp			↑		
72	DFTAU	04 23 59	+25 35 42	30	8m	
73	comp			↑		
74	DG Tau	04 24 01	+25 59 36	30	6m	
75	comp			↑		
76	HBC 388	04 24 17	+17 44 03	30	3m	
77	comp			↑		
78	DHTAU	04 26 37	+26 26 29	30	8m	
79	comp			↑		
80	DI Tau	04 26 38	+26 26 20	30	8m	
81	comp			↑		
82	IG Tau	04 26 47	+26 00 13	30	5m	
83	comp			↑		
84	FXTau	04 27 27	+24 20 18	30	5m	
85	comp			↑		
86	DK Tau	04 27 40	+25 54 59	30	5m	2 stars close together in slit
87	comp			↑		maybe needs narrower slit
88	22 Tau	04 27 49	+24 35 57	30	5m	don't see any 'c' component
89	comp			↑		
90	JH56	04 28 09	+27 03 54	30	5m	
91	comp			↑		
92	V927 Tau	04 28 22	+24 04 30	30	5m	
93	comp			↑		

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>T Lappin</u>		Grating: <u>300L 3" slit, binby 4</u>			Page: <u>4361</u>	
PI: <u>Kenyon/Pantoja</u>		Date: <u>28 Jan 96</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
94	H8C39Z	04 28 34	+17 00 02	30	5m	
95	comp			↑		
96	H LTau	04 28 44	+18 07 36	30	5m	star to E near slit
97	comp			↑		
98	H K Tau	04 28 48	+24 17 56	30	8 m	
99	comp			↑		
100	L1551-51	04 29 03	+18 15 16	30	5m	
101	comp			↑		
102	V928 Tau	04 29 17	+24 16 08	30	5m	
103	comp			↑		
104	V827 Tau	04 29 20	+18 13 55	30	5m	
105	comp			↑		
106	V926 Tau	04 29 22	+17 55 19	30	5m	
107	comp			↑		
108	GG Tau	04 29 37	+17 25 22	30	1m	
109	comp			↑		
110	L1551-55	04 29 50	+17 56 40	30	5m	(looks clear! no cirrus visible with moon still in sky)
111	comp			↑		
112	0614002	06 05 00	+39 16 00	43	15m	
113	comp			↑		
114	0216001	06 06 45	+13 28 00	43	5m	
115	comp			↑		
116	0117001	06 22 37	+07 33 16	43	5m	
117	comp			↑		
118	0416005	06 47 00	+25 43 00	43	10m	
119	comp			↑		
120	0416001	06 46 42	+25 44 00	43	10m	
121	comp			↑		
122	0318008	07 01 24	+18 37 00	43	10m	
123	comp			↑		

60 inch Telescope Log

Observer: T. LappinPI: Geller/WilkesSpectrograph: FASTGrating: 300L 3" slit, bin by 4 Page: 4362Date: 28 Jan 96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
124	318.009115	11 14 37	+27 01 42	3	15m	
125	comp			↑		
126	318.009873	11 10 30	+27 05 27	3	15m	
127	comp			↑		
128	318.010033	11 36 55	+27 06 52	3	15m	
129	comp			↑		
130	318.010840	11 11 51	+27 11 54	3	15m	
131	comp			↑		
132	318.012032	11 37 00	+27 19 09	3	15m	
133	comp			↑		
134	318.012099	11 17 04	+27 21 05	3	15m	
135	comp			↑		
136	318.012442	11 09 31	+27 20 55	3	15m	
137	comp			↑		
138	318.012863	11 34 54	+27 25 01	3	15m	
139	comp			↑		
140	318.013498	11 12 12	+27 28 38	3	15m	
141	comp			↑		
142	318.013600	11 12 53	+27 29 36	3	15m	
143	comp			↑		
144	Mrk 421	11 01 40	+38 28 43	6	5m	
145	comp			↑		
146	N 4051	12 00 36	+44 48 35	6	2m	
147	comp			↑		
148	N 4151	12 08 01	+39 41 01	6	30s	
149	comp			↑		
150	Mrk 279	13 51 53	+69 33 13	6	90s	
151	comp			↑		
152	N 5548	14 15 43	+25 22 01	6	2m	
153	comp			↑		

