

** Start of FAST Run **

60 inch Telescope Log
 Observer: P. Berlin
 PI: Scott

Spectrograph: FAST
 Grating: 300R
 Date: 10/1/99

Page: 7914

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BPMs				0s	
11-20	FLAT				7s	clear & hazy
21-30	BPMs				0s	
31-40	FLAT				Ms	
41-45	sky	zenith		S7	2s	looks good!
46	FLAT			↑		
47-51	HDM22SL	19:20	+10	S6	5s	
52	COMP			↑		
53-58	GMSgr	18:19	-25:29	99	4m	1.5" slit ; PA=15°
59,59	COMP			↑		
60-61	V2415gr	17:57	-21:41	12	30s, 10m	3" slit
62	COMP			↑		
63-65	FD1549A1	17:06	+23:58	12	1s-10s	
66	COMP			↑		
67-69	VX Her	18:11	+20:59	12	5s, 2m, 15s	
70				↑		
71-73	V443 Her	18:22	+23:27	12	5s-3m	
74	COMP			↑		poor seeing
75-77	FN Sgr	18:53	-18:59	12	1m, 15s, 5m	PA=24
78	COMP			↑		
79-81	V995gr	19:03	-16:59	12	15s, 8m, 1m	PA=24
82	COMP			↑		det. @ 18"
83-85	BFLygr	19:23	+29:40	12	30s, 1m	PA=90
86	COMP			↑		
87-90	CHCgr	19:24	+50:14	12	1-10s	PA=90
91	COMP			↑		
92-97	HMSgr	19:41	+16:47	12	1s-1m	PA=45
98	COMP			↑		

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>7595</u>		
Observer: <u>PB</u>		Grating: <u>300L</u>		Date: <u>10/1/99</u>		
PI: <u>Kenyon</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
96-97	ASXO	19.75	+18.76	12	10s, 5m	PA=45
98	COMP			↑		
99-102	PAWnt	20.21	+21.34	12	0.5s-2m	PA=45
103	COMP			↑		
104-107	V1016Cyg	19.57	+32.19	12	1s-2m	PA=90
108	COMP			↑		
109-111	HeZm 467	20.35	+20.4	12	5s-10m	PA=35
112	COMP			↑		
113-115	HeZm 468	20.41	+21.11	12	1m/2m	PA=90
116	COMP			↑		
117-119	V1325Cyg	20.51	+35.34	12	10s, 12m	
120	COMP			↑		
121-123	V1407Cyg	21.02	+45.42	12	10s, 4m	
124	COMP			↑		
125-129	KePeg	21.51	+12	12	0.5s-1.5s	
129	COMP			↑		
130-132	S190	21.41	+02.43	12	5s, 1m	PA=90
133	COMP			↑		
134-135	S190	"	"	12	5s, 1m	PA=15
136	COMP			↑		
137-138	S180	20.39	-05.7	12	1m, 10m	PA=15
139	COMP			↑		
140-141	S169	19.49	+46.45	12	12m	PA=90
142	COMP			↑		
143	Z208p0531	22.08	+15.51	57	5m	
144	COMP			↑		
145-147	ZAnd	23.35	+48.49	12	1s-90s	
148	COMP			↑		
149-151	EZAnd	00.44	+40.40	12	1-15s	
152	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Ken

Spectrograph: FAST

Crating: 3022

Date: 10/1/99

Page: 7596

Number	Object	R.A.	Dec.	L/R	Exp	Comments
153-	M32	00:39	+10:35	57	30s	
154	COMP			f		
155	158m23	00:40	+10:50	57	5m	
156	COMP			f		
157.161	RAA	23:43	-15:17	12	15-30s	
162	COMP			f		
163	g119-120	00:57	-02:20	64	7m	
164	COMP			f		
165	118	00:46	-07:26	67	7m	
166	COMP			f		
167	121	00:53	+01:48	69	8m	
168	COMP			f		
169	123	00:48	-01:31	64	4m	
170	COMP			f		
171	125	00:56	+10:40	64	5m	
172	COMP			f		
173	126	00:55	-01:34	64	4m	
174	COMP			f		
175	127	00:51	-02:09	64	10m	
176	COMP			f		
177	130	00:03	-03:34	64	10m	
178	COMP			f		
179	132	00:08	-02:02	64	5m	
180	COMP			f		
181	133	00:56	+10:02	64	5m	
182	COMP			f		
183	134	01:02	-04:47	64	6m	
184	COMP			f		
185	135	01:04	+10:51	64	5m	
186	COMP			f		

60 inch Telescope Log

Observer: PB

PI: Ken

Spectrograph: FAST

Grating: 300L

Page: 7597

Date: 10/1/99 (2)

Number	Object	R.A.	Dec.	L/R	Exp	Comments
187	a119-176	0102	-0241	64	5m	
188	COMP			↑		
189	138	0046	-0409	64	10m	
190	COMP			↑		
191	139	0101	-0254	64	5m	
192	COMP			↑		
193	140	0058	+0201	64	5m	
194	COMP			↑		
195	141	0106	-0157	64	5m	
196	COMP			↑		
197	142	0046	-0355	64	10m	
198	COMP			↑		
199	143	0056	-0301	64	7m	
200	COMP			↑		
201	144	0056	-0340	64	4m	
202	COMP			↑		
203	145	0045	-0200	64	6m	
204	COMP			↑		
205	147	0057	-0237	64	5m	
206	COMP			↑		
207	148	0057	-0302	64	5m	
208	COMP			↑		
209	146	0109	-0135	64	12m	LSB
210	COMP			↑		
211	149	0049	-0407	64	4m	
212	COMP			↑		
213	151	0104	-0207	64	5m	
214	COMP			↑		
215	152	0046	+0041	64	4m	
216	COMP			↑		

60 inch Telescope Log

Observer: PB
 PI: Ken & Andi

Spectrograph: FAST

Grating: 300R

Page: 7598

Date: 10/1/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
217	all9_154	00:59	+10:25	64	4m	
218	COMP			f		
219	156	00:51	-07:02	64	4m	
220	COMP			f		
221	153	00:59	+10:45	64	4m	
222	COMP			f		
223	155	00:41	-02:19	64	10m	
224	COMP			f		
225	sig 5 063 220	00:20	+21:30	59	4m	
226	COMP			f		
227	221	00:20	+23:08	59	4m	
228	COMP			f		
229	224	00:20	+27:08	59	4m	
230	COMP			f		
231	225	00:20	+22:31	59	4m	
232	COMP			f		
233	227	00:20	+22:35	59	4m	2 clumps; com
234	COMP			f		
235	229	00:20	+21:57	59	4m	Sup *?
236	COMP			f		
237	231	00:20	+22:13	59	10m	
238	COMP			f		
239	234	00:20	+21:22	59	2m	
240	COMP			f		
241	235	00:20	+22:22	59	4m	
242	COMP			f		
243	237	00:20	+21:51	59	2m	
244	COMP			f		
245	238	00:21	+22:35	59	2m	
246	COMP			f		

60 inch Telescope Log

Observer: PB

PI: Scott

Spectrograph: FAST

Grating: 300R

Date: 10/1/99

Page: 7599

Number	Object	R. A.	Dec.	L/R	Exp	Comments
247	SN 1999dg	02:37	+52:58	Z	20m	PA = 58°
248	COMP			↑		
249	HZ 14	01:41	+10:59	S ₀	5m	PA = -8°
250	COMP			↑		
251-253	AN Per	01:36	+54:15	12	10s, 5m S ₀	
251	COMP			↑		
255-6	V 741 Per	01:58	+52:53	12	10s, 5m	
257	COMP			↑		
258	02:22 p 5706	02:21	+57:06	83	5m	
255	COMP			↑		
260	02:22 p 5713	02:21	+57:13	83	5m	
261	COMP			↑		
262	02:21 p 5712	02:21	+57:12	83	5m	
263	COMP			↑		
264	02:22 p 5701	02:21	+57:01	83	5m	
265	COMP			↑		
266	02:22 p 5713	02:21	+57:13	83	5m	
267	COMP			↑		
268-269	G 19102B	04:01	+52:45	S ₆	2m	
270	COMP			↑		
271	02:24 p 5714	02:21	+57:14	83	5m	
272	COMP			↑		
273	02:22 p 5702	02:21	+57:02	83	4m	
274	COMP			↑		
275	02:22 p 5704	02:21	+57:04	83	4m	
276	COMP			↑		
277	02:22 p 5707	02:21	+57:07	83	1m	
278	COMP			↑		
279	02:23 p 5712	02:21	+57:12	83	2m	
280	COMP			↑		

60 inch Telescope Log

Observer: PB
 PI: AM

Spectrograph: FAST
 Grating: 3000
 Date: 10/1/99

Page: 7600

Number	Object	R. A.	Dec.	L/R	Exp	Comments
288	02231590L	0521	+5706	83	1m	
289	COMP			↑		
289-291	HD 27862	0349	74	57	2s	
289	COMP			↑		
289-91	HD 28159	0349	32	59	2s	
292	COMP			↑		
293-95	HD 24534	0355	31	57	2s	
296	COMP			↑		
297-299	HD 26906	0417	+46	59	2s	
300	COMP			↑		
301-303	HD 25361	0401	58	59	2s	
304	COMP			↑		
305-308	HD 25878	0408	53	57	2s	
309	COMP			↑		
310-311	BIPAS				0s	
312-301	FLAT				7s	
313-314	BIPAS				0s	
315-319	FLAT				14s	
320-321	FLAT				10s	1.5" slit
322-325	DARK				15m	
						clear & dawn

60 inch Telescope Log

Observer: DR. [Signature]

PI: Scott

Spectrograph: FAST

Grating: 300R

Date: 10/2/99

Page: 7601

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	DARK				15m	
11-20	FLAT				15s	1.5" slit.
21-30	FLAT				2s	
31-40	FLAT				7s	3" slit ↓
41-50	FLAT				2s	
51-60	FLAT				14s	clear skies!
61-65	sky	Zenith		59	2s	
66	COMP			↑		
67-69	H16520b	17:40	-10	59	2s	
70	COMP			↑		
71-73	H166734	17:40	-10	59	2s	
74	COMP			↑		
75-77	H16319c	17:40	-10	59	2s	
78	COMP			↑		
79-81	Hen 1341	17:08	-17:26	12	5s-2m	PA=34
82	COMP			↑		
83-85	M1m21	17:34	-19:09	12	10s-10m	PA=34
86	COMP			↑		
87-89	R50ph	17:50	-06:42	12	5s-2m	
90	COMP			↑		
91-94	X40ph	17:43	-06:16	12	1s-20s	
95	COMP			↑		
97-100	GMS 97	18:19	-25:21	99	4m	1.5" slit! PA=25
96, 101	COMP			↑		
102-104	H101927a1			80	5s	3" slit PA=90
105	COMP			↑		
106-107	G95 OBZ*9	20:31	+11:01	56	30s	
108	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>			Page: <u>7602</u>
Observer: <u>PB</u>		Grating: <u>300R</u>		Date: <u>10/2/99</u>		
PI: <u>Scott</u>						
Number	Object	R. A.	Dec.	L/R	Exp	Comments
109-	Wolke 1346	20:22	+24:53	SG	3m	
110	COMP			↑		
111-113	S149	18:18	+27:26	12	5, 5, 2, 2m	
114	COMP			↑		
115-116	RJ 105	18:35	+01:46	12	2m, 2m	PA=30
117	COMP			↑		
118-119	Doser	18:44	05:02	12	1m, 12m	
120	COMP			↑		
121-123	CM 41	19:03	-03:03	12	10s, 7m, 50s	
124	COMP			↑		
125-126	S164	19:28	-06:03	12	10s, 12	
127	COMP			↑		
128-129	V1413A1	19:03	+16:26	12	6m	PA=60
130	COMP			↑		
131	MRK 509	20:44	-10:43	6	4m	PA=20
132	COMP			↑		
133	AKN 564	22:42	+29:43	6	5m	PA=90
134	COMP			↑		
135	MRK 355	00:06	+22:12	6	4m	
136	COMP			↑		
137	SG 6063.191	00:15	+27:29	59	10m	
138	COMP			↑		
139	195	00:16	+27:26	59	5m	
140	COMP			↑		
141	197	00:16	+27:16	59	4m	Star to W
142	COMP			↑		
143	198	00:16	+27:31	59	2m	
144	COMP			↑		
145	200	00:17	+27:35	59	5m	em
146	COMP			↑		

60 inch Telescope Log
 Observer: PB
 PI: Andi
 Spectrograph: FAST
 Grating: 3000
 Date: 10/2/99
 Page: 7603

Number	Object	R. A.	Dec.	L/R	Exp	Comments
147	Star 063.201	00:17	+23:18	59	4m	PA=90
148	COMP			↑		
149	202	00:17	+23:15	59	5m	
150	COMP			↑		
151	204	00:18	+23:08	↑	4m	
152	COMP			59		
153	205	00:18	+23:09	59	4m	
154	COMP			↑		
155	203	00:18	+23:01	59	5m	
156	COMP			↑		
157	206	00:19	+23:28	59	4m	
158	COMP			↓		
159	208	00:19	+23:40	59	2m	
160	COMP			↑		
161	214	00:20	+23:40	59	2m	
162	COMP			↑		
163	207	00:19	+23:45	59	5m	
164	COMP			↓		
165	Fagello	23:17	-05:20	56	3m	PA=6
166	COMP			↑		
167	N7469	23:03	+08:52	6	25m	PA=6
168	COMP			↑		
169	g119-158	01:00	-02:07	64	4m	PA=90
170	COMP			↓		
171	157	01:01	-03:04	64	6m	bin by 2 close pair
172	COMP			↑		
173	159	00:59	+23:29	64	4m	
174	COMP			↓		
175	160	01:02	-02:43	64	5m	
176	COMP			↑		

60 inch Telescope Log

Observer: PB
 PI: Ken

Spectrograph: FAST
 Grating: 3000
 Date: 10/2/99

Page: 7604

Number	Object	R.A.	Dec.	L/R	Exp	Comments
177	a119-163	00:56	+02:41	64	5m	
178	COMP			↑		
179	164	01:06	-02:20	64	4m	
180	COMP			↑		
181	165	01:06	+01:35	64	5m	
182	COMP			↑		
183	SN 1964	01:13	+01:23	2	22m	3 rd SN here in 4 years!
185	COMP			↑		PA=26
186	168	00:49	+01:20	64	4m	PA=90
187	COMP			↑		
188	171	00:53	-03:03	64	6m	to to W
189	COMP			↑		
190	173	01:03	-01:47	64	4m	
191	COMP			↑		
192	174	00:51	-03:21	64	5m	
193	COMP			↑		
194	176	01:03	-02:20	64	5m	
195	COMP			↑		
196	175	01:03	-04:31	64	10m	
197	COMP			↑		
198	177	01:05	-01:17	64	4m	
199	COMP			↑		
200	178	00:59	-01:53	64	5m	
201	COMP			↑		
202	179	00:40	-01:31	64	4m	
203	COMP			↑		
204	180	01:02	+02:25	64	5m	
205	COMP			↑		
206	181	00:40	-02:17	64	4m	
207	COMP			↑		

60 inch Telescope Log
 Observer: PB
 PI: Ken
 Spectrograph: PAST
 Grating: 3000
 Date: 10/2/99
 Page: 7685

Number	Object	R. A.	Dec.	L/R	Exp	Comments
204	g119-182	00:56	-03:46	64	4m	
209	COMP			↑		
210	183	00:49	-02:57	64	7m	
211	COMP			↑		
212	184	00:55	-03:36	64	4m	
213	COMP			↑		
214	185	00:51	-04:33	64	4m	
215	COMP			↑		
216	186	00:53	-04:17	64	4m	
217	COMP			↑		
218	189	01:05	+00:14	64	7m	
219	COMP			↑		
220	190	01:05	-04:16	64	5m	
221	COMP			↑		
222	191	00:49	+01:33	64	5m	
223	COMP			↑		
224	198	00:44	-03:06	64	12m	ok em
225	COMP			↑		
226	194	00:46	-01:44	64	6m	
227	COMP			↑		
228	193	01:07	+00:47	64	4m	
229	COMP			↑		
230	197	01:06	-04:32	64	4m	
231	COMP			↑		
232	214	01:09	-04:02	64	4m	
233	COMP			↑		
234	208	01:10	-02:54	64	4m	
235	COMP			↑		
236	SN1999dq	02:33	+02:58	2	20m	PA=51
237	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7607</u>
Observer: <u>PB</u>		Grating: <u>3000</u>		Date: <u>10/2/95</u>		
PI: <u>Sest</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
272	02248, 5705	0224	+5705	83	7m	
273	Comp			↑		
274	022157p5712	0221	+5712	83	90s	
275	Comp			↑		
276	022140p570	0221	+5701	83	3m	
277	Comp			↑		
278	022140p5712	0221	+5712	83	2m	
279	Comp			↑		
280	022144p5712	0221	+5712	83	2m	
281	Comp			↑		
282-284	HD12623	02:02	+62	59	5s	
285	Comp			↑		
286-288	BIAS				0s	
289-290	FLAT				7s	
291-292	BIAS				0s	
293-294	FLAT				15s	
295-296	DARK				20m	
						clear @ dawn

60 inch Telescope Log

Observer: PB

PI: Scott

Spectrograph: FAST

Grating: 300R

Page: 7606

Date: 10/2/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
238-240	532	04:37	-01:19	12	10s, 12m	
241	COMP			↑		
242	022226p57114	02:21	+57:11	83	10m	* to E
243	COMP			↑		
244	022227p5707	02:21	+57:07	83	6m	
245	COMP			↑		
246	022228p5708	02:21	+57:08	83	3m	
247	COMP			↑		
248	022228p5710	02:21	+57:10	83	4m	
249	COMP			↑		
250	022229p5711	02:21	+57:11	83	5m	
251	COMP			↑		
252	022230p5710	02:21	+57:10	83	4m	
253	COMP			↑		
254	022231p5705	02:21	+57:05	83	4m	
255	COMP			↑		
256	022231p5712	02:21	+57:12	83	2m	
257	COMP			↑		
258	022233p5703	02:21	+57:03	83	3m	
259	COMP			↑		
260	022233p5710	02:21	+57:13	83	2m	
261	COMP			↑		
262	022236p5703	02:21	+57:03	83	2m	
263	COMP			↑		
264.5	SN 1950 2207	06:16	-21	2	4m	NON-SN
266	COMP			↑		
267	H2M	04:44	-10:59	56	5m	PA=20
268	COMP			↑		
269D	G91D20	05	+50	56	2m	PA=12
271	COMP			↑		

60 inch Telescope Log

Observer: PBerlind
 PI: Scott

Spectrograph: FAST
 Grating: 300R
 Date: 10/3/99

Page: 7608

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	DARK				15m	
11-20	FLAT				15s	1.5" slit
21-30	BIDS				0s	
31-40	FLAT				7s	3" slit ↓
41-50	BIDS				0s	
51-60	FLAT				14s	clear skies!
61-65	sky	Zenith		57	2s	
66	comp			↑		
67-68	HD 172171	18:36	04:50	57	2s	
69	comp			↑		
70-72	HD 169582	18:25	-09:45	57	4s	
73	comp			↑		
74-76	HD 172275	18:39	-07:21	57	4s	
77	comp			↑		
78-80	HD 165679	18:06	-22:13	57	4s	
81	comp			↑		
82-84	HD 169010	18:23	-13:43	57	15s	
85	comp			↑		
86-88	RT Ser	17:39	-11:56	12	1m, 11m	PA=32
89	comp			↑		
90-91	UUSr	17:42	-15:29	12	1m, 11m	PA=32
92	comp			↑		
93-94	AS 2250	18:05	-20:20	12	15s, 7m	PA=32
95	comp			↑		
96	comp			↓		1.5" slit
97-99	GMSgr	18:19	-25:24	49	4m	PA=32
100	comp			↑		
101-102	Hen 1591	18:07	-25:53	49	1m, 11m	3" slit
103	comp			↑		PA=32

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7609</u>
Observer: <u>PB</u>				Grating: <u>300R</u>		
PI: <u>Scott & Ardi</u>				Date: <u>10/3/99</u>		
Number	Object	R. A.	Dec.	L/R	Exp	Comments
104-107	AS289	18:12	-1140	12	10, 3m	PA=32-1
108	WMP			↑		
109-110	V2601 Sgr	18:38	-22	12	1m, 12m	
111	WMP			↑		
112-114	AS316	18:42	-2111	12	1m, 12m	
115	WMP			↑		
116-118	MWC900	18:47	-2005	12	10, 6m	
119	WMP			↑		
120-122	HD192281	20:10	+4057	56	55	PA=90
123	WMP			↑		
124	SNrgc 7741	23:43	+2604	2	10m	NO
125	WMP			↑		
126	Sgr b 063209	00:19	+2233	59	4m	
127	WMP			↑		
128	.212	00:19	+2228	59	9m	
129	WMP			↑		
130	.210	00:21	+2222	59	5m	
131	WMP			↑		
132	.211	00:21	+2219	59	5m	
133	WMP			↑		
134	243	00:21	+2245	59	5m	
135	WMP			↑		
136	244	00:22	+2215	59	4m	
137	WMP			↑		
138	242	00:21	+2248	59	4m	Sup*? etc
139	WMP			↑		
140	.245	00:21	+2222	59	4m	
141	WMP			↑		
142	246	00:21	+2220	59	10m	
143	WMP			↑		

142 hi background on Western side

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>2610</u>
Observer: <u>PB</u>		Grating: <u>3002</u>		Date: <u>10/3/99</u>		
PI: <u>Andi</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
144	5196 063.247	00:21	+23:05	S9	4m	
145	COMP			↑		
146	248	00:21	+23:05	S9	4m	
147	COMP			↑		
148	249	00:21	+21:59	S9	4m	
149	COMP			↑		
150	250	00:21	+22:26	S9	90s	
151	COMP			↑		
152	251	00:21	+22:30	S9	2m	
153	COMP			↑		
154	252	00:21	+22:33	S9	90s	
155	COMP			↑		
156	253	00:21	+22:30	S9	5m	
157	COMP			↑		
158	255	00:21	+21:36	S9	6m	
159	COMP			↑		
160	256	00:21	+22:35	S9	3m	
161	COMP			↑		
162	257	00:21	+22:48	S9	4m	
163	COMP			↑		
164	Feryello	23:17	05:26	S6	2m	PA=8
165	COMP			↑		
166	264	00:21	+22:23	S9	3m	
167	COMP			↑		
168	266	00:21	+22:00	S9	2m	↓ to W
169	COMP			↑		
170	267	00:21	+22:16	S9	3m	
171	COMP			↑		
172	269	00:22	+22:24	S9	2m	
173	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Ken

Spectrograph: FAST

Grating: 300R

Date: 10/3/99

Page: 7611

Number	Object	R. A.	Dec.	L/R	Exp	Comments
174	g119-215	00:55	+10:36	69	5m	
175	COMP			↑		
176	213	00:20	-03:01	69	10m	em
177	COMP			↑		
178	211	01:01	-03:09	69	5m	
179	COMP			↑		
180	212	01:06	-03:26	69	5m	
181	COMP			↑		
182	205	00:47	-03:31	69	5m	
183	COMP			↑		
184	206	00:52	+01:47	69	6m	
185	COMP			↑		
186	207	00:57	-02:28	69	4m	
187	COMP			↑		
188	201	01:01	-03:29	69	5m	
189	COMP			↑		
190	202	00:45	-03:12	69	5m	
191	COMP			↑		
192	203	00:48	+01:22	69	4m	
193	COMP			↑		
194	199	01:06	+01:21	69	4m	
195	COMP			↑		
196	195	01:00	-01:53	69	4m	
197	COMP			↑		
198	196	00:47	-02:47	69	10m	
199	COMP			↑		
200	192	01:02	-04:29	69	6m	
201	COMP			↑		
202	87	00:49	-02:09	69	4m	
203	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Ken

Spectrograph: FAST

Grating: 300R

Date: 10/3/99

Page: 76/12

Number	Object	R.A.	Dec.	L/R	Exp	Comments
204	9119-88	01:03	-04:36	69	4m	
205	COMP			↑		
206	89	01:02	-02:52	64	4m	
207	COMP			↑		
208	90	01:05	-03:20	69	4m	
209	COMP			↑		
210	93	00:47	-03:35	69	4m	* to E
211	COMP			↑		
212	98	00:46	-01:09	69		
213	COMP			↑		
214	SNrg=64	01:43	+04:13	2	15m	PA=19
215	COMP			↑		
218	131	01:08	-03:39	64	10m	PA=90
219	COMP			↑		
220	150	00:59	-01:34	64	8m	
221	COMP			↑		
222	99	0 052	-01:50	64	5m	
223	COMP			↑		
224	106	00:50	-01:19	64	7m	
225	COMP			↑		
226	124	00:51	+01:01	69	6m	car
227	COMP			↑		
228	260	00:55	-03:20	64	7m	* to W
229	COMP			↑		
230	216	00:54	+02:25	64	5m	
231	COMP			↑		
232	M32	00:40	+79	57	30s	
233	COMP			↑		
235	225A280	00:41	+41:21	57	4m	
236	COMP			↑		

60 inch Telescope Log
 Observer: PB
 FI: Huchra
 Spectrograph: FAST
 Grating: 302
 Date: 10/3/99
 Page: 7613

Number	Object	R.A.	Dec.	L/R	Exp	Comments
237	ZM0216124	02:16	+19:35	68	6m	
238	COMP			f		
239	ZM0214585	02:49	+14:47	68	2m	
240	COMP			f		
241	ZM0214	02:34	+18:20	68	3m	
242	COMP			f		
243	ZM021656	02:26	+26:00	68	2m	
244	COMP			f		
245	ZM0215927.2	02:59	+31:23	68	3m	
246	COMP			f		
247	ZM0215112	02:57	+17:51	68	3m	
248	COMP			f		
249	ZM0215566	02:25	+21:09	68	3m	
250	COMP			f		
251	ZM0216412	02:26	+25:50	68	2m	
252	COMP			f		
253	ZM0210159	02:22	+23:27	68	3m	
254	COMP			f		
255	ZM0216565	02:26	+26:41	68	2m	
256	COMP			f		
257	ZM0213644.2	02:36	+35:19	68	2m	
258	COMP			f		
259	ZM0214224.3	02:47	+18:05	68	2m	
260	COMP			f		
261	ZM021839	02:53	+23:58	68	5m	brt star to W
262	COMP			f		sup*
263264167	SN1997209	06:16	-21:22	2	20m	PA=-17
265268	COMP			f		
2689	Hiltner600	06:42	+02:11	50	45s	PA=-27
270				f		

60 inch Telescope Log

Observer: PB

Spectrograph: FAST

Grating: 3002

Page: 7614

PI: All

Date: 10/7/99

Number	Object	R.A	Dec.	L/R	Exp	Comments
271	NGC 1110	04:46	-04:52	S7	3m	PA=90
272	COMP			f		
273-275	HID 52971	06:57	+01:13	S7	55	
276	COMP			f		
277-286	BEAS				0s	
287-288	FLAT				7s	
289-296	BEAS				0s	
307-316	FLAT				145	
317-326	DRINK				22m	
						clear @ dawn!

60 inch Telescope Log

Observer: CALKINS

PI: Kuchanek et al, Garcia

Spectrograph: FAST

Grating: 600

Page: 7615

Date: 10/7/99

Number	Object	R. A.	Dec	L/R	Exp	Comments
1-4	DARK				15m	600 lpm, 2" slit,
5-14	BIAS				0s	tilt = 742, $\gamma_0 = 6563$
15-24	FLAT				25s	high winds @ sunset
25-29	GM Sqr	18 19	-25 24	X-Ray	4m	lousy seeing
30	comp			↑		
31, 32	MF3018	22 28	16 55	#88F	7.5m	PA = 51°
33	comp			↑		
34	comp			↓		
35-37	MF2996	22 12	14 00	#88F	15m	PA = 49°
38	comp			↑		
39	comp			↓		
40-41	MF2038	00 15	16 05	#88F	15m	PA = 96°
42	comp			↑		
43	comp			↓		
44-46	MF2107	00 43	23 20	#88	15m	PA = 100°
47	comp			↑		
48	comp			↓		
49-50	MF2104	00 42	23 29	#88	15m	PA = 52°
51	comp			↑		
52	comp			↓		
53-54	MF2015	00 06	26 08	#88	15m	PA = 7°
55	comp			↑		
56	comp			↓		
57-58	MF2259	1 44	37 23	#88	15m	PA = -3°
59	comp			↑		seeing getting even
60	comp			↓		worse!!
61-63	MF2629	01 09	14 21	#88	15m	PA = -25°
64	comp			↑		
65	comp			↓		
66, 67	MF2071	00 25	31 24	#88	15m	PA = -1°

60 inch Telescope Log

Observer: CALVIN

PI: Boehman et al

Spectrograph: FAST

Grating: 600

Page: 76/6

Date: 10/7/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
68	comp			↑		
69	comp			↓		
70-71	MF2498	2 44	16 44	± 88	15m	PA = -33
72	comp			↑		
73	comp			↓		
74-75	MF2278	1 51	19 05	± 88	15m	PA = 84°
76	comp			↑		
77	comp			↓		
78, 79	MF2284	2 18	38 00	± 88	15m	PA = -37°
80	comp			↑		
81	comp			↓		
82, 83	MF2597	3 59	21 47	± 88	15m	PA = 7°
84	comp			↑		
85	comp			↓		
86-87	MF2807	08 00	26 38	± 88	15m	PA = -40°
88	comp			↑		
89	comp			↓		
90-91	MF2751	7 41	34 16	± 88	15m	PA = -27°
92	comp			↑		bright star west
93	Hiltner 600	6 45	2 08	± 56	1m	PA = -45°
94	comp			↑		
95	G19182B	5 05	52 50	± 56	2.5m	PA = +26°
96	comp			↑		
97-101	sky			± 57	2.5	
102	comp			↑		
103-112	BIAS				0.5	
113-122	FLAT				35s	
123-132	DARK				15m	

60 inch Telescope Log

Spectrograph: FAST

Observer: CALKINS

Grating: 600L

Page: 7017

PI: Kochanek et al

Date: 10/8/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-5	DARK				15m	600 lpm, 2" slit
6-15	BIAS				0s	filter = 494 $\lambda_c = 4900 \text{ \AA}$
16-25	FLAT				35s	
26	BDP284211	21 51	28 52	$\pi 56$	40s	PA = 105°
27	comp			\uparrow		
28	HD156224	16 50	32 32	$\pi 56$	N/A	Guide rate = $3''/s$
29	comp			\uparrow		
30, 31	NGC 7331	22 37	34 24	$\pi 56$	3m	PA = -9°
32	comp			\uparrow		
33, 34	MF3258	23 52	21 28	$\pi 88$	7.5m	PA = -5°
35	comp			\uparrow		seeing going south
36	comp			\downarrow		
37-39	MF3145	23 13	16 47	$\pi 88$	20m	PA = -60°
40	comp			\uparrow		
41	comp			\downarrow		
42-44	MF2091	00 38	29 52	$\pi 88$	15m	PA = -25°
45	comp			\uparrow		
46	comp			\downarrow		
47-49	MF2024	00 12	22 21	$\pi 88$	10m	PA = 107°
50	comp			\uparrow		
51	HD198809	20 52	27 05	$\pi 88$	N/A	guide rate = $3''/s$
52	comp			\uparrow		
53	HD198809	20 52	27 05	$\pi 88$	N/A	(redo of above)
54	comp			\uparrow		(seeing requires greater lateral separation)
55, 56	M32	00 42	40 50	$\pi 88$	3m	PA = -10°
57	comp			\uparrow		
58	comp			\downarrow		
59-61	MF2107	00 43	23 29	$\pi 88$	10m	PA = 101°
62	comp			\uparrow		
63, 64	MF2498	02 44	16 42	$\pi 88$	7.5m	PA = -33°

1-8°

60 inch Telescope Log

Spectrograph: FAST

Observer: CAUSINS

Grating: 600L

Page: 2618

PI: Kochanek et al

Date: 10/8/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
65	comp			↑		
66a	comp			↓		
67-69	MF2015	00 06	26 10	#88	15m	PA=9
70	comp			↑		
71	Feige 24	02 35	03 42	#56	2m	PA = -38
72	comp			↑		
73	HD 5516	00 57	23 25	#88	N/A	Guide rate = 3"/s
74	comp			↑		
75,76	NGC 1023	02 40	39 03	#88	2m	PA = 85°
77	comp			↑		
78	comp			↓		
79-81	MF2104	00 42	23 29	#88	15m	PA = 51°
82	comp			↑		
83	comp			↓		
84-86	MF2040	00 16	28 58	#88	15m	PA = 64.0°
87	comp			↑		
88	HD 3546	00 38	29 19	#88	N/A	Guide rate = 3"/s
89	comp			↑		
90	comp			↓		
91-93	MF2297	01 55	21 18	#88	10m	PA = 92°
94	comp			↑		
95-96	NGC 1700	4 56	-4 51	#88	3m	PA = 90°
97	comp			↑		
98	Hiltner 620	6 45	2 08	#56	2m	PA = 90°
99	comp			↑		
100	comp			↓		
101-103	MF2307	8 00	26 36	#88	10m	PA = -40° (not 90°)
104	comp			↑		
105,106	MF2597	3 59	21 47	#88	7.5m	
107	comp			↑		

60 inch Telescope Log

Observer: CALKINS

PI: Kochanek et al

Spectrograph: FAST

Grating: 600L

Page: 7619

Date: 10/8/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
108	comp			↓		
109-111	MF2842	8 09	19 29	π 88	10m	PA = -47°
112	comp			↑		
113-114	MF2384	2 18	38 04	π 88	7.5m	PA = -36°
115	comp			↑		
116	G191B2B	05 05	52 49	π 86	2.5m	PA = 91°
117	comp			↑		
118	HD34559	05 19	22 06	π 88	N/A	Guide rate = 3 1/2
119	comp			↑		
120-124	sky			π 57	2s	
125	comp			↑		
126-135	BIAS				0s	
136-145	FLAT				35s	
146-155	DARK				15m	

60 inch Telescope Log

Spectrograph: FAST

Observer: CALICINS

Grating: 600L

Page: 7620

PI: Kochanek et al

Date: 10/9/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-5	DARK				15m	
6-15	BEAS				0s	
16-25	FLAT				5s	
26	HD175743	18 56	18 06	"88	N/A	Guide rate = 3 1/6
27	comp			↑		
28	HD192281	20 12	40 15	"88	5s	PA = 45°
29	comp			↑		
30-31	NGC 7351	22 37	34 24	"88	3m	PA = -10°
32	comp			↑		
33	comp			↓		
34-36	MF3162	23 18	18 45	"88	15m	PA = 93°
37	comp			↑		seeing ~ 2"
38,39	MF2996	22 12	14 01	"88	7.5m	PA = 49°
40	comp			↑		
41,42	MF3058	22 48	27 37	"88	7.5m	PA = -7° PA
43	comp			↑		
44	comp			↓		
45-47	MF3110	23 04	20 04	"88	10m	PA = 0°
48	comp			↑		
49,50	MF2012	00 04	31 31	"88	7.5m	PA = -65°
51	comp			↑		
52	comp			↓		
53-55	MF3164	23 18	18 44	"88	10m	PA = -47°
56	comp			↑		
57,58	MF2038	00 15	46 06	"88	7.5m	PA = 95°
59	comp			↑		
60	HD202109	01 12	30 13	"88	N/A	guide rate = 3 1/6
61	comp			↑		
62,63	MB2	00 40	40 36	"88	3m	PA = -10
64	comp			↑		

60 inch Telescope Log

Spectrograph: FAST

Observer: CALKINS

Grating: 600L

Page: 7621

PI: Richard et al

Date: 10/9/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
65	comp			↓		
66-68	MF3062	22 50	12 01	#88	10m	PA = 35° bright star to west
69	comp			↑		(col 30-35°)
70, 71	MF2350	22 09	25 31	#88	7.5m	PA = 75°
72	comp			↑		
73	comp			↓		
74-76	MF2441	2 29	28 58	#88	15m	PA = 83°
77	comp			↑		
78	HD216131	22 50	24 35	#88	N/A	Guide rate = 3 1/3
79	comp			↑		
80, 81	NGC 0636	1 39	-7 31	#88	3m	PA = 0°
82	comp			↑		
83	PG 0310p149	03 13	15 08	#56	10m	PA = -51°
84	comp			↑		seeing much worse
85	comp			↓		weak exposure
86-88	MF3250	23 48	27 22	#88	10m	PA = 100°
89	comp			↑		
90	comp			↓		
91-93	MF2031	00 14	28 33	#88	10m	PA = -59°
94	comp			↑		
95	comp			↓		
96-98	MF2288	01 54	36 24	#88	10m	PA = -59°
99	comp			↑		
100	comp			↓		
101-103	MF2430	2 28	32 23	#88	15m	PA = -70°
104	comp			↑		
105	comp			↓		
106-108	MF2399	2 22	25 58	#88	20m	PA = -80°, Bright foreground star, row
109	comp			↑		
110-111	MF2751	7 41	34 16	#56	7.5m	89

60 inch Telescope Log
 Observer: CAULKINS
 PI: Kochanski et al
 Spectrograph: FAST
 Grating: 600L
 Date: 10/9/99
 Page: 2622

Number	Object	R.A.	Dec.	L/R	Exp	Comments
112	comp			↑		
113, 114	NGC 1023	2 40	39 05	#88	3m	PA = 88°
117	comp			↑		
119	HD 27348	4 20	34 34	#88	N/A	Guide rate = 3"/s
119	comp			↑		
120	HD 48433	6 43	13 13	#48	N/A	Guide rate = 3"/s
121	comp			↑		
122-126	sky			#57	2s	
127	comp			↑		
128-137	RIAS				0s	
138-147	FLAT				35s	
148-157	DARK				15m	

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>7623</u>	
Observer: <u>P Berlin</u>			Grating: <u>3002</u>		Date: <u>10/10/99</u>	
PI: <u>Huck and Kenyon</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-8	DARK				15m	
9-11	test				5s	
12-21	BIAS				0s	clear skies!!
22-31	FLAT				7s	
32-41	BIAS				0s	
42-51	FLAT				14s	
52-56	sky	zenith		59	2s	
57	COMP			↑	5s	
58-61	HD192281	20:10	+46	56	5s	
62				↑		
63	ZM1831262	18:31	+7825	68	3m	
64	COMP			↑		
65	ZM1831220	18:31	+7122	68	3m	
66	COMP			↑		
67	ZM1831918	18:31	+7403	68	3m	etc.
68	COMP			↑		
69	ZM1831568	18:31	+3144	68	3m	
70	COMP			↑		
71	ZM1834272	18:34	+7827	68	3m	+ to W
72	COMP			↑		
73	COMP			↓		1.5" slit ↓
74-75	GMSgr	18:19	-7524	99	4m	PA=25 L
76	COMP			↑		
77-79	ASS29	18:53	-2422	12	30s, 12s	3" slit ↓
80	COMP			↑		
81	Draco1	17:19	+5750	12	15s	PA=90 L
82	COMP			↑		

110 BIN BY 2 DARKS
 FLATS FOR 1.5" should have been done
 before changing to 1200 l/mm grating

REDUCED DATA FROM THIS NIGHT IN 3 SECTIONS
 SET 1 - through file 161
 SET 2 - file 169 on
 SET 3 - 1.5" slit data

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>7624</u>	
Observer: <u>PB</u>			Grating: <u>3000</u>			
PI: <u>JPH/Andi</u>			Date: <u>10/10/99</u>			
Number	Object	R. A.	Dec.	L/R	Exp	Comments
83	3C390.3	18:32	+7946	6	11m	
84	COMP			↑		
85	ZM183226.4	18:32	+71025	68	4m	
86	COMP			↑		
87	ZM183314.7	18:33	+71017	68	4m	
88	COMP			↑		
89	ZM183311.7	18:34	+71010	68	3m	
90	COMP			↑		
91	ZM183430.0	18:34	+7043	68	2m	
92	COMP			↑		
93	ZM183620.1	18:36	+7025	68	2m	
94	COMP			↑		
95	ZM183832.6	18:38	+7259	68	2m	
96	COMP			↑		
97	ZM184438.1	18:44	+7343	68	2m	
98	COMP			↑		
99	ZM184735.5	18:44	+72958	68	4m	
100	COMP			↑		
101	MRK509	22:44	-10:43	6	4m	PA=12
102	COMP			↑		
103	Akn564	22:42	+29:43	6	5m	PA=100
104	COMP			↑		
105	59g6063.258	00:21	+71:54	59	4m	PA=90
106	COMP			↑		
107	259 EW	00:21	+72:28	59	10m	bin by 2 EW camps
108	COMP			↑		
109	260	00:21	+72:47	59	4m	
110	COMP			↑		
111	261	00:21	+72:20	59	7m	
112	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>7625</u>	
Observer: <u>PB</u>			Grating: <u>300R</u>			
PI: <u>Andi</u>			Date: <u>10/19/99</u>			
Number	Object	R. A.	Dec.	L/R	Exp	Comments
113	Stryls 263.262	00:21	+22:01	S9	10m	LSB
114	COMP			↑		
115	263	00:21	+22:18	S9	5m	
116	COMP			↑		
117	265	00:21	+22:54	S9	4m	
118	COMP			↑		
119	268	00:22	+22:25	S9	4m	
120	COMP			↑		
121	270	00:22	+23:44	S9	4m	
122	COMP			↑		
123	271	00:22	+22:29	S9	3m	N gal
124	COMP			↑		
125	272	00:22	+22:28	S9	3m	S gal
126	COMP			↑		
127	273	00:22	+22:14	S9	4m	
128	COMP			↑		
129	274	00:22	+22:32	S9	2m	
130	COMP			↑		
131	276	00:23	+21:23	S9	7m	
132	COMP			↑		
133	277	00:23	+21:11	S9	6m	
134	COMP			↑		
135	MRK 335	00:06	+20:12	6	4m	PA=90
136	COMP			↑		
137	275EW	00:22	+23:43	S9	8m	E+W comps PA=490
138	COMP			↑		
139-40	Fox 110	23:17	-05:26	S9	2m	PA=6
141	COMP			↑		
142	N7469	23:03	+08:52	6	2m	PA=18
143	COMP			↑		

60 inch Telescope Log

Observer: PB
 PI: Ken & Sheila

Spectrograph: FAST
 Grating: 300 + 1200
 Date: 10/10/99

Page: 7626

Number	Object	R. A.	Dec.	L/R	Exp	Comments
144	a119_217	00:47	-01:48	64	6m	
145	COMP			↑		
146	218	00:55	-01:44	64	9m	
147	COMP			↑		
148	219	01:05	+01:30	64	4m	
149	COMP			↑		
150	221	00:57	-01:18	64	5m	
151	COMP			↑		
152	222	01:00	-02:44	64	7m	
153	COMP			↑		
154	223	00:48	+01:24	64	6m	extra gal to E
155	COMP			↑		
156	226	00:53	-04:17	64	6m	
157	COMP			↑		
158	227	00:54	-03:17	64	4m	
159	COMP			↑		
160	229	00:57	+01:51	64	6m	
161	COMP			↑		
						bin by 4a ↓
162-164	HDX 2029	01:58	+24:22	62	2s	1200Å g; 3" slit; tilt=38°
165	COMP			↑	5s	$T_e = 6500\text{Å}$ focus=1160
166	COMP			↓	5s	PA=30
167-175	AO13 Mp1531B	01:51	+15:39	62	20m	wk em.
176	COMP			↑	5s	
177-186	FLAT			62	20s	
187-188	BIAS			0s	0s	
						bin by 2 ↓
189,191	SN1999eb	01:43	+04:13	Z	20m	3000Å; 3" slit; tilt=610
190,192	COMP			↑		focus=1110 "normal" PA=39

60 inch Telescope Log

Observer: PS

PI: Calvet

Spectrograph: FAST

Grating: 300R

Date: 10/10/99

Page: 7627

Number	Object	R.A.	Dec	L/R	Exp	Comments
193	SN1999 dg	02:33	+20:58	2	20m	
194	COMP			↑		
195	quasol 37958	05:22	-01:28	112	7m	
196	COMP			↑		
197	25616	05:15	-02:06	112	6m	PA = -15 ↓
198	COMP			↑		
199	31414	05:19	-02:01	112	10m	PMS!
200	COMP			↑		
201	35068	05:19	-02:59	112	4m	
202	COMP			↑		
203	35886	05:20	-02:45	112	5m	PA = -8 ↓ Li
204	COMP			↑		
205	31210	05:20	-02:05	112	4m	PA = -5 ↓
206	COMP			↑		
207	45795	05:22	-01:45	112	8m	
208	COMP			↑		
209	33655	05:21	-01:16	112	4m	PA = 0 ↓
210	COMP			↑		
211	46898	05:23	-01:33	112	11m	
212	COMP			↑		
213	33139	05:23	-02:09	112	9m	PMS
214	COMP			↑		
215	NGC 1760	04:54	-04:51	57	2m	
216	COMP			↑		
217	Hiltner 60	06:42	-02	56	45c	PA = -14
218	COMP			↑		
219	B Fori	05:37	-06:35	51	30m	PA = 20
220	COMP			↑		
221	V 3800ri	05:36	-06:42	87	10, 20, 1m	nrc neb
222	COMP			↓		

60 inch Telescope Log

Observer: PB
 PI: Calvet

Spectrograph: FAST
 Grating: 300
 Date: 10/10/99

Page: 7678

Number	Object	R.A.	Dec.	L/R	Exp	Comments
228-229	PQ Ori	0553	-02-12	89	6m	jd ok
230	COMP			↑		
231-233	HD 27971	0459	+24-22	57	3s	PA=90°
234	COMP			↑		
235-237	HD 34959	0521	+11-48	57	2s	
238	COMP			↑		
239-241	HD 31647	0459	+37-53	57	2s	
242	COMP			↑		
243-45	HD 29808	0424	+21-44	57	2s	
246	COMP			↑		
247-249	HD 27983	0419	+16-31	57	2s	
250	COMP			↑		
251-253	HD 26015	0409	+15-09	57	2s	clear & down!
254	COMP			↑		
255-264	BIBS				0s	
265-274	FLAT				7s	
275-284	BIBS				0s	
285-294	FLAT				14s	
295-304	FLAT			99	10s	1.5" slit
305-314	BIBS			62	0s	bin by 4a
315-324	PARK			62	20m	bin by 4a

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>7629</u>	
Observer: <u>P. Berlin</u>			Grating: <u>300L</u>			
PI: <u>Huchra & Falco</u>			Date: <u>10/18/99</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
10	DARK				15s	
11-20	BIAS				0s	
21-30	FLAT				7s	clear skies!
31-40	BIAS				0s	a little hazy though
41-50	FLAT				14s	
51-55	sky	zenith		67	2s	
56	COMP			↑		
57	ZM185715.9	18:57	+37:59	68	2m	
58	COMP			↑		
59	ZM185718.5	18:57	+38:00	68	2m	
60	COMP			↑		
61	ZM185702.4	18:57	+38:47	68	2m	
62	COMP			↑		
63	ZM185741.1	18:57	+37:55	68	2m	
64	COMP			↑		windy
65	ZM185741.8	18:57	+38:41	68	4m	
66	COMP			↑		
67	1721Sp0141	17:24	+01:39	84	10m	spiral LSB em
68	COMP			↑		
69	1715Sp7227	17:14	+72:23	84	18m	PA=45° LSB
70	COMP			↑		
71	17153p706	17:14	+71:12	84	5m	PA=45° brighter companion
72	COMP			↑		binary? gal in slit to E
73	17347p2109	17:36	+21:07	84	6m	
74	COMP			↑		
75	ZM185748.9	18:57	+37:59	68	3m	
76	COMP			↑		
77	ZM185757.3	18:57	+38:29	68	4m	
78	COMP			↑		

STARTED USING ILLUMINATION CORRECTION
ON BIN BY 4 DATA

60 inch Telescope Log

Observer: PB

PI: Hucha & Andi

Spectrograph: FAST

Grating: 300L

Page: 7630

Date: 10/16/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
79	ZM191106.5	19:11	+38:57	68	2m	
80	COMP			↑		
81	ZM191147.5	19:11	+41:48	68	3m	
82	COMP			↑		
83	ZM191057.5	19:10	+37:39	68	4m	
84	COMP			↑		
85	ZM191284	19:14	+41:52	68	4m	
86	COMP			↑		
87	ZM195250	19:15	+39:54	68	4m	
88	COMP			↑		
89	ZM191855.2	19:18	+57:52	68	4m	
90	COMP			↑		
91	ZM191935.7	19:19	+39:42	68	3m	
92	COMP			↑		
93	ZM192251	19:22	+39:26	68	4m	
94	COMP			↑		
95	ZM192257.6	19:22	+40:29	68	4m	
96	COMP			↑		
97	ZM192337.9	19:23	+39:59	68	7m	extended
98	COMP			↑		
99	ZM195653.7	19:56	+40:21	68	4m	ok. 4's m slit
100	COMP			↑		
101	ZM195654.3	19:56	+40:22	68	3m	
102	COMP			↑		
103	sr06063.218	00:23	+23:39	59	6m	em
104	COMP			↑		
105	279	00:23	+23:25	59	7m	
106	COMP			↑		
107	281	00:24	+23:08	59	5m	
108	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Andi & Ken

Spectrograph: FAST

Grating: 3002

Page: 7631

Date: 10/14/99

Number	Object	R. A.	Dec.	L/R	Exp	Comments
109	src 063.282	00:24	+21:06	59	3m	
110	COMP			↑		
111	283	00:24	+21:31	59	5m	
112	COMP			↑		
113	285	00:26	+21:46	59	7m	
114	COMP			↑		
115	286	00:26	+21:47	59	10m	
116	COMP			↑		
117	287	00:26	+21:48	59	2m	
118	COMP			↑		
119,120	Xray 1858 p22	18:58	-22:39	99	5m, 15m	just in x-ray now
121	COMP			↑		
122-123	Ferrel 10	23:17	-05:26	56	2m	PA=1
124	COMP			↑		
125	163m 219	00:40	+41:11	57	5m	
126	COMP			↑		
127	M32	00:40	+40:35	59	30s	
128	COMP			↑		
129	a119-232	00:42	-02:15	64	10m	
130	COMP			↑		
131	270	01:02	-01:51	64	7m	faint comp to E
132	COMP			↑		
133	231	00:52	-01:52	64	7m	
134	COMP			↑		
135	229	00:53	-10:53	64	4m	
136	COMP			↑		
137	225	01:03	-02:13	64	12m	near spiral
138	COMP			↑		
139	233	00:45	-03:01	64	7m	
140	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Ken

Spectrograph: FAST

Grating: 300R

Date: 10/11/99

Page: 7672

Number	Object	R. A.	Dec.	L/R	Exp	Comments
141	a119-238	00:46	-04:11	64	5m	
142	COMP			↑		
143	240	00:54	-03:43	64	5m	
144	COMP			↑		
145	244	00:55	-05:10	64	7m	
146	COMP			↑		
147	235	01:00	-04:33	64	8m	em
148	COMP			↑		
149	234	01:00	-04:48	64	6m	
150	COMP			↑		
151	236	01:05	-10:53	64	12m	
152	COMP			↑		
153	237	00:59	-02:47	64	10m	
154	COMP			↑		
155	241	00:48	-10:34	64	4m	
156	COMP			↑		
157	239	01:03	-03:59	64	4m	
158	COMP			↑		
159	243	01:11	-02:09	64	4m	
160	COMP			↑		
161	242	01:07	-10:40	64	4m	
162	COMP			↑		
163	247	01:06	-10:15	64	4m	
164	COMP			↑		
165	244	00:59	-10:32	64	5m	
166	COMP			↑		
167	245	00:46	-10:00	64	5m	good me
168	COMP			↑		
169	246	00:50	-04:17	64	5m	
170	COMP			↑		

60 Inch Telescope Log

Observer: PB
 PI: Ken & Huchra & Falco

Spectrograph: FAST
 Grating: 300R
 Date: 10/11/99

Page: 7633

Number	Object	R.A.	Dec.	L/R	Exp	Comments
171	a119_248	00:53	-03:33	64	5m	
172	COMP			↑		
173	250	00:47	-04:25	64	10m	
174	COMP			↑		
175	251	00:59	-02:59	64	5m	
176	COMP			↑		
177	252	01:01	-03:06	64	6m	
178	COMP			↑		
179	253	01:04	-04:18	64	7m	nice.
180	COMP			↑		
181	254	01:04	-04:15	64	4m	
182	COMP			↑		
183	255	00:57	+10:25	64	5m	
184	COMP			↑		
185	256	00:58	-01:49	64	5m	
186	COMP			↑		
187	01067p3527	01:09	+03:43	84	2m	nice bright gal ^{blue shifted}
188	COMP			↑		Pete And
189	032407p1745	03:24:07	+17:45:11.5	84	10m	USB em
190	COMP			↑		
191	ZM022118.5	02:21	+01:44	68	3m	
192	COMP			↑		
193	ZM022155.9	02:21	+15:34	68	5m	
194	COMP			↑		
195	ZM022358.4	02:23	+14:20	68	4m	
196	COMP			↑		
197	ZM022709	02:27	+21:59	68	3m	
198	COMP			↑		
199	ZM022920.3	02:29	+19:14	68	6m	
200	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Calvet

Spectrograph: FAST

Grating: 3002

Date: 10/11/99

Page: 7634

Number	Object	R.A.	Dec.	L/R	Exp	Comments
201	quasar 50597	05:27	-01:07	112	7m	PA = -30 ↓
202	COMP			↑		
203	quasar 642315	05:27	-02:45	112	8m	PMS
204	COMP			↑		
205	quasar 1544661	05:30	-00:52	112	5m	
206	COMP			↑		
207	quasar 13437	05:37	-01:55	112	10m	
208	COMP			↑		
209	quasar 1542416	05:33	-00:21	112	5m	
210	COMP			↑		
211	quasar 1538773	05:32	-02:00	112	4m	PA = -15 ↓
212	COMP			↑		
213	quasar 1546882	05:32	-00:34	112	8m	ok!
214	COMP			↑		
215	47440	05:33	-00:42	112	10m	
216	COMP			↑		
217	48418	05:34	-00:47	112	5m	
218	COMP			↑		
219	48515	05:34	-00:31	112	6m	
220	COMP			↑		
221	48831	05:34	-00:44	112	12m	PA = 0 ↓
222	COMP			↑		
223	48479	05:34	-00:58	112	5m	
224	COMP			↑		
225	49644	05:35	-00:43	112	6m	
226	COMP			↑		
227	49680	05:35	-00:50	112	7m	
228	COMP			↑		
229	55682	05:32	-01:13	112	6m	
230	COMP			↑		

60 inch Telescope Log
 Observer: PB
 PI: Calvet
 Spectrograph: F15T
 Grating: 300L
 Date: 10/11/99
 Page: 2635

Number	Object	R.A.	Dec.	L/R	Exp	Comments
231-2	MROri	05:32	-05:23	89	1m, 7m	PA=0
233	COMP			↑		lots of lines
234-236	MVORi	05:32	-05:22	89	90s, 4m	extended nebulous Myz
237	COMP			↑		bright background
238-240	CGEri	05:35	+04:49	89	5s-35s	
241	COMP			↑		
242-243	Hiltner 60	06:12	+02:11	56	45s	PA=5
244	COMP			↑		
245	Yng 102B	05:01	+57:45	56	2m	PA=90
246	COMP			↑		
247-248	HD 21389	05:29	+58:52	57	2s	
250	COMP			↑		
251-253	HD 22951	05:42	+57:57	57	2s	
254	COMP			↑		
255-257	HD 24131	05:51	+54:21	57	2s	
258	COMP			↑		
259-261	HD 23948	05:45	+74:20	57	2s	
262	COMP			↑		clear 2 diam!
263-265	HD 52997	06:57	+06:22	57	4s	
266	COMP			↑		
267-276	BIAS				0s	
277-286	FLAT				7s	
287-296	BIAS				0s	
297-306	FLAT				14s	
307-316	DARK				20m	

236 - could NOT background subtract
 MVORi - em lines across slit -
 be careful of subtraction

done ~ 240?

60 inch Telescope Log
 Observer: PBerland
 PI: JPH
 Spectrograph: FAST
 Grating: 3000
 Date: 10/12/99
 Page: 7636

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-5	DARK				15m	
6-15	BIAS				0s	clear skies!
16-25	FLAT				0s	
26-35	BIAS				0s	
36-45	FLAT				14s	
46-50	sky	zenith		S7	2s	
51	WMP			↑		
52	XTE J1858.0-2239	1858	+22:39	99	10m	PA = 47 ~ 7m
53	WMP			↑		
54	V1057 Cyg	2058	+44:45	12	10m	* Spend 1+ hour w/ Nelson on optics engineering & collimation
55	WMP			↑		
56	V1515 Cyg	20:23	+42:12	12	5m	
57	WMP			↑		
58	ZM232050.2	2310	+21:10	68	4m	
59	WMP			↑		
60	ZM232306.3	23:23	+26:16	68	3m	
61	WMP			↑		
62	ZM232313.0	23:23	+24:23	68	4m	
63	WMP			↑		
64	ZM232311.8	23:23	+24:45	68	3m	
65	WMP			↑		
66	ZM232327.0	23:23	+44:19	68	3m	
67	WMP			↑		
68	ZM232334.0	23:23	+25:37	68	2m	
69	WMP			↑		
70	ZM232358.7	23:23	+25:02	68	3m	
71	WMP			↑		
72	ZM232406.7	23:24	+27:50	68	2m	
73	WMP			↑		

DATA REDUCED IN 2 SETS: BEFORE GRATING CHANGE TO 600 μm & AFTER GRATING RETURNED TO 300 μm 761 & 735 zone

NO ILLUMINATION CORRECTION

60 inch Telescope Log

Observer: PB
 PI: Hudra

Spectrograph: FAST
 Grating: 3000
 Date: 10/12/99

Page: 7637

Number	Object	R. A.	Dec.	L/R	Exp	Comments
74	ZM 235503.5	23:25	+29:47	68	3m	PA=90
75	WMP			↑		
76	ZM 235504.2	23:25	+29:39	68	3m	
77	WMP			↑		
78	ZM 2356725	23:27	+26:35	68	5m	
79	WMP			↑		
80	ZM 23578349	23:28	+25:02	68	3m	
81	WMP			↑		
82	ZM 235002.5	23:29	+28:04	68	2m	
83	WMP			↑		
84	ZM 2352916.4	23:20	26:11	68	2m	
85	WMP			↑		
86	ZM 2353278	23:31	+25:31	68	2m	
87	WMP			↑		
88	ZM 23531502	23:31	+25:32	68	3m	
89	WMP			↑		
90	XTE J1858p22	18:58	+22	99	10m	PA=66
91	WMP			↑		
92	N17469	23:03	+08:52	6	2m	PA=0
93	WMP			↑		
94	Fergello	23:17	-05:26	56	2m	PA=0
95	WMP			↑		
97	ZM 233258.1	23:32	+25:57	68	2m	PA=90 ↓
98	WMP			2		
99	ZM 234328.0	23	+28:59	68	2m	
100	WMP			↑		
101	ZM 234342.2	23:43	+26:42	68	2m	
102	WMP			↑		
103	ZM 2343459	23:43	+27:20	68	2m	
104	WMP			↑		

60 inch Telescope Log

Observer: PB
 PI: Ken & S. Walk

Spectrograph: FAST
 Grating: 3000 + 6000
 Date: 10/12/99

Page: 7638

Number	Object	R.A.	Dec.	L/R	Exp	Comments
105	α119-260	00:52	+00:05	64	4m	
106	COMP			↑		
107	259	00:53	-02:35	64	8m	
108	COMP			↑		
109	256	01:07	-02:56	64	4m	
110	COMP			↑		
111	262	00:54	-02:26	64	4m	
112	COMP			↑		
113	261	01:07	-01:39	64	4m	
114	COMP			↑		
115	264	00:54	-02:02	64	7m	
116	COMP			↑		
117	SN1999eF	00:58	+12:44	2	20m	PA=-14
118	COMP			↑		
119	158m 213	00:40	+40:50	57	3m	
120	COMP			↑		
121	MBM12.25	02:57 10	+20:11	110	15m	6000 grating - 2" slit ↓
122	COMP			↑		↑ 11-748 20 = correct
123	25522	02:55 1	+20:05	110	8m	for Scott Walk
124	COMP			↑		
125	25538	02:55 2	+19:55	110	8m	
126	COMP			↑		
127	25635	02:56 3	+19:57	110	8m	
128	COMP			↑		
129	25455	02:51 4	+19:52	110	9m	
130	COMP			↑		
131	25630	02:56 5	+19:52	110	9m	
132	COMP			↑		

0051 Comp

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7639</u>
Observer: <u>PB</u>		Grating: <u>600L + 300L</u>		Date: <u>10/12/99</u>		
PI: <u>Wolk</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
133	MBM12.25448	02:54 6	+19:51	110	9m	600L, 2" slit ↓
134	COMP			↑		
135	25530 7	02:55	+19:51	110	12m	
136	COMP			↑		
137	25600	02:56	+20:00	110	10m	
138	COMP			↑		
139	25544	02:55	+19:59	110	12m	
140	COMP			↑		
141	25443	02:55	+20:07	110	15m	
142	COMP			↑		
143	25636	02:56	+20:02	110	15m	
144	COMP			↑		
145	25454	02:54	+19:55	110	15m	
146	COMP			↑		
147	HZ14	04:41	+10:59	110	5m	
148	COMP			↑		
149-50	HD285599	04:12	+6:11	110	2s	
151	COMP			↑		
152-154	HD283572	04:21	+7:28	110	10s	Li
155	COMP			↑		
156-7	HD9746	01:36	+48:43	110	2s	Li
158	COMP			↑		
159-60	HD12623	02:02	+62:56	110	2s	
161	COMP			↑		
162-171	FLAT			110	12s	
172	HZ14	04:41	+10:59	56	4m	300L, 3" slit ↓
173	COMP			↑		normal setup
174-176	CISCam	04:19	+55:59	65	16-100s	
177	COMP			↑		

60 inch Telescope Log

Observer: PB
 PI: Calvet

Spectrograph: FAST
 Grating: 300R
 Date: 10/12/99

Page: 7640

Number	Object	R. A.	Dec.	L/R	Exp	Comments
178	SN1999eg	02:53	+2829	Z	20m	PA=65
179	COMP			↑		
180	gvs216 50239	05:35	-02:37	11Z	10m	PA=0 ↓ bimby Z
181	COMP			↑		+ to W ¹ off slit
182	50763	05:35	-02:59	11Z	6m	Li good one
183	COMP			↑		
184	52033	05:37	-02:48	11Z	10m	close comp to SE
185	COMP			↑		
186	56682	05:33	-01:27	11Z	8m	star to W
187	COMP			↑		
188	57028	05:34	-01:22	11Z	9m	
189	COMP			↑		
190	57623	05:34	-01:22	11Z	7m	
191	COMP			↑		
192	46787	05:37	-00:05	11Z	4m	
193	COMP			↑		
194	46830	05:37	-02:06	11Z	7m	
195	COMP			↑		
196-7	V350 Ori	05:37	-09:43	89	30s, 5m	
198	COMP			↑		
199-201	Tori	05:33	-05:30	89	10s, 1m	
202	COMP			↑		
203	46041	05:46	-02:05	11Z	4m	
204	COMP			↑		
205	46428	05:48	-01:48	11Z	10m	
206	COMP			↑		
207-209	p26887	05:36	+26:18	89	10s, 1m	
210	COMP			↑		
211-213	RRTian	05:36	+26:20	89	10s-1m	
214	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>7644</u>	
Observer: <u>AB</u>			Grating: <u>300R</u>			
PI: <u>All</u>			Date: <u>10/12/99</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
215-216	Hiltner 60	06:42	+02 11	S6	45s	PA = -10
217	COMP			↑		
218	gus on 52197	05:44	-02 06	112	3m	PA = 0 ↓
219	COMP			↑		
220	48650	05:45	-01 59	112	5m	
221	COMP			↑		
222-224	H10 52971	06:57	+29	S7	4s	
225	COMP			↑		cleaned down.
226-235	BIAS				0s	
236-245	FLAT				7s	
246-255	BIAS				0s	
256-265	FLAT				1s	
266-275	DARK				20m	

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7642</u>	
Observer: <u>Calvin</u>				Grating: <u>30026</u>			
PI: <u>Bill Garcia, Hucla</u>				Date: <u>10/13/99</u>			
Number	Object	R.A.	Dec	L/R	Exp	Comments	
1-2	Dark				15m		
3-12	BIAS				0s		
13-22	FLAT				7s		
23-32	BIAS				0s		
33-42	FLAT				19s		
43, 44	BDP 284211	21 51	28 51	#56	30s		
45	comp			↑			
46-48	BDP 284211	21 51	28 51	#56	30s	PA = 75°	
49	comp			↑			
50	SC3902	18 42	79 45	#6	10m		
51	comp			↑			
52	XTE J1858p22	18 58	22 39	#65	15m	PA = 52°, Ring 2	
53	comp			↑			
54	V4641 Sgr	18 19	-25 24	#65	10m		
55	comp			↑			
56	MRK 509	20 44	-10 41	#6	3m		
57	comp			↑			
58	Akn 569	22 42	29 43	#6	5m		
59	comp			↑			
60	N7469	23 03	08 52	#6	2.5m	star west	
61	comp			↑			
62	XTE J1858p22	18 58	22 39	#65	15m	PA = 65°	
63	comp			↑			
64	V4641 Sgr	18 19	-25 25	#65	10m		
65	comp			↑			
66	2M223902	22 39	29 22	#68	4m		
67	comp			↑			
68	2M223913	22 39	13 18	#68	5m		
69	comp			↑			
70	2M223920	22 39	22 45	#68	7m		

DATA REDUCED IN TWO SETS (BEFORE + AFTER GRATING CHANGE)

60 inch Telescope Log

Observer: CALDWELLPI: Huchra, GarciaSpectrograph: FASTGrating: 200LPage: 7643Date: 10/13/99

Number	Object	R. A.	Dec.	L/R	Exp	Comments
71	comp			↑		
72	2M224047	22 40	25 00	#68	2m	
73	comp			↑		
74	2M224237	22 42	19 55	#68	4m	
75	comp			↑		
76	2M224339	22 43	23 56	#68	4m	Row = 80
77	comp			↑		
78	2M224342	22 43	19 30	#68	4m	
79	comp			↑		
80	XTE J1858.2	18 58	22 39	#65	15m	PA = 60°, Row = 80
81	comp			↑		
82	2M224344	22 43	20 19	#68	3m	
83	comp			↑		
84	2M224344	22 43	20 19	#68	6m	- center of above
85	comp			↑		
86	2M224357	22 43	23 50	#68	4m	Double peaked
87	comp			↑		
88	2M224522	22 45	21 12	#68	6m	Row 80
89	comp			↑		
90	2M224926	22 49	24 48	#68	6m	
91	comp			↑		
92	2M224944	22 49	24 48	#68	6m	
93	comp			↑		
94	2M225009	22 50	19 00	#68	5m	
95	comp			↑		
96	2M225104	22 51	18 51	#68	7m	
97	comp			↑		
98	2M225424	22 54	19 12	#68	4m	
99	comp			↑		
100	2M225430	22 54	19 13	#68	3m	

60 inch Telescope Log				Spectrograph: FAST		
Observer: <u>Cox, Sims</u>				Grating: <u>3000/6000</u>		Page: <u>7644</u>
PI: <u>Rubins, Rines, Kirshner, Kulk</u>				Date: <u>10/13/99</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
101	comp			↑		
102	2m225446	22 54	29 17	#68	3m	
103	comp			↑		
104	2m225653	22 57	63 07	#55	15m	(stellar?) #
105	comp			↑		
106	2m225659	22 57	60 42	#68	17m	Row - 40 (stellar?) #
107	comp			↑		
108	sn1999ef	00 58	12 44	#2	20m	PA = 0°
109	comp			↑		
110	sn1999dq	02 33	21 00	#2	20m	PA = 54°, Row - 80°
111	comp			↑		
112	g119-265	01 01	-2 50	#64	20m	
113	comp			↑		
114	g119-266	01 05	01 27	#64	12m	
115	comp			↑		
116	g119-267	01 03	-3 47	#64	11m	
117	comp			↑		
118	g119-268	00 48	01 29	#64	4m	
119	comp			↑		
120	g119-270	00 51	-4 23	#64	4m	
121	comp			↑		
122	g119-271	01 05	01 11	#64	6m	
123	comp			↑		
124	g119-272	00 44	-01 31	#64	12m	
125	comp			↑		
126	255Ap1952	2 55	19 09	#110	15m	600 lpm, 2" slit
127	comp			↑		tilt = 74°, focus =
128	25501p1952	2 55	19 52	#110	15m	1140
129	comp			↑		
130	2543Sp1952	2 54	19 52	#110	12m	

106 - clearly a star - does no one look at finding charts??

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>1645</u>
Observer: <u>Calvin</u>				Grating: <u>600L/300L</u>		
PI: <u>Wolk, Calvet</u>				Date: <u>10/13/99</u>		
131	comp					
132	25724 p2018	2 57	20 18	#110	15m	
133	comp			↑		
134	25601 p1958	2 56	19 58	#110	15m	
135	comp			↑		
136	25724 p2018	2 57	20 18	#110	15m	
137	comp			↑		
138	25814 p2022	2 58	20 22	#110	15m	
139	comp			↑		
140	25619 p1951	2 56	19 51	#110	15m	
141	comp			↑		
142	25459 p1953	2 55	19 52	#110	15m	
143	comp			↑		
144-153	FLAT				14s	
154	gusamb 615242	5 48	-1 28	#112	12m	300L, 3" slit, tilt = 610, focus = 1120
155	comp			↑		PA=0
156	gusamb 61337	5 52	-00 26	#112	4m	
157	comp			↑		
158	gusamb 49389	5 53	-1 55	#112	4m	↓
159	comp			↑		
160	gusamb 57063	5 53	00 07	#112	8m	
161	comp			↑		
162	gusamb 58672	5 55	-00 09	#112	5m	
163	comp			↑		
164	gusamb 64940	5 55	-00 34	#112	6m	
165	comp			↑		
166	Hiltner 600	6 45	2 09	#56	45s	PA = 90°
167	comp			↑		
168	Hiltner 600	6 45	2 09	#56	45s	↓
169	comp			↑		

60 inch Telescope Log			Spectrograph: FAS 5			Page: 7647
Observer: CALKINS			Grating: 3000			
PI: All Garcia, Hydra			Date: 10/14/99			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	DARK				15m	
11-20	BIAS				0s	
21-30	FLAT				7s	
31-40	BIAS				0s	
41-50	FLAT				19s	
51-55	sky			#57	2s	cirrus to west @
56	comp			↑		sunset
57,58	HD192281	20 12	40 16	#56	4s	
59	comp			↑		
60,61	HD192281	20 12	40 16	#56	4s	
62	comp			↑		
63,64	HD192281	20 12	40 16	#56	4s	PA = -1.0"
65	comp			↑		
66	H7331	12 57	39 24	#57	5m	
67	comp			↑		
68	skn 564	22 42	29 43	#60	5m	
69	comp			↑		
70	H7469	23 05	8 52	#60	3m	Row = 80
71	comp			↑		
72	V4641 Sgr	18 19	-25 24	#65	10m	
73	comp			↑		
74	XTE J1858p22	18 58	22 39	#65	15m	PA = 52°
75	comp			↑		
76	2M202520	20 25	15 50	#60	4m	
77	comp			↑		
78	2M202521	20 25	24 43	#68	5m	Row = 82
79	comp			↑		
80	V4641 Sgr	17 58	-25 24	#65	10m	
81	comp			↑		
82	2M202722	20 27	15 13	#68	7m	

60 inch Telescope Log				Spectrograph: <u>FAST</u>		
Observer: <u>Collins</u>				Grating: <u>300L</u>		Page: <u>7640</u>
PI: <u>Huchra, Garcia</u>				Date: <u>10/19/99</u>		
Number	Object	R. A.	Dec.	L/R	Exp	Comments
83	comp			↑		
84	ZM23101	20 31	20 13	#68	5m	Row - 80
85	comp			↑		
86	V4641 Sp	18 19	-25 24	#65	10m	
87	comp			↑		
88	ZM23039	20 29	29 45	#68	20m	clouds moving thru
89	comp			↑		(radio?)
90	XTE J1858	18 58	22 39	#65	15m	row - 80, PA = 66°
91	comp			↑		
92	ZM231546	22 22	19 43	#68	4.5m	
93	comp			↑		
94	ZM231704	23 17	18 03	#68	3m	
95	comp			↑		
96	ZM231734	23 17	21 55	#68	3.5m	
97	comp			↑		
98	ZM231757	23 17	16 47	#68	2.5m	
99	comp			↑		
100	ZM231818	23 18	21 19	#68	6m	
101	comp			↑		
102	ZM231858	23 18	15 51	#68	2.5	
103	comp			↑		
104	ZM231909	23 19	12 55	#68	5m	
105	comp			↑		
106	ZM231912	23 19	18 40	#68	3m	
107	comp			↑		
108	ZM232020	23 20	12 08	#68	2m	
109	comp			↑		
110	ZM232021	23 20	18 42	#68	2.5m	row - 40
111	comp			↑		
112	ZM232138	23 21	20 14	#68	3m	

60 inch Telescope Log

Observer: CALKINS

PI: Garcia, Kochanek

Spectrograph: FAST

Grating: X06

Page: 7699

Date: 10/14/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
113	comp			↑		
114	XTE J1858p22	18 58	22 39	165	17m	PA=64°
115	comp			↑		
116	ZM J004248	00 42	23 29	188	3m	
117	comp			↑		
118	ZM J005448	00 54	11 49	188	2m	
119	comp			T		
120	ZM J011102	01 11	17 39	188	2.5m	
121	comp			↑		
122	ZM J011934	01 19	32 10	188	3 m	
123	comp			↑		
124	ZM J012319	1 23	32 16	188	2m	
125	comp			↑		
126	ZM J012328	1 23	33 19	188	90s	
127	comp			g		
128	012349	1 23	23 08	188	90s	
129	comp			↑		
130	015206	1 52	35 24	188	60s	
131	comp			↑		
132	015250	1 52	36 13	188	75s	
133	comp			T		
134	015355	1 53	36 19	188	75s	
135	comp			↑		
136	015634	1 56	31 26	188	90s	
137	comp			↑		
138	015805	1 58	37 39	188	2m	- Row 40
139	comp			↑		
140	015921	1 59	36 49	188	75s	
141	comp			↑		
142	022527	2 25	37 10	188	45s	

60 inch Telescope Log				Spectrograph: PAST		
Observer: <u>Calkins</u>				Grating: <u>300L</u>		Page: <u>7650</u>
PI: <u>Kneibele Jones</u>				Date: <u>10/14/99</u>		
Number	Object	R.A.	Dec	L/R	Exp	Comments
143	comp			↑		
144	022943	2 29	23 57	#88	90s	
145	comp			↑		
146	024019	2 40	32 16	#88	4m	
147	comp			↑		
148	024443	2 44	16 44	#88	4m	
149	comp			↑		
150	024920	2 49	19 18	#88	60s	
151	comp			↑		
152	030243	3 07	29 36	#88	2.5m	
153	comp			↑		
154	031025	3 10	20 23	#88	4m	
155	comp			↑		
156	031250	3 12	18 48	#88	4m	bright star to west
157	comp			↑		
158	032234	3 22	14 55	#88	3.5m	
159	comp			↑		
160	034117	3 41	15 24	#88	2.5m	
161	comp			↑		
162	034958	3 49	17 50	#88	5m	
162	comp			↑		
164	035007	3 50	17 41	#88	2m	
165	comp			↑		
166	9119-273	00 52	-2 40	#64	20m	
167	comp			↑		
168	274	01 00	-2 57	#64	12m	
169	comp			↑		
170	275	00 56	-01 19	#64	4m	
171	comp			↑		
172	276	00 56	-3 31	#64	15m	

60 inch Telescope Log
 Observer: CALVINUS
 PI: Fines, Briggs
 Spectrograph: FAST
 Grating: 300L
 Date: 10/14/99
 Page: 765L

Number	Object	R.A.	Dec.	I/R	Exp	Comments
173	comp			↑		
174	277	00 51	-4 44	#64	15m	
175	comp			↑		
176	278	00 54	-3 17	#64	17m	
177	comp			↑		
178	022145	2 21	57 05	#83	4m	Row-80
179	comp			↑		
180	022146	2 21	57 07	#83	3m	
181	comp			↑		
182	022146	2 21	57 09	#83	5m	
183	comp			↑		
184	022146	2 21	57 11	#83	4m	
185	comp			↑		
186	022146	2 21	57 14	#83	2m	
187	comp			↑		
188	022149	2 21	57 01	#83	2.5m	
189	comp			↑		
190	022451	2 21	57 15	#83	3.5m	Row 80
191	comp			↑		
192	022152	2 21	57 07	#83	4m	
193	comp			↑		
194	022154	2 21	57 15	#83	3.5m	
195	comp			↑		
196	022155	2 21	57 14	#83	1s	
197	comp			↑		
198	022156	2 21	57 12	#83	90s	
199	comp			↑		
200	022156	2 21	57 12	#83	60s	
201	comp			↑		
202	022157	2 21	57 10	#83	90s	

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7652</u>	
Observer: <u>CALVIN</u>				Grating: <u>3006</u>			
PI: <u>B3339</u>				Date: <u>10/14/99</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments	
203	comp			↑			
204	022158	2 21	57 06	#83	3.5m		
205	comp			↑			
206	022158	2 21	57 10	#83	4m		
207	comp			↑			
208	022159	2 21	57 08	#83	5m	Row 80 (bright star east)	
209	comp			↑			
210	022200	2 22	57 04	#83	5m		
211	comp			↑			
212	022200	2 22	57 09	#83	90s		
213	comp			↑			
214	022200	2 22	57 15	#83	5m		
215	comp			↑			
216	022204	2 22	57 06	#83	6m		
217	comp			↑			
218	022204	2 22	57 08	#83	5m	Row 80	
219	comp			↑			
220	022204	2 22	57 08	#83	6m	Row 80	
221	comp			↑			
222	022206	2 22	57 10	#83	4m		
223	comp			↑			
224	022206	2 22	57 11	#83	3.5m		
225	comp			↑			
226	022206	2 22	57 13	#83	4.5m		
227	comp			↑			
228	022207	2 22	57 03	#83	4m		
229	comp			↑			
230	022207	2 22	57 12	#83	3m		
231	comp			↑			
232	022208	2 22	57 09	#83	4.5m		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7653</u>
Observer: <u>CALKINS</u>				Grating: <u>30006</u>		
PI: <u>Calvet, Kirshner, All</u>				Date: <u>10/14/99</u>		
Number	Object	R. A.	Dec.	L/R	Exp	Comments
233	comp			↑		
234	guson 53094	5 57	-1 55	#112	10m	PA = 0°
235	comp			↑		
236	53975	5 58	-1 41	#112	4.5m	
237	comp			↑		
238	61478	5 58	-00 14	#112	4m	↓ (enough obs?!)
239	comp			↑		
240	54718	5 59	-1 58	#112	4.5m	
241	comp			↑		
242	55023	5 59	-1 51	#112	3m	
243	comp			↑		
244	shn 2770	09 09	22 09	#2	20m	PA = 100°
245	comp			↑		
246	guson 53264	5 47	-00 13	#112	5m	PA = 0°
247	comp			↑		
248	HDS 2971	7 01	27 12	#57	4s	
249	comp			↑		
250	Hiltner 600	6 45	2 08	#56	45s	
251	comp			↑		
252	Hiltner 600	6 45	2 08	#56	45s	PA = 0°
253	comp			↑		
254-263	BIAS				0s	
264-273	FLAT				7s	
274-283	BIAS				0s	
284-293	FLAT				14s	
294-303	DARK				15m	

60 inch Telescope Log

Observer: CALKINS

PI: All, Garcia, Huchra

Spectrograph: FAST

Grating: 300L

Page: 7654

Date: 10/15/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	DARK				15m	
11-20	BIAS				0s	
21-30	FLAT				7s	
31-40	BIAS				0s	
41-50	FLAT				14s	
51, 52	BDP284211	21 51	28 51	#56	30s	circus to S.E.
53	comp			↑		
54, 55	BDP284211	21 51	28 51	#56	30s	
56	comp			↑		
57, 58	BDP284211	21 51	28 51	#56	30s	PA = 104°
59	comp			↑		
60	N7331	22 37	34 24	#57	3m	
61	comp			↑		
62	V4641 Sgr	18 19	-25 24	#65	16m	close to moon
63	comp			↑		
64	XTEJ1858, 22	18 58	22 40	#65	15m	PA = 51°
65	comp			↑		
66	MRK 509	20 44	-10 43	#66	4m	
67	comp			↑		
68	Akn 564	22 42	29 43	#66	5m	
69	comp			↑		
70	V4641 Sgr	18 19	-25 24	#65	12m	
71	comp			↑		
72	N7469	23 03	8 52	#66	2.5m	
73	comp			↑		
74	2M182229	18 22	23 51	#68	4m	near 80
75	comp			↑		
76	V4641 Sgr	18 19	-25 25	#65	12m	
77	comp			↑		
78	2M181455	18 14	19 01	#68	15m	

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7655</u>	
Observer: <u>Calkins</u>				Grating: <u>3006</u>			
PI: <u>Huchra, Garcia, Rines</u>				Date: <u>10/15/99</u>			
Number	Object	R. A.	Dec	L/R	Exp	Comments	
79	comp			↑			
80	XTE J1858p22	18 58	12 38	↑ 65	15m	PA=66°, Row 80	
81	comp			↑			
82	2M182443	18 24	12 19	↑ 68	15m	big blob on row 80	
83	comp			↑			
84	2M182516	18 25	12 52	↑ 68	4m		
85	comp			↑			
86	2M182606	18 26	14 32	↑ 68	7m		
87	comp			↑			
88	2M182700	18 27	14 19	↑ 68	10m	Row 80	
89	comp			↑			
90	XTE J1858p22	18 58	22 38	↑ 65	15m	PA=61°	
91	comp			↑			
92	g119-279	00 46	00 05	↑ 64	8m		
93	comp			↑			
94	280	01 09	00 20	↑ 64	6.5m		
95	comp			↑			
96	281	00 49	-04 00	↑ 64	8m		
97	comp			↑			
98	282	1 00	-2 48	↑ 64	3.5m		
99	comp			↑			
100	283	1 03	1 47	↑ 64	8m		
101	comp			↑			
102	284	01 00	-4 21	↑ 64	12m		
103	comp			↑			
104	285	00 54	-3 33	↑ 64	3.5m		
105	comp			↑			
106	286	01 06	00 08	↑ 64	17m		
107	comp			↑			
108	287	00 54	-1 35	↑ 64	4m	Row 80	

60 inch Telescope Log
 Observer: CALKINS
 PI: Kochner, Pines, Bragg
 Spectrograph: FAST
 Grating: 300L
 Date: 10/15/99
 Page: 7656

Number	Object	R.A.	Dec.	L/R	Exp	Comments
109	comp			↑		
110	sn1999ef	00 58	12 44	#2	20m	PA=0°
111	comp			↑		
112	9/19-288	1 03	-2 21	#64	12m	
113	comp			↑		
114	290	1 03	-3 10	#64	5m	
115	comp			↑		
116	291	1 10	-3 03	#64	9m	row 80
117	comp			↑		
118	292	00 52	-4 35	#64	8m	
119	comp			↑		
120	295	01 01	01 06	#64	3.5m	
121	comp			↑		
122	296	00 48	-04 19	#64	8m	
123	comp			↑		
124	297	00 53	01 57	#64	8m	
125	comp			↑		
126	298	01 03	-2 33	#64	15m	clouds moving in
127	comp			↑		cut short for clouds
128	299	01 03	-2 25	#64	17m	thru clouds
129	comp			↑		
130	300	00 55	00 18	#64	10m	thru clouds, redo
131	comp			↑		
132	022209	2 22	57 04	#83	6m	in & out of clouds
133	comp			↑		
134	022209	2 22	57 06	#83	5m	row 80, redo
135	comp			↑		
136	022209	2 22	57 06	#83	4m	redo of above
137	comp			↑		row 90
138	022209	2 22	57 09	#83	4m	

poor
 poorer
 poorest

128 - poor but ☺

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>2657</u>
Observer: <u>CALKINS</u>				Grating: <u>300L</u>		
PI: <u>Beag9</u>				Date: <u>10/18/99</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
139	comp			↑		
140	022210	2 22	57 02	#83	4.5m	
141	comp			↑		
142	022210	2 22	57 10	#83	6m	
143	comp			↑		
144	022212	2 22	57 03	#83	6m	
145	comp			↑		
146	022212	2 22	57 12	#83	3m	
147	comp			↑		
148	022213	2 22	57 01	#83	3.5m	
149	comp			↑		
150	022213	2 22	57 01	#83	3m	
151	comp			↑		
152	022213	2 22	57 05	#83	5m	
153	comp			↑		
154	022213	2 22	57 09	#83	6m	
155	comp			↑		
156	022215	2 22	57 13	#83	3m	
157	comp			↑		
158	022216	2 22	57 08	#83	5m	
159	comp			↑		
160	022216	2 22	57 08	#83	6m	
161	comp			↑		
162	022216	2 22	57 14	#83	5m	
163	comp			↑		
164	022217	2 22	57 10	#83	5m	Row 80
165	comp			↑		
166	022218	2 22	57 07	#83	5m	
167	comp			↑		
168	022219	2 22	57 07	#83	5m	Row 80

used comp 167 for file 168

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>7658</u>	
Observer: <u>Calbins</u>			Grating: <u>300L</u>			
PI: <u>Calvet, All</u>			Date: <u>10/15/99</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
169	comp	S 38 41	-0 14	↑		MUTED TELESCOPE
170	47513	5 34	-00 14	*112	6m	PA=0°
171	comp			↑		
172	51034	5 43	00 01	*112	8m	
173	comp			↑		
174	45907	5 46	-1 43	*112	6m	
175	comp			↑		
176	45166	5 41	-1 52	*112	4m	
177	comp			↑		
178	44851	5 41	-2 00	*112	8m	
179	comp			↑		
180	59173	5 39	-00 33	*112	8m	
181	comp			↑		
182	56542	5 42	-00 40	*112	6m	
183	comp			↑		
184	32067	5 15	-00 26	*112	15m	
185	comp			↑		
186, 187	HDS2971	7 00	27 09	*157	4s	
188	comp			↑		
189, 190	Hiltner600	6 45	2 07	*156	45s	
191	comp			↑		
192, 193	Hiltner600	6 45	2 07	*156	45s	
194	comp			↑		
195-199	sky			*157	2s	
200	comp			↑		
201-210	BIAS				0s	
211-220	FLAT				7s	
221-230	BIAS				0s	
231-240	FLAT				14s	
241-250	DARK				15m	

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>7659</u>	
Observer: <u>Pberlind</u>			Grating: <u>300R</u>		Date: <u>10/16/99</u>	
PI: <u>Huchra</u>						
Number	Object	R. A.	Dec.	L/R	Exp	Comments
110	DARK				15m	
1120	BDAS				0s	
21-50	FLAT				7s	Solid clouds
31-110	BDAS				0s	
41-50	FLAT				11s	open @ 10:45 pm
51	XTE01658p22	18 53	+27 39	69	3m	clouds sit + wait
52				†		rain in BV
53	ZM234449.4	2341	+28 29	69	6m	
54	COMP			†		
55	ZM234442.4	2344	+28 15	68	8m	
56	COMP			†		
57	ZM234444.0	2341	+29 51	68	8m	
58	COMP			†		clouds...
59	ZM234513.1	2345	+28 03	68	5m	
60	COMP			†		poor seeing
61	ZM234519.5	2345	+27 59	68	5m	
62	COMP			†		
63	ZM235536.4	2353	+28 26	68	8m	
64	COMP			†		
65	ZM235532.2	2353	+29 15	68	5m	
66	COMP			†		
67	ZM235536.2	2353	+29 20	68	4m	
68	COMP			†		clearing!
69	ZM235536.0	23 53	+28 26	68	4m	
70	COMP			†		
71	ZM235532.9	23 53	+27 58	68	4m	
72	COMP			†		
73	ZM235638.1	23 56	+26 34	69	4m	
74	COMP			†		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7660</u>
Observer: <u>PB</u>		Grating: <u>300R</u>		Date: <u>10/16/99</u>		
PI: <u>Brady/Kayon</u>						
Number	Object	R. A.	Dec.	L/R	Exp	Comments
75	2M235705.2	23:57	+25:46	68	4m	cold + windy!
76	COMP			↑		
77	2M235219.6	23:52	+27:45	68	15m	
78	COMP			↑		
79,81	SN1999db	01:43	+04:13	2	15m	PA=15 for both
80,82	COMP			↑		not too bad!
83	022219p57	02:22	+57:10	83	5m	PA=90
84	COMP			↑		
85	022221p57	02	+57	83	5m	
86	COMP			↑		
87	022220p57	02:22	+57:12	83	3m	5m
88	022220p57	02:22	+57:12	83	6m	NT
89	COMP			↑		
90	022219p57	02:22	+57:13	83	4m	
91	COMP			↑		
92	022222p57	02:22	+57:11	83	6m	
93				↑		
94	022223p5703	02:22	+57:03	83	4m	
95	COMP			↑		
96	022223p5706	02:22	+57:06	83	6m	
97	COMP			↑		
98	022223p5711	02:22	+57:10	83	10m	
99	COMP			↑		
100	022138p5706	02:21	+17:02	83	5m	
101	COMP			↑		
102	022138p5714	02:21	+57:14	83	5m	
103	COMP			↑		
104	022142p5710	02:21	+57:10	83	5m	
105	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7661</u>
Observer: <u>PB</u>				Grating: <u>300L</u>		
PI: <u>Brang & Kanyon</u>				Date: <u>10/16/99</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
106	022225p5705	02:22	+57:05	83	1/2	
107	CMP			+		
108	02222 Sp 5708	02:22	+57:08	83	4m	
109	CMP			+		
110	022226p5703	02:22	+57:03	83	4m	
111	CMP			+		
112	022221p57	02:22	+57:12	83	8m	
113	CMP			+		
114	022228p5707	02:22	+57:07	83	6m	
115	CMP			+		
116	022228 p 5715	02:22	+57:15	83	4m	
117	CMP			+		
118	022229p5704	02:22	+57:04	83	4m	
119	CMP			+		
120	022229p5711	02:22	+57:12	83	3m	
121	CMP			+		
122	022220p1135	02:22	+57:11	83	4m	
123	CMP			+		
124	022230p5714	02:22	+57:14	83	3m	
125	CMP			+		
126-7	022222p57	02:22	+57:03	83	2m, 6m	
128	CMP			+		
129	022235p57	02:22	+57:01	83	1m	
130	CMP			+		
131	022235p5709	02:22	+57:09	83	6m	
132	CMP			+		
133	022238p5713	02:22	+57:13	83	3m	
134	CMP			+		
135	022241p57	02:22	+57:10	83	7m	
136	CMP			+		

60 inch Telescope Log
 Observer: PS
 PI: Rines/Geller
 Spectrograph: FAST
 Grating: 300L
 Date: 10/16/99
 Page: 762

Number	Object	R.A.	Dec.	L/R	Exp	Comments
137	G191B2B	07:01	+52:45	56	2m	seeing better!
138	COMP			↑		
140	G5766.003	07:29	+56:59	69	4m	
141	COMP			↑		
142	004	07:14	+55:07	69	4m	
143	COMP			↑		
144	005	07:16	+54:30	69	4m	
145	COMP			↑		
146	006	07:26	+56:41	69	4m	
147	COMP			↑		
148	007	07:28	+56:49	69	4m	
149	COMP			↑		
150	008	07:26	+56:33	69	4m	
151	COMP			↑		
152	009	07:29	+56:51	69	4m	
153	COMP			↑		
154	010	07:33	+54:15	69	4m	
155	COMP			↑		
156	011	07:24	+54:39	69	4m	extra gal in slit told
157	COMP			↑		
158	012	07:25	+56:41	69	6m	
159	COMP			↑		
160	013	07:13	+56:30	69	4m	
161	COMP			↑		
162	014	07:19	+54:48	69	4m	
163	COMP			↑		
164	015	07:12	+55:04	69	4m	
165	COMP			↑		
166	016	07:11	+55:18	69	5m	
167	COMP			↑		

60 inch Telescope Log

Observer: PB
 PI: All

Spectrograph: FAST

Grating: 300L

Page: 7663

Date: 10/16/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
168	a 5766-017	07:30	+56:54	67	5m	
169	comp			↑		
170	NGC 770	08:54	+04:56	57	2m	PA=0 ↓
171	comp			↑		
172-173	Hiltner 600	06:42	+02	56	4.5s	PA=0
174	comp			↑		
175	ZM J081048	05:40	+84:54	88	3m	PA=90 ↓ is bin by 2
176	comp			↑		sup ±? redo!
177	ZM J052822	05:38	+79:35	88	5m	em
178	comp			↑		
179	ZM J0544	05:44	+79:35	88	3m	
180	comp			↑		
181-183	HDS 2971	08:57	+27	57	5s	clear + cold
184	comp			↑		o dawn
185-187	HDS 0896	06:54	-23:55	57	4s	
188	comp			↑		
189-193	sky	Zenith		57		
194	comp			↑		
195-201	BIAS				0s	
205-214	FLAT				7s	
215-224	BIAS				0s	
225-231	FLAT				14s	
235-241	DARK				15m	

60 inch Telescope Log
 Observer: PBerland
 PI: Fales
 Spectrograph: FAST
 Grating: 300R
 Date: 10/17/99
 Page: 7664

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	DARK				15m	
11-20	BENS				0s	
21-30	FLAT				7s	v. hazy
31-40	BENS				0s	east wind.
41-50	FLAT				14s	
51-55	SKY	zenith		S7	2s	
56	COMP			↑		
57-59	HD192761	2010	+10 07	S6	6s	
60	COMP			↑		
61	ZM1829110	18:59	+17	G8	2m	sup *? + gal ✗
62	COMP			↑		poor seeing
63	ZM1855095	18:58	+22W	G8	4m	em BAO (UNDER EXPOSED)
64	COMP			↑		
65	ZM1827539	18:27	+15 49	G8	6m	*'s to E sup ✗
66	COMP			↑		
69	XTEJ1858p22	18:58	+22	G5	13m	PA=62 7 or 7:10
70	COMP			↑		
71	Z1296p718	21:31	+24 31	S7	1m	★ ✗
72	COMP			↑		
73	Z1088p2985	21:31	+00 08	S7	1m	★ ✗
74	COMP			↑		
75	Z1478p3443	21:49	+14 56	S7	1m	★; faint star
76	COMP			↑		
77	Z1300p0956	21:32	+16 08	S7	90s	Seagiant 1!
78	COMP			↑		
79	Z1495p0249	21:49	+63 03	S7	10m	em
80	COMP			↑		
81	Z1567p175L	21:59	+18 10	S7	5m	large LSB
82	COMP			↑		wk H ₂ @ pos 2131? bright sky red

em BAO (UNDER EXPOSED) to W. Not E

→ 67 ZM1842465 68 5min another ✗
 68 COMP ↑

DATA REDUCED IN 2 SETS (BEFORE + AFTER FRATING CHANGE)

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7665</u>
Observer: <u>PS</u>				Grating: <u>302</u>		
PI: <u>Falco & Huchra</u>				Date: <u>10/17/99</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
83	Z3061p4636	2308	+46.54	84	90s	* #
84	Z3061p4678SW	"	"	84	2m	* #
85	COMP			↑		
86	ZMJ232740	2327	+23.20	88	2m	seeing better
87	COMP			↑		
88	ZMJ232442	23.24	+44.31	88	4m	
89	COMP			↑		
90	ZMJ22444	2244	+25.06	88	2m	
91	COMP			↑		
92	ZMJ233911	2339	+27.06	88	2m	
93	COMP			↑		
94	ZMJ234058	2340	+20.26	88	5m	
95	COMP			↑		
96	ZMJ234324	23.43	+23.30	88	4m	
97	COMP			↑		
98	ZMJ234426	2344	+27.76	88	4m	
99	COMP			↑		
100	ZMJ235226	23.52	+33.25	88	2m	
101	COMP			↑		
102	ZMJ235249	23.52	+33.19	88	2m	
103	COMP			↑		
104	ZM0017016	00:17	+35.16	68	5m	
105	COMP			↑		
106	ZM001410.1	00:14	+24.70	68	3m	
107	COMP			↑		
108	ZM001513.6	00:15	+31.30	68	2m	
109	COMP			↑		
110	ZM001618.2	00:16	+33.59	68	3m	
111	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>766</u>
Observer: <u>PB</u>		Grating: <u>300R</u>		Date: <u>10/17/99</u>		
PI: <u>Huchra & Gersz</u>						
Number	Object	R. A.	Dec.	L/R	Exp	Comments
112	ZM001819.5	00:18	+74:52	68	5m	* to W
113	COMP			↑		
114	ZM001845	00:18	+70:03	68	3m	
115	COMP			↑		
116	ZM002039.8	00:20	+71:31	68	3m	
117	COMP			↑		
118	ZM002246.1	00:22	+71:24	68	5m	
119	COMP			↑		
120	ZM002358.6	00:23	+70:17	68	2m	
121	COMP			↑		
122	ZM002522.7	00:25	+70:04	68	4m	
123	COMP			↑		
124	XTEJ0858.22	18:58	+72	65	15m	PA=66 low
125	COMP			↑		
126	N7469	23:05	+06:52	6	2m	PA=0 ↓
127	COMP			↑		
128-9	Ferg 110	23:17	+05:26	56	2m	PA=0
130	COMP			↑		
131	Akn 569	22:42	+29:43	6	5m	PA=90 ↓
132	COMP			↑		
133	MRK 335	00:06	+70:12	6	3m	
134	COMP			↑		
135	ZM002912.4	00:25	+70:05	68	4m	
136	COMP			↑		
137	ZM002752.4	00:27	+70:20	68	3m	
138	COMP			↑		
139	ZM003000.0	00:30	+70:51	68	4m	
140	COMP			↑		
141	ZM003022.8	00:30	+70:36	68	4m	
142	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7667</u>
Observer: <u>PB</u>		Grating: <u>300L</u>		Date: <u>10/17/99</u>		
PI: <u>Rmess/Geller</u>						
Number	Object	R. A.	Dec.	L/R	Exp	Comments
143	a1196_014	01:01	-00:57	64	12m	
144	COMP			↑		
145	016	01:01	-00:48	64	5m	
146	COMP			↑		
147	015	00:41	-00:24	64	5m	ok
148	COMP			↑		
149	017	00:57	-01:08	64	6m	
150	COMP			↑		
151	020	00:48	-00:54	64	4m	
152	COMP			↑		
153	019	01:05	-00:45	64	4m	
154	COMP			↑		
155	021	00:59	-00:12	64	7m	em ok
156	COMP			↑		
157	022	01:08	-00:06	64	6m	
158	COMP			↑		
159	023	01:06	-00:39	64	4m	
160	COMP			↑		seeing worse
161	024	01:05	-00:54	64	4m	
162	COMP			↑		
163	025	00:53	-01:05	64	5m	
164	COMP			↑		windy
165	026	00:51	-00:08	64	4m	
166	COMP			↑		
167	027	00:58	-00:17	64	4m	
168	COMP			↑		
169	028	01:04	-00:58	64	5m	
170	COMP			↑		
171	031	00:57	-00:38	64	5m	
172	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>7668</u>	
Observer: <u>PB</u>			Grating: <u>3002</u>			
PI: <u>Rinos & Brangy</u>			Date: <u>10/17/99</u>			
Number	Object	R. A.	Dec.	L/R	Exp	Comments
173	a1196-030	00:44	-02:25	64	6m	
174	COMP			↑		
175	033	00:58	-02:45	64	5m	poor seeing
176	COMP			↑		wind
177	034	00:57	-02:31	64	5m	
178	COMP			↑		
179	035	00:56	-02:31	64	6m	
180	COMP			↑		
181	022133p570	02:21	+57:01	83	5m	PA=90
182	COMP			↑		
183	022241p5711	02:22	+57:11	83	4m	PA=90L
184	COMP			↑		
185	022242p57	02:22	+57:12	83	15m	
186	COMP			↑		seeing 5"
187	022244p57	02:22	+57:04	83	15m	
188	COMP			↑		
189	022245p570	02:22	+57:07	83	10m	
190	COMP			↑		
191	022247p57	02:22	+57:14	83	7m	
192	COMP			↑		
193	022248p5712	02:22	+57:12	83	2m	em
194	COMP			↑		
195	022252p57	02:22	+57:09	83	5m	bm by 2; comp to w
196	COMP			↑		
197	022259p5707	02:22	+57:07	83	4m	
198	COMP			↑		
199-200	022259p5714	02:22	+57:14	83	10s, 5s	em
201	COMP			↑		
202	022255p5708	02:22	+57:08	83	4m	
203	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7669</u>
Observer: <u>PB</u>		Grating: <u>6002</u>		Date: <u>10/17/99</u>		
PI: <u>S. Wolk</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
204	COMP	test				6002. 2" slit ↓
205	H1D716	01:36	+4843	110	2s	tilt = 7880, focus = 120
207	COMP			↑		
208	MBM12.35X	0301	+1712	110	4m	
209	COMP			↑		
210	MBM12.357	0304	+1714	110	4m	
211	COMP			↑		
212	339	08:07	+1708	110	6m	
213	COMP			↑		
214	340	0855	+1705	110	7m	
215	COMP			↑		
216	341	08:57	+1704	110	7m	
217	COMP			↑		
218	342	03:01	+1708	110	7m	
219	COMP			↑		
220	343	0258	+1733	110	7m	
221	COMP			↑		
222	345	03:02	+1703	110	10m	
223	COMP			↑		
224	348	03:02	+1708	110	12m	
225	COMP			↑		
226	350	03:02	+1700	110	12m	
227	COMP			↑		
228	351	0256	+1757	110	12m	
229	COMP			↑		
230	G191B23	05:01	+5245	110	3m	SD
231	COMP			↑		
232	FLAT				14s	

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>7670</u>
Observer: <u>PB</u>		Grating: <u>300L</u>		Date: <u>10/17/99</u>		
PI: <u>Zines</u>						
Number	Object	R. A.	Dec.	L/R	Exp	Comments
242	SN1999dq	02:33	+70:58	Z	15m	300L - 3" slit ↓
243	COMP			↑		PA67 normal setup
244	G191D2B	05:01	+52	S6	2m	PA-90
245	COMP			↑		
246	α5766021	07:18	+54:53	64	10m	
247	COMP			↑		POOR SEEING!
248	022	07:21	+56:32	64	8m	
249	COMP			↑		
250	023	07:24	+54:26	64	9m	
251	COMP			↑		
252	024	07:27	+56:10	64	9m	
253	COMP			↑		
254-5	Hiltner60	06:42	+42	S6	1m	
256	COMP			↑		
257	NGC1700	04:54	+64:56	S7	2m	
258	COMP			↑		
259-218	BIAS				0s	
269-278	FLAT				0s	
279-288	BIAS				0s	
289-298	FLAT				14s	
						★END of FAST Run★

Fax to:
Susan Tokarz

★ Start of FAST Run ★

60 inch Telescope Log	Spectrograph: <u>FAST</u>
Observer: <u>CALLINS</u>	Grating: <u>5006</u>
PI: <u>All Rines</u>	Date: <u>10/29/99</u>

Page: 7714

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-2	DARK				15m	
3-13	REAS				0.5	
14-23	FLAT				7.5	
24-23	REAS				0.5	
34-43	FLAT				14.5	
44	BDP284211	21 51	28 52	#56	30s	
45	comp			↑		
46	BDP284211	21 51	28 52	#56	30s	
47	comp			↑		
48	BDP284211	21 51	28 52	#56	30s	PA=0
49	comp			↑		
50	30390.3	18 42	79 46	#6	12m	
51	comp			↑		
52	MBX509	20 44	-10 43	#6	4m	
53	comp			↑		
54	Aln 56A	22 42	29 43	#6	5m	
55	comp			↑		
56	N7469	23 03	8 52	#6	3m	row 75
57	comp			↑		
58	9119-091	1 04	2 04	#64	20m	too faint
59	comp			↑		
60	9119-092	1 00	-2 00	#64	20m	PA=0°
61	comp			↑		
62	9119-100	00 48	-3 24	#64	12m	
63	comp			↑		
64	9119-122	01 07	-02 08	#64	20m	
65	comp			↑		
66	9119-128	1 04	1 44	#64	20m	
67	comp			↑		
68	9119-137	00 41	-1 51	#64	20m	PA=0°

NOT ENOUGH BIN BY 4 DARKS (ONLY 2)
COULD NOT DARK SUBTRACT BIN BY 4 DATA.

H66 Very interesting - bright superposed star,
but set gal velocity because of emission lines.
... ..

60 inch Telescope Log

Observer: CALVIN

PI: Noel, Kirshner, Dragg

Spectrograph: FAST

Grating: 300L

Date: 10/29/99

Page: 7715

Number	Object	R. A.	Dec.	L/R	Exp	Comments
69	comp			↑		
70	all9-161	00 47	1 27	#69	17m	PA = 96°, clouds
71	comp			↑		
72,73	sm1999ej	1 23	33 28	#2	15	wind has died
74	comp			↑		down but seeing
75	021752	2 17	57 07	#83	3m	is 2-5" ! PA=0°
76	comp			↑		
77	021755	2 17	57 05	#83	3m	
78	comp			↑		
79	021756	2 17	57 06	#83	7m	
80	comp			↑		
81	021757	2 17	57 06	#83	12m	
82	comp			↑		
83	021757	2 17	57 07	#83	5m	
84	comp			↑		
85	021801	2 18	57 03	#83	8m	
86	comp			↑		
87	021802	2 18	57 04	#83	12m	
88	comp			↑		
89	021802	2 18	57 05	#83	8m	
90	comp			↑		
91	021803	2 18	57 12	#83	4m	row 75
92	comp			↑		
93-95	sm1637	4 41	-2 51	#2	5m	PA=31, seeing
96	comp			↑		might be improving
97	021804	2 18	57 03	#83	3m	Type IA
98	comp			↑		
99	021804	2 18	57 10	#83	8m	row 74
100	comp			↑		
101	021804	2 18	57 10	#83	7m	

60 inch Telescope Log

Spectrograph: FAST

Observer: Calvin

Grating: 300L

Page: 7716

PI: Bray, Calvet

Date: 10/29/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
102	comp			↑		
103	021805	2 18	57 10	#83	8m	which one? extracted bright * near center
104	comp			↑		
105	021805	2 18	57 12	#83	2m	row 74
106	comp			↑		
107	021805	2 18	57 12	#83	15m	Row 74
108	comp			↑		
109	sn1999ek	5 36	16 58	#83	20m	Row 74
110	comp			↑		
111	36095	5 24	-00 23	#112	5m	
112	comp			↑		
113	36095	5 24	-00 23	#112	5m	(insufficient counts in 1 st exp)
114	comp			↑		
115	46641	5 37	-00 19	#112	17m	
116	comp			↑		
117-119	41137	5 16	-1 09	#112	10m	
120	comp			↑		
121	36075	5 24	00 00	#112	11m	
122	comp			↑		
123	47015	5 58	00 02	#112	10m	
124	comp			↑		
125	WILSON 637	10 01	55 34	#57	5s	
126	comp			↑		
127	WILSON 637	10 01	55 34	#57	5s	
128	comp			↑		
129	HILTNER 600	6 45	2 08	#56	45s	
130	comp			↑		
131	Hiltner 600	6 45	2 08	#56	45s	
132	comp			↑		
133	Hiltner 600	6 45	2 08	#56	45s	PA = 23°

103

h

60 inch Telescope Log
 Observer: CALEXSUS
 PI: All, Kirshner, Kenyon
 Spectrograph: FAST
 Grating: 300L
 Date: 10/30/99
 Page: 7218

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	DIREX				15m	
11-20	BIAS				2x	
21-30	FLAT				7x	
31-40	BIAS				0x	
41-50	FLAT				14x	
51, 52	BDP 284211	21 51	28 51	#56	30x	
53	comp			↑		
54, 55	BDP 284211	21 51	28 51	#56	30x	
56	comp			↑		
57, 58	BDP 284211	21 51	28 51	#56	30x	PA = 73°
59	comp			↑		
60	N7331	22 37	24 25	#57	3m	
61	comp			↑		
62	N7331	22 37	24 25	#57	3m	
63	comp			↑		
64	Abn 56A	22 42	29 43	#6	5m	
65	comp			↑		
66	N7469	23 03	8 52	#6	2.5m	Row 74
67	comp			↑		
68	sn1999el	20 37	66 06	#2	10m	PA = -17°
69	comp			↑		
70, 71	ND154791	17 06	27 58	#12	1, 10x	
72	comp			↑		
73	Draw C1	17 20	57 50	#12	12m	
74	comp			↑		
75, 76	5180	10 39	-5 16	#12	3, 5m	
77	comp			↑		
78, 79	5169	19 50	46 15	#12	200/600	
80	comp			↑		
81, 82	V1413Agl	19 03	16 26	#12	200/600	

REDUCED IN 2 SETS:
 FILES 1-123
 + FILES 146-159 + 192-196

60 inch Telescope Log

Observer: CALISTAR

PI: Henryk Rines, Bragg

Spectrograph: FAST

Grating: 300L

Page: 7719

Date: 10/30/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
83	comp			↑		
84 85	V443 Her	18 22	23 28	#12	40/400	
86	comp			↑		
87 88	V4 Her	18 14	21 00	#12	60/600	
89	comp			↑		
90	a119-166	00 54	03,34	#64	20m	
91	comp			↑		
92	a119-167	01 03	4 12	#69	20m	
93	comp			↑		
94	a119-169	00 41	-2 19	#64	20m	
95	comp			↑		
96	a119-170	00 41	00 16	#64	10m	
97	comp			↑		
98	021806	2 18	57 07	#83	3.5m	
99	comp			↑		
100	021808	2 18	57 08	#83	5m	
101	comp			↑		
102	021808	2 18	57 09	#83	3m	row 74
103	comp			↑		
104	021808	2 18	57 09	#83	8m	row 74
105	comp			↑		
106	021808	2 18	57 12	#83	6m	row 74
107	comp			↑		
108	021809	2 18	57 02	#83	3.5m	seeing getting bad
109	comp			↑		
110	021809	2 18	57 04	#83	9m	
111	comp			↑		
112	021809	2 18	57 06	#83	10m	row 74
113	comp			↑		
114	021810	2 18	57 06	#83	15m	row 73

60 inch Telescope Log				Spectrograph: <u>FAST</u>		
Observer: <u>CALVIN S</u>				Grating: <u>300L</u>		Page: <u>2720</u>
PI: <u>Bragg, Wolf, Kirshner, Calvet</u>				Date: <u>10/30/99</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
115	comp			↑		
116	021810	2 18	57 11	#83	5m	
117	comp			↑		
118	021811	2 18	57 09	#83	9m	row 74
119	comp			↑		
120	021813	2 18	57 12	#83	15m	row 74
121	comp			↑		
122	sn1999dq	2 33	20 58	#2	20m	row 74
123	comp			↑		
124-133	FLAT				14s	600 ipm, 748 - tilt
124	MBM12.352	3 02	17 10	#110	11m	2" slit
135	comp			↑		row 26 !!
136	12.353	2 58	19 47	#110	17m	terrible seeing
137	comp			↑		
138	12.354	2 58	19 45	#110	20m	
139	comp			↑		
140	12.355	2 58	19 49	#110	15m	
141	comp			↑		
142	12.356	3 02	17 19	#110	17m	
143	comp			↑		
144	12.357	3 02	17 00	#110	15m	
145	comp			↑		Normal setup
146-148	sn1999em	4 41	-2 51	#2	8m	PA=6°, 73" seeing
149	comp			↑		(increase exp)
150-152	gysola 41189	5 16	-1 15	#112	10m	
153	comp			↑		
154	1637485	5 26	-00 15	#112	15m	
155	comp			↑		
156-158	sn1999em	4 41	-2 53	#2	10m	Tilt=502, PA=31°
159	comp			↑		

no flats for these!

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>7721</u>	
Observer: <u>CALYNS</u>			Grating: <u>3002L</u>			
PI: <u>Colvet, All</u>			Date: <u>10/30/99</u>			
Number	Object	B.A.	Dec.	L/R	Exp	Comments
160	Hiltner 600	6 45	2 08	#56	45s	PA=0, Tilt=50°
161	comp			↑		
162	gcnb47116	5 38	00 04	#112	12m	normal setup
163	comp			↑		
164	1a41404	5 16	-1 26	#112	10m	seeing improving ↑
165	comp			↑		
166	1b41594	5 26	00 40	#112	11m	
167	comp			↑		
168	nb48113	5 39	00 04	#112	12m	
169	comp			↑		
170	1a43212	5 19	-1 35	#112	11m	will get again
171	comp			↑		(low cts)
172,173	Hiltner 600	6 45	2 08	#56	45s	
174	comp			↑		
175,176	Hiltner 600	6 45	2 08	#56	45s	
177	comp			↑		
178	AGK2p14783	7 20	14 53	#57	5s	
179	comp			↑		
180	AGK2p14783	7 20	14 53	#57	5s	
181	comp			↑		
182-191	FLAT				14s	Tilt = 50°
192-196	sky			#57	7s	
197	comp			↑		
198-207	BIAS				0s	
208-217	FLAT				7s	
218-227	BIAS				0s	
228-237	FLAT				14s	
238-247	DARK				15m	

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>7722</u>	
Observer: <u>COLKINS</u>			Grating: <u>300L</u>			
PI: <u>All, Kenyon</u>			Date: <u>10/31/99</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	DARK				15m	
11-20	BIAS				0s	
21-30	FLAT				7c	
31-40	BIAS				0s	
41-50	FLAT				14c	
51, 52	BDp284211	21 51	28 51	#56	30s	
53	comp			↑		
54, 55	BDp284211	21 51	28 51	#56	30s	
56	comp			↑		
57, 58	DDp284211	21 51	28 51	#56	30s	PA = 73°
59	comp			↑		
60	N7331	22 37	34 25	#57	3m	
61	comp			↑		
62	N7331	22 37	34 25	#57	3m	
63	comp			↑		
64	AKn5264	22 42	29 43	#6	5m	
65	comp			↑		
66	N7469	23 03	8 52	#6	2.5m	row 74
67	comp			↑		
68, 69	M1m21	12 34	-19 09	#12	10/100	row 75
70	comp			↑		
71, 72	Hen1341	17 08	-17 26	#12	50/500	
73	comp			↑		
74, 75	RTSer	17 39	-11 55	#12	10/100	
76	comp			↑		
77, 78	UUser	17 42	-15 22	#12	50/100	row 74
79	comp			↑		
80, 81	XXOph	17 43	-6 15	#12	5/45	
82	comp			↑		
83, 84	ZL50ph	17 50	-6 41	#12	5/20	

60 inch Telescope Log

Observer: Callin

PI: Kenny

Spectrograph: FAST

Grating: 300L

Page: 723

Date: 10/31/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
85	comp			↑		
86, 87	AS289	18 12	-11 59	12	5/10	
88	comp			↑		
89, 90	V2601 Sgr	18 38	-22 41	12	20/200	
91	comp			↑		
92, 93	AS316	18 42	-21 17	12	20/200	Row 74
94	comp			↑		
95, 96	MWC960	18 47	-20 04	12	11/100	Row 74
97	comp			↑		
98, 99	AS327	18 53	-24 22	12	30/100	
100	comp			↑		
101, 102	FN Sgr	18 53	-18 58	12	20/100	
103	comp			↑		
104, 105	V919 Sgr	19 03	-16 58	12	20/100	Row 75
106	comp			↑		
107-109	S149	18 18	27 27	12	70/100	
110	comp			↑		
111, 112	DPSer	18 44	5 03	12	60/120	Row 75
113	comp			↑		
114, 115	RJ105	18 35	1 47	12	2/100	
116	comp			↑		
117, 118	CMRgl	19 03	-3 02	12	30/300	
119	comp			↑		
120, 121	S164	19 28	-6 03	12	30/120	
122	comp			↑		
123-125	CNC79	19 24	50 15	12	1,5,30	
126	comp			↑		
127-129	HM Sgr	19 42	16 45	12	10,60	
130	comp			↑		
131, 132	AS360	19 45	18 37	12	10/100	

60 inch Telescope Log

Spectrograph: FAST

Observer: CALLANS

Grating: 300L

Page: 724

PI: Keryon, A11

Date: 10/31/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
133	comp			↑		
134-136	CICyg	19 50	35 41	#12	1,10,60	
137	comp			↑		
138-140	PVVul	20 21	21 34	#12	1,10,60	
141	comp			↑		
142-144	V1016Cyg	19 57	39 49	#12	1,10,60	
145	comp			↑		
146,147	Helix 467	20 35	20 11	#12	200/600	
148	comp			↑		
149,150	Helix 468	20 41	39 44	#12	200/600	
151	comp			↑		
152-154	S190	21 41	2 43	#12	1,10,60	
155	comp			↑		
156,157	V1329Cyg	20 50	35 35	#12	20/120	
158	comp			↑		
159,160	V407Cyg	21 02	45 46	#12	200/600	
161	comp			↑		
162-164	AGPer	21 51	12 37	#12	1,10,20	
165	comp			↑		
166-168	2And	03 37	48 49	#12	2,10,60	
169	comp			↑		
170,171	RAgr	23 43	-15 17	#12	1,10	
172	comp			↑		
173,174	EGAnd	0 44	40 40	#12	1,5	
175	comp			↑		
176-178	AxPer	1 36	54 14	#12	1,10,60	
179	comp			↑		
180,181	V741Per	1 36	54 15	#12	19,60	
182	comp			↑		
183	MRL335	00 06	20 12	#6	4m	

60 inch Telescope Log

Spectrograph: FAST

Observer: CALYSA

Grating: 200L

Page: 7725

PI: Comp

Date: 10/21/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
184	comp			↑		
185	571226	2 18	57 12	#83	10m	
186	comp			↑		
187	570946	2 18	57 09	#83	10m	
188	comp			↑		
189	571153	2 18	57 11	#83	16m	row 74
190	comp			↑		
191	571152	2 18	57 13	#83	8m	row 74
192	comp			↑		
193	571400	2 18	57 14	#83	8m	
194	comp			↑		
195	570633	2 18	57 06	#83	8m	
196	comp			↑		
197	570515	2 18	57 05	#83	5m	
198	comp			↑		
199	571123	2 18	57 11	#83	6m	
200	comp			↑		
201	571312	2 18	57 13	#83	7m	row 74
202	comp			↑		
203	570147	2 18	57 01	#83	5m	row 74
204	comp			↑		MOVING
205	570513	2 18	57 05	#83	10m	row 75
206	comp			↑		
207	571112	2 18	57 11	#83	10m	
208	comp			↑		
209	571347	2 18	57 13	#83	8m	
210	comp			↑		
211	571141	2 18	57 11	#83	8m	row 74
212	comp			↑		
213	570029	2 18	57 00	#83	1m	

60 inch Telescope Log

Observer: CALVIN

PI: Bray, Kirchner, Colvet

Spectrograph: FAST

Grating: 7000L

Page: 7726

Date: 11/21/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
214	comp			→		
215	570026	2 18	57 00	#83	8s	
216	comp			→		
217	570702	2 18	57 07	#83	11m	
218	comp			↑		
219	570730	2 18	57 07	#83	11m	
220	comp			↑		
221	570842	2 18	57 07	#83	8m	row 74
222	comp			↑		
223	570901	2 18	57 09	#83	9m	row 74 !!
224	comp			↑		
225	570959	2 18	57 09	#83	8m	bright ne
226	comp			↑		
227-229	sm1999en	4 41	-2 51	#2	5m	PA = 9°
230	comp			↑		
231-233	1a45212	5 19	-1 35	#112	5m	
234	comp			↑		
235	1b39568	5 28	-00 16	#112	12m	
236	comp			↑		
237	nb54564	5 40	-00 58	#112	15m	
238	comp			↑		
239	1a45580	5 21	-1 34	#112	11m	
240	comp			↑		
241	1b39691	5 29	-00 21	#112	11m	
242	comp			↑		
243	nb54704	5 40	-00 31	#112	15m	
244	comp			↑		
245	1a37259	5 21	-00 20	#112	12m	
246	comp			↑		
247	1b43783	5 29	-00 41	#112	12m	aligned with pulsed with cosmic

60 inch Telescope Log

Observer: CALKINSPI: Rines, AllSpectrograph: FASTGrating: 300LDate: 10/31/99Page: 7727

Number	Object	R.A.	Dec.	L/R	Exp	Comments
248	comp			↑		seeing getting
249	a5766-025	7 29	56 22	#64	4m	a little bad
250	comp			↑		
251	a5766-025	7 29	56 22	#64	4m	(not enough cts in
252	comp			↑		1 st exp)
253	a5766-026	7 30	56 31	#64	5m	
254	comp			↑		
255	-027	7 29	57 11	#64	3m	
256	comp			↑		
257	-029	7 16	54 44	#64	5m	
258	comp			↑		
259	-030	7 13	56 38	#64	5m	
260	comp			↑		
261	-031	7 29	55 05	#64	5m	
262	comp			↑		
263, 264	Hiltner 600	6 45	2 08	#56	45s	
265	comp			↑		
266, 267	Hiltner 600	6 45	2 08	#56	45s	
268	comp			↑		
269	AGK2p 14783	7 20	14 53	#57	5s	
270	comp			↑		
271-275	sky			#57	2s	
276	comp			↑		
277-286	BIAS				0s	
287-296	FLAT				7s	
297-306	BIAS				0s	
307-316	FLAT				14s	
317-326	DARK				15m	