

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>5844</u>	
Observer: <u>MADER</u>			Grating: <u>300L</u>		Date: <u>12/03/97</u>	
PI: <u>KENYON, BARTON, KIRSHNER</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS	-	-		-	BIN X4
11-20	FLAT	-	-		6	
21-25	DARK	-	-		900	
26-35	BIAS	-	-		-	BIN X2
36-45	FLAT	-	-		12	
46-50	SKY				2	BIN X4
51	COMP			↑		
52-53	? And	23:33:40	48:49:06	12	1/2, 12	
54	COMP			↑		
55-56	CI Cys	19:50:12	35:41:04	12	1/30	
57	COMP			↑		
58-60	HD192281	20:10:47	40:07:01	56	5	
61	COMP			↑		
62	soqal-211	20:20:28	-00:42:37	60	6000	GALAXY IS FAINTER ONE @ ~ L=45
63	COMP			↑		
64	soqal-212	20:20:29	-00:40:24	60	300	
65	COMP			↑		
66	soqal-219	20:39:22	02:05:09	60	720	HEADER WAS UNCORRECTED
67	COMP			↑		
68	SN1997DE	23:00:03	15:59:51	12	1200	BIN X2
69	COMP			↑		
70-72	DDP284211	21:48:57	28:37:48	56	30	"
73	COMP			↑		
74	soqal-220	20:39:26	02:01:08	60	300	BIN X4
75	COMP			↑		
76	soqal-231	21:08:21	18:12:01	60	240	
77	COMP			↑		
78	soqal-237	21:43:54	46:37:00	60	420	
79	COMP			↑		

MANY BAD COMPS

BAD COMPS

110 through 141

159 through 183

187 through 209

60 inch Telescope Log

Observer: MADER

PI: BALTON, KENYON, HUCHRA, GELLER

Spectrograph: FAST

Grating: 300L

Date: 12/03/97

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
80	sogal_240	21:44:13	46:37:17	60	1020	
81	COMP			↑		
82	sogal_245	21:56:56	06:38:55	60	720	
83	COMP			↑		
84	sogal_246	21:56:58	06:39:25	60	720	
85	COMP			↑		
86-87	AX Per	01:36:23	54:15:02	12	3,70	
88	COMP			↑		
89	2H003039.1p12493	00:30:39	12:40:50	68	300	
90	COMP			↑		
91	2H00310p155311	00:31:10	15:53:11	68	300	
92	COMP			↑		
93	528.037018	01:41:41	05:51:10	55	480	
94	COMP			↑		
95	528.036806	01:42:54	05:50:08	55	600	
96	COMP			↑		
97	528.045181	01:44:08	06:18:55	55	600	
98	COMP			↑		
99	528.044072	01:52:52	06:13:58	55	600	
100	COMP			↑		
101	2H003248.2p14738	00:32:48	14:47:38	68	600	
102	COMP			↑		
103	2H003310.4p173618	00:33:10	17:36:18	68	600	
104	COMP			↑		
105	sogal_176	02:27:35	41:58:41	60	300	
106	COMP			↑		
107	sogal_167	02:21:33	39:22:31	60	900	
108	COMP			↑		
109	sogal_143	01:59:20	19:00:30	60	240	
110	COMP			↑		BRD

60 inch Telescope Log

Spectrograph: FAST

Observer: MADER

Grating: 300 L

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PI: BARTON, KENYON, GALEY, WILKES, KIRSHNER

Date: 12/03/97

Number	Object	R.A.	Dec.	L/R	Exp	Comments
111	Scgal-123	01:52:40	36:10:17	60	240	
112	COMP			↑		
113	Scgal-125	01:52:40	36:09:07	60	360	
114	COMP			↑		
115-116	D6 Tau	04:27:05	26:06:16	12	10,90	
117	COMP			↑		
118-119	DL Tau	04:33:59	25:20:39	12	10,150	
120	COMP			↑		
121-122	DR Tau	04:47:05	16:58:37	12	10,75	
123	COMP			↑		
124	HZ14	04:38:16	10:53:57	56	180	
125	COMP			↑		
126	N1700	04:54:28	-04:30:30	57	180	
127	COMP			↑		
x 128	528.094278	01:55:27	09:32:47	55	600	
129	COMP			↑		
x 130	528.096200	01:40:17	09:42:07	55	720	
131	COMP			↑		
x 132	528.087655	01:42:39	09:05:53	55	720	
133	COMP			↑		
x 134	528.077796	01:53:37	08:21:38	55	480	
135	COMP			↑		
136	AKN 120	05:13:38	-02:12:15	6	180	@R=40
137	COMP			↑		
138	SN1997do	07:26:43	47:05:36	2	900	BIN x 2.
139	COMP			↑		
140	SN00C 4107	07:57:03	49:33:40	2	1200	"
141	COMP			↑		
142	G191B2B	05:01:32	52:45:52	56	180	"
143	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>5847</u>
Observer: <u>MADER</u>				Grating: <u>300L</u>		
PI: <u>WUJRA, BARTON</u>				Date: <u>12/03/97</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
144	2M04220976p181617	04:22:09	18:16:17	68	720	BIN x 4
145	COMP			↑		
146	scgal-151	02:03:41	26:16:38	60	600	
147	COMP			↑		
143	scgal-155	02:03:56	19:40:08	60	900	
149	COMP			↑		
150	scgal-177	02:27:37	42:00:28	60	420	
151	COMP			↑		
152	2M0326008p265339	03:26:01	26:53:39	68	720	
153	COMP			↑		
154	2M0326336p263338	03:26:34	26:03:38	68	720	
155	COMP			↑		
156	2M0421227p223395	04:21:30	22:39:55	68	720	
157	COMP			↑		
158	NGC1259	08:23:50	11:33:01	60	300	
159	COMP			↑		
160	NGC6167	08:27:06	21:38:43	60	240	
161	COMP			↑		
162	NGC2213	08:36:06	25:36:28	60	300	
163	COMP			↑		
164	NGC2216	08:39:11	26:13:13	60	300	
165	COMP			↑		
166	Z003460	08:46:49	28:10:17	60	240	
167	COMP			↑		
168	Z001162	08:57:36	03:05:26	60	180	
169	COMP			↑		
170	2M084851.3p090121	08:48:51	09:01:21	68	420	
171	COMP			↑		
172	2M084855.7p090147	08:48:55	09:01:47	68	600	
173	COMP			↑		

60 inch Telescope Log

Spectrograph: FASTObserver: MADERGrating: 300LPage: 5843PI: MUKHERJEE, WILKES, KIRSHNER, MANDAYIDate: 12/03/97

Number	Object	R. A.	Dec.	L/R	Exp	Comments
174	ZM084940.7p10412	08:49:41	11:04:12	68	300	
175	COMP			↑		
176	ZM084842.1p103123	08:48:42	10:31:33	68	300	
177	COMP			↑		
178	ZM084830p095949	08:48:43	09:59:49	68	480	
179	COMP			↑		
180	ZM08480p11065	08:48:45	11:06:55	68	480	
181	COMP			↑		
182	MRK421	11:01:41	38:28:43	6	300	
183	COMP			↑		
184-185	Feige 34	10:36:41	43:21:50	56	60	
186	COMP			↑		
187-188	Feige 34	10:36:41	43:21:50	56	60	BIN X 2
189	COMP			↑		
190	SN 1997dg	11:40:56	11:28:46	2	900	"
191	COMP			↑		
192	rg1008.05	09:12:51	30:12:44	59	300	BIN X 4
193	COMP			↑		
194	rg1008.04	09:12:45	29:25:17	59	240	
195	COMP			↑		
196	rg1008.17	09:14:35	29:49:31	59	240	
197	COMP			↑		
198	N4051	12:00:36	44:49:35	6	180	
199	COMP			↑		
200	N4151	12:08:01	39:41:01	6	30	
201	COMP			↑		
202	N4258	12:16:30	47:34:51	6	120	
203	COMP			↑		
204	rg1008.L3	09:14:59	29:43:49	59	240	
205	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>5850</u>	
Observer: <u>MADER</u>			Grating: <u>300-L</u>			
PI: <u>KENYON, WILKES, BARTON</u>			Date: <u>12/04/97</u>			
Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	BIAS	-	-		-	BIN X 2
11-20	FLAT	-	-		12	"
21-30	FLAT	-	-		6	BIN X 4
31-40	BIAS	-	-		-	"
41-45	DARK	-	-		900	"
46-50	SKY				2	
51	COMP			↑		
52-53	z And	23:33:40	48:49:00	12	0.5, 12	
54	COMP			↑		
55	N7469	23:03:15	08:52:25	6	150	BRIGHT ONE
56	COMP			↑		
57	MRK 509	20:41:20	-10:54:18	6	180	
58	COMP			↑		
59-63	HD192281	20:10:47	40:07:01	50	4	
64	COMP			↑		
65-66	CI Cyg	19:50:12	35:41:04	12	1, 30	
67	COMP			↑		
68	segal_227	20:48:17	16:43:15	60	720	$\theta = 40$, $H\alpha = 6700 \text{ \AA}$
69	COMP			↑		
70	segal_249	22:15:19	37:18:05	60	540	PA = 45°
71	COMP			↑		
72	segal_255	22:23:01	30:55:30	60	360	PA = 45°
73	COMP			↑		
74	segal_263	22:57:35	19:46:58	60	720	PA = 90°
75	COMP			↑		
76	segal_269	23:00:10	31:22:30	60	300	
77	COMP			↑		
78	segal_270	23:03:10	08:52:25	60	300	$\theta = 40$
79	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>MADER</u>			Grating: <u>300L</u>		Page: <u>5851</u>	
PI: <u>BARTON, WILKES, KENTON</u>			Date: <u>12/04/97</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
80	sogal-272	23:14:35	04:29:54	60	360	PA=85°
81	COMP			↑		
82	sogal-273	23:14:43	04:32:02	60	240	PA=90°
83	COMP			↑		
84	sogal-275	23:15:16	18:57:42	60	720	
85	COMP			↑		
86	sogal-284	23:21:33	27:07:05	60	1080	PA=85°
87	COMP			↑		
88	sogal-303	23:51:23	20:05:47	60	300	PA=90°
89	COMP			↑		
90	sogal-304	23:51:25	20:06:45	60	300	PA=82°
91	COMP			↑		
92	sogal-311	00:01:20	13:06:39	60	180	PA=90°
93	COMP			↑		
94	sogal-296	23:41:29	03:44:24	60	300	
95	COMP			↑		
96	MRK335	00:03:45	19:55:27	6	180	
97	COMP			↑		
98-99	AX Per	01:36:23	54:15:03	12	370	
100	COMP			↑		
101	sogal-143	01:59:20	19:00:30	60	240	REDO FROM 12/03
102	COMP			↑		
103	sogal-123	01:52:40	36:10:17	60	240	REDO FROM 12/03
104	COMP			↑		
105	sogal-125	01:52:46	36:09:07	60	360	REDO FROM 12/03
106	COMP			↑		
107	sogal-090	01:25:44	-01:22:47	60	240	
108	COMP			↑		
109	sogal-088	01:25:18	-01:31:04	60	600	PA=-45°
110	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		
Observer: <u>MADER</u>				Grating: <u>300.8</u>		Page: <u>5852</u>
PI: <u>BARTON, KENYON, GELLER</u>				Date: <u>12/04/97</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
111	Sagal-098	01:26:19	34:45:14	60	240	PA = 45°
112	COMP			↑		
113	Sagal-099	01:26:22	34:42:11	60	240	PA = 90°
114	COMP			↑		
115	Sagal-100	01:26:31	34:40:32	60	540	PA = 90 - 38°
116	COMP			↑		
117-118	DR Tau	04:27:05	26:06:16	12	10,90	PA = 90°
119	COMP			↑		
120-121	DL Tau	04:33:39	25:20:37	12	10,150	
122	COMP			↑		
123-124	DR Tau	04:47:06	16:58:43	12	10,75	
125	COMP			↑		
126	N1700	04:54:28	-04:56:30	57	180	
127	COMP			↑		
128	H2 14	04:38:16	10:53:57	56	180	
129	COMP			↑		
130	528.094278	01:55:27	09:32:47	55	480	REDO FROM 12/03
131	COMP			↑		
132	528.096200	01:40:17	09:42:07	55	720	REDO FROM 12/03
133	COMP			↑		
134	528.087655	01:42:39	09:05:53	55	720	REDO FROM 12/03
135	COMP			↑		
136	528.077796	01:53:37	08:21:38	55	300	REDO FROM 12/03
137	COMP			↑		
138	528.081104	01:33:34	08:37:31	55	300	BRIGHTER ONE
139	COMP			↑		
140	528.076053	01:40:01	08:16:01	55	300	
141	COMP			↑		
142	528.081062	01:55:43	08:35:22	55	300	
143	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		
Observer: <u>MADER</u>				Grating: <u>300R</u>		Page: <u>5853</u>
PI: <u>KIRSHNER, BARTON, GELLER, MUMFRA</u>				Date: <u>12/04/97</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
144	SN1997do	07:26:43	47:05:30	2	900	BIN X 2
145	COMP			↑		
146	SNugc4107	07:57:03	49:33:40	2	1200	"
147	COMP			↑		
148-149	Hiltner 600	06:42:37	02:11:25	50	30	"
150	COMP			↑		
151	sogal_131	01:55:21	36:18:25	60	300	BIN X 4 PA=45°
152	COMP			↑		
153	sogal_1166	02:21:29	39:22:31	60	780	PA=45°
154	COMP			↑		
155	sogal_179	02:28:13	19:35:00	60	540	PA=45°
156	COMP			↑		
157	sogal_127	01:54:54	36:55:04	60	300	PA=90°
158	COMP			↑		
159	sogal_129	01:55:02	36:55:10	60	1080	
160	COMP			↑		
161	sogal_128	01:54:59	36:52:11	60	600	
162	COMP			↑		
163	xe470.009922	02:29:46	10:11:55	55	480	
164	COMP			↑		
165	24032555.4p285732	03:25:55	28:57:32	68	900	
166	COMP			↑		
167	N001259	08:23:50	11:33:01	60	240	REDO FROM 12/03
168	COMP			↑		
169	N006167	08:27:06	21:38:43	60	180	REDO FROM 12/03
170	COMP			↑		
171	N002213	08:36:06	25:36:38	60	300	REDO FROM 12/03
172	COMP			↑		
173	N002216	08:39:11	26:13:13	60	240	REDO FROM 12/03
174	COMP			↑		

60 inch Telescope log

Spectrograph: FASTObserver: MADERGrating: 300LPage: 5854PI: GELLER, HUCHRA, MAHDAYIDate: 12/04/97

Number	Object	R. A.	Dec.	L/R	Exp	Comments
175	2003460	08:46:49	28:10:17	60	180	REDO FROM 12/03
176	COMP			↑		
177	2001162	08:57:36	03:05:26	60	180	REDO FROM 12/03
178	COMP			↑		
179	2004425	08:43:16	13:05:10	60	300	PA = 0°
180	COMP			↑		
181	N000823	09:01:25	10:12:01	60	240	PA = 90°
182	COMP			↑		
183	2005218	09:04:37	13:33:15	60	240	PA = 48°
184	COMP			↑		
185	2000691	09:09:01	53:50:28	60	180	PA = 90°
186	COMP			↑		
187	N001079	09:11:31	28:49:26	60	180	
188	COMP			↑		
189	2M08483.9p075948	08:48:43	09:59:48	68	480	REDO FROM 12/03
190	COMP			↑		
191	2M08481.1pN3133	08:48:42	10:31:33	68	240	REDO FROM 12/03
192	COMP			↑		
193	2M08485.2p110655	08:48:45	11:06:55	68	540	REDO FROM 12/03
194	COMP			↑		
195	2M08485.3p070120	08:48:51	09:01:20	68	420	REDO FROM 12/03
196	COMP			↑		BRIGHT ONE
197	2M08485.7p090947	08:48:56	09:09:47	68	600	REDO FROM 12/03
198	COMP			↑		
199	2M08494.2p110412	08:49:41	11:04:12	68	300	REDO FROM 12/03
200	COMP			↑		
201	2M08493.6p090822	08:49:36	09:08:22	68	300	PA = 70°
202	COMP			↑		
203	1gh008.04	09:12:45	29:25:17	68	240	PA = 90° REDO FROM 12/03
204	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>5855</u>	
Observer: <u>MADER</u>			Grating: <u>300L</u>		Date: <u>12/04/97</u>	
PI: <u>MAHDAVI</u>						
Number	Object	R. A.	Dec.	L/R	Exp	Comments
205	rg1008.05	09:12:51	30:12:44	59	180	REDO FROM 12/03
206	COMP			↑		
209	rg1001.10	08:54:30	36:07:03	59	300	PA = 10°
210	COMP			↑		
211	rg1008.02	09:11:54	29:34:11	59	420	PA = 10°
212	COMP			↑		
213	rg1001.11	08:54:32	36:30:33	59	300	PA = 0°
214	COMP			↑		
215	rg1008.06	09:13:01	29:32:16	59	480	PA = 10°
216	COMP			↑		
217	rg1008.09	09:13:32	28:57:08	59	240	PA = -30°
218	COMP			↑		
219	rg1008.10	09:13:33	29:59:59	59	480	PA = 80°
220	COMP			↑		
221	rg1008.13	09:13:37	29:59:57	59	240	PA = 0° HEADER WAS rg1008.10
222	COMP			↑		
223	rg1008.18	09:14:35	30:08:25	59	180	PA = 10°
224	COMP			↑		
225	rg1008.17	09:14:35	29:49:31	59	240	PA = 90° REDO FROM 12/03
226	COMP			↑		
227-236	BIAS	-	-		-	BIN X 4
237-246	FLAT	-	-		6	"
247-256	FLAT	-	-		12	BIN X 2
257-266	BIAS	-	-		-	"
267-271	DARK	-	-		900	"

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>5856</u>	
Observer: <u>MADER</u>			Grating: <u>300l</u>		Date: <u>12/05/97</u>	
PI: <u>KENNEDY, WILKES, GALLER, KIRSHNER</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS	-	-	-	-	BIN X 2
11-20	FLAT	-	-	-	12	"
21-30	FLAT	-	-	-	6	BIN X 4
31-40	BIAS	-	-	-	-	"
41-45	DARK	-	-	-	900	"
46-50	SKY				2	
51	COMP			↑		
52-53	BDP 204211	21:48:57	28:37:48	56	30	THIN CLOUDS
54	COMP			↑		
55-56	Z And	23:33:40	48:49:06	12	05, 12	
57	COMP			↑		
58	N7469	23:03:15	08:52:25	6	150	BRIGHT ONE
59	COMP			↑		
60	3C 390.3	18:45:37	79:43:07	6	600	
61	COMP			↑		
62-63	CI Cyg	19:50:12	35:41:04	12	1,30	
64	COMP			↑		
65	MRK 335	00:03:45	19:55:27	6	180	
66	COMP			↑		
67-68	AX Per	01:36:23	54:15:02	12	3,70	
69	COMP			↑		
70	518.007189	21:36:07	09:39:38	55	300	PA=25° CLOUDS THICKER
71	COMP			↑		
72	518.168036	21:30:58	13:59:11	55	300	PA=53°
73	COMP			↑		
74	SN 1997de	23:00:03	15:59:57	2	1200	BIN X 2. PA=90°
75	COMP			↑		
						BIN X 4, CLOUDS TOO THICK

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>5857</u>
Observer: <u>MADER</u>				Grating: <u>300L</u>		
PI: <u>BARTAN, WELER, TENYON</u>				Date: <u>12/05/97</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
76	soyal_154	02:03:49	14:44:21	60	360	PA = 7°
77	COMP			↑		
78	soyal_137	01:58:55	37:00:58	60	360	PA = -45°
79	COMP			↑		
80	soyal_103	01:33:29	49:56:29	60	240	PA = 30°
81	COMP			↑		
82	soyal_111	01:49:08	13:03:35	60	300	PA = 90°
83	COMP			↑		
84	soyal_109	01:48:53	10:31:19	60	360	CLOUDS VARIABLE
85	COMP			↑		
•						HIGH HUMIDITY!!!
86	472.136878	03:17:05	15:29:02	55	600	PA = 45°
87	COMP			↑		
88	470.003498	02:31:49	09:44:09	55	300	PA = 40°
89	COMP			↑		
90	470.002096	02:53:54	09:37:53	55	300	PA = -10°
91	COMP			↑		
92	470.011466	02:38:53	10:17:39	55	360	PA = -20°
93	COMP			↑		
94-95	DR Tau	04:47:05	16:58:37	60	10,75	PA = 90°
96	COMP			↑		
97-98	DL Tau	04:33:39	25:20:39	60	10,150	
99	COMP			↑		
100-101	D6 Tau	04:27:05	026:00:16	60	10,30	
102	COMP			↑		
103	HZ 14	04:38:16	10:53:57	56	180	
104	COMP			↑		
105	HZ 14	"	"	56	180	BIN X 2
106	COMP			↑		

Start of FAST Run
(1st 3 nights snowed out)

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>5867</u>		
Observer: <u>P Berlin</u>		Grating: <u>300L</u>		Date: <u>12/22/97</u>		
PI: <u>Walker Adams</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	DARK			0	15m	1' of snow today!
11-20	BTAS			0	0s	
21-30	FLAT			0	6s	clearing ~ 10 pm
31-40	BTAS			0	0s	
41-50	FLAT			0	12s	open @ 11.
51-52	Hitner 60					standard setup ↓
53	COMP					3" slit, 300L/mm grating @ 60°
54	Arg 120	05:43	-00:12	6	3m	
55	COMP			↑		
56-57	DG Tau	04	+26		10s, 10s	
58						
59-60	DL Tau	04	+25		12s, 10s	
61						
62-63	DR Tau	04:47	+1658	12	12s, 10s	
64	COMP			↑		poor seeing; mostly clear
65	DL Tau	04:39	+25:20	12	3m	
66	COMP			↑		
67	COMP					2" slit, tilt = 677.0 ↓
68-77	FLAT 2	05:38	-02:29	71	8s	taken here to help compensate
78, 80	4771m0961	05:38	-02:29	71	15m	for interference fringes.
79, 81	COMP			↑	5s	
82, 84	PO53939m0231	05:39	-02:31	71	15m, 8m	extended em
83, 85	COMP			↑		all across CCD.
86-95	FLAT 2				8s	stopped by fog; close
96-98	DARK				15m	
99, 101	4771m0961	05:38	-02:45	71	15m	extended em
100, 102	COMP			↑		
103, 104	Hitner 60	06:47		71	45s	observed as project 71
105	COMP					for Walker Adams

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>5868</u>
Observer: <u>PB</u>				Grating: <u>3002</u>		Date: <u>12/22/97</u>
PI: <u>Kirshner & Andi</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
106, 108	SN1997ef	07:57	+19:33	2	20m	Normal setup; bin by 2
107, 109	COMP			↑		3" slit; tilt = 60.0
110	09h 08.23	09:15	+29:15	S9	10m	em
111	COMP			↑		
112	008.23	09:14	+29:43	S9	3m	redo from 12/3/97
113	COMP			↑		
114	008.20	09:14	+30:10	S9	6m	redo from 12/3
115	COMP			↑		
116	008.24	09:15	+29:16	S9	5m	redo from 12/3
117	COMP			↑		
118	008.19	09:11	+29:59	S9	10m	*'s on slit em
119	COMP			↑		
120	008.26	09:16	+30:49	S9	5m	
121	COMP			↑		
122	008.29	09:16	+30:57	S9	4m	SD
123	008.30	09:16	+30:54	S9	2m	NE
124	COMP			↑		
125	010.08	09:18	+34:17	S9	4m	
126	COMP			↑		
127	008.31	09:16	+30:54	S9	8m	
128	COMP			↑		
129	010.05	09:17	+34:30	S9	8m	
130	COMP			↑		
131	010.06	09:18	+33:33	S9	5m	
132	COMP			↑		
133	010.07	09:18	+33:52	S9	5m	
134	COMP			↑		
135	010.09	09:18	+33:52	S9	6m	
136	COMP			↑		
137	010.11	09:18	+34:22	S9	6m	

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>5869</u>		
Observer: <u>PB</u>		Grating: <u>300L</u>				
PI: <u>Andi</u>		Date: <u>12/22/97</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
138	COMP			↑		
139	γh 010.13	09:19	+34:40	S9	6m	
140	COMP			↑		
141	010.14	09:19	+33:52	S9	6m	
142	COMP			↑		
143	010.15	09:19	+33:44	S9	4m	
144	COMP			↑		
145	010.16	09:19	+33:37	S9	2m	
146	COMP			↑		
147	010.20	09:19	+32:35	S9	8m	
148	COMP			↑		
149	010.21	09:19	+33:53	S9	6m	
150	COMP			↑		
151	010.22	09:19	+33:25	S9	5m	
152	COMP			↑		
153	SN 1997eg	13:11	+22:55	2	15m	
154	COMP			↑		
155	H244	13:21	+36:23	S6	2m	
156	COMP			↑		
157	MRK421	11:01	+38:28	6	4m	clouds all over @ dawn
158	COMP			↑		
159	N4151	12:08	+39:41	6	30s	
160	COMP			↑		
161	N5548	14:15	+25:22	6	3m	
162	COMP			↑		
162-172	BIAS				0s	
173-182	FLAT				6s	
183-192	BIAS				0s	bin by 2
193-202	FLAT				12s	bin by 2
203-212	DARK				20m	bin by 2

60 inch Telescope Log
 Observer: PBerlin
 PI: Geller & Walk

Spectrograph: FAST
 Grating: 300R 3" slit
 Date: 12/23/97

Page: S870

Number	Object	R.A.	Dec.	L/R	Exp	Comments
LS	DARK				15m	
5-10	DARK				20m	bin by 2
11-20	BIAS				0s	
21-30	FLAT				6s	
31-40	BIAS				0s	bin by 2
41-50	FLAT				12s	bin by 2
51-60	DARK				15m	bin by 4
61	S28.034936	01:32	+05:14	SS	15m	Fog after sunset - em clearing; poor seeing
62	COMP			↑		
63	S28.023308	01:31	+05:06	SS	6m	bin by 2; * to E
64	COMP			↑		
65	S28.038295	01:36	+05:55	SS	10m	seeing settling down
66	COMP			↑		
67	S28.010771	01:54	+06:02	SS	12m	---
68	COMP			↑		
69	S28.042213	01:31	+06:08	SS	6m	
70	COMP			↑		
71	S28.013312	01:43	+06:12	SS	6m	
72	COMP			↑		
						$\lambda = 6500 \text{ \AA}$
73	COMP	test				↓ tilt = 677.0; 2" slit
74-83	FLAT 2	05:38	-02:29	71	8s	For Scott Walk & Nancy Adams
84,86	4771m1090	05:38	-02:43	71	15m	
85,87	COMP			↑	SS	
88,90	P053902m0238	05:39	-02:38	71	15m	bin by 2 E to W
89,91	COMP			↑	10s	"
92,96	FLAT 2	05:39	-02:38	71	16s	bin by 2
97,99	P053925m0231	05:39	-02:31	71	15m	bin by 4
98,100	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>5871</u>	
Observer: <u>PB</u>			Grating: <u>30R</u>			
PI: <u>Wolke Kirshner & And.</u>			Date: <u>12/23/97</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
101,103	POS3833, m0236	05:36	-02:36	71	15m	2" slit, tilt=677.0
102,104	COMP			↑		sig Ori to E; bright scattered light
105,1	POS3849, m0241	05:38	-02:41	71	15m	use W side for sky subtraction
106,1	COMP			↑		2" stopped by fog
107-116	FLAT2	05:38	-02:41	71	8s	
117-118	Hiltner 6W	06:42	-02:42	56-71	75s	clear but wet; quicksee
119	COMP			↑		then close. more fog
						open again
120	rg h010.29	09:19	+33:55	59	4m	normal setup: 3" slit, tilt=60°
121	COMP			↑		
122	010.30	09:20	+33:42	59	5m	
123	COMP			↑		
124	010.25	09:19	+33:43	59	15m	
125	COMP			↑		
126,128	SN1997ef	07:57	+49:33	2	20m	bin by 2
127,129	COMP			↑		
130	rg h008.29	09:16	+28:53	59	15m	MKT in cloud em, CBS
131	COMP			↑		
132	010.33	09:20	+33:04	59	3m	em
133	COMP			↑		
134	010.34	09:20	+33:39	59	3m	
135	COMP			↑		
136	010.40	09:21	+33:24	59	2m	
137	COMP			↑		
138	010.41	09:21	+33:W	59	5m	
139	COMP			↑		
140	010.43	09:22	+33:50	59	2m	
141	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Andi

Spectrograph: FAST

Grating: 3002

Date: 12/23/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
142	ryh 010.45	09:22	+33:36	S9	10m	em
143	WMP			r		
144	010.46	09:23	+33:45	S9	5m	
145	WMP			r		
146	010.48	09:25	+34:06	S9	12m	em, pec, v. blue!
147	WMP			r		
148	ryh 011.01	09:25	+24:29	S9	5m	
149	WMP			r		
150	11.03	09:27	+24:24	S9	6m	
151	WMP			r		
152	11.04	09:29	+24:45	S9	15m 9m	redo oh boy more clacks... wham! foggied out again
153	WMP			r		
154-163	ISFAS				0s	
164-173	FLAT				6s	
174-183	BIB				0s	
184-193	FLAT				12s	
194-203	DARK				15m	
194-206						

60 inch Telescope Log
 Observer: MAERI
 PI: FAST COMBO

Spectrograph: FAST
 Grating: 300A; 3" slit
 Date: 12/26/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					x4
11-20	"					x2
21-30	FLAT					x4
31-40	"					x2
41-45	SKY					x2
46-50	SKY					x4
51	CI Cyg	19:50	35:41		3	#12
52	"	"	"		45	
53	COMP	↑				
54	z And	23:33	48:49		1	#12
55	"	"	"		20	
56	COMP	↑				
57	AX Per	1:36	54:15		5	#12
58	"	"	"		100	
59	COMP	↑				
60	Feige 24	2:32	3:31		180	STD
61	COMP	↑				
62	M46 335	0:04	19:55		180	#6
63	COMP	↑				
64	so gal. 228	20:48	16:45		1500	redo in bin by 4... nearby #60
65	so gal. 267	23:00	31:25		600	#60
66	COMP	↑				
67	so gal. 287	23:21	27:03		1800	#60
68	so gal. 288	23:21	27:04		1800	#60; galaxy C 46
69	COMP	↑				for both 67 & 68 (C1' apart)
70	so gal. 313	0:01	31:26		360	#60; galaxy C 43, M20
71	so gal. 314	0:01	31:26		420	#60
72	COMP	↑				for both 70 & 71 (C1' apart)
73	so gal. 315	0:01	23:29		300	#60
74	so gal. 316	0:01	23:29		1200	#60 little bit of shows up

60 inch Telescope Log

Observer: MACEI

PI: FAST COMBO

Spectrograph: FAST

Grating: 300L; 3" slit

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Date: 12/26/97

Number	Object	R.A.	Dec.	L/R	Exp	Comments
75	COMP	↑				for 73 & 74 (cl' apart)
76	528_47644	1:39	6:27		600	#55
77	COMP	↑				
78	528_48601	1:32	6:31		800	#55
79	"	"	"			too faint, getting another exp
80	COMP	↑				for 78 & 79
81	528_68746	1:45	7:46		900	#55
82	COMP	↑				
83	528_74723	1:43	8:10		900	#55
84	COMP	↑				
85	528_84976	1:43	8:53		600	#55
86	COMP	↑				CLOSE DUE TO WIND
87-91	DARK				1200	bin by 2
92	ngc 1092	10:05	19:16		300	bin by 4 #60
93	COMP	↑				
94	ngc 105	10:23	12:37		900	#60
95	COMP	↑				
96	ngc 106	10:23	13:37		720	#60
97	COMP	↑				
98	ngc 11020	9:28	30:13		480	#59
99	ngc 11021	9:28	30:11		300	#59
100	COMP	↑				both 98 & 99
101	SN 97ef	7:57	49:34		1200	bin by 2 #2
102	"	"	"		"	" "
103	COMP	↑				
104	ngc 11022	9:28	29:42		360	#59
105	COMP	↑				
106	ngc 11027	9:29	30:23		360	#59
107	"	"	"		"	" faint...
108	COMP	↑				106 & 107

60 inch Telescope Log Observer: <u>MACEY</u> PI: <u>FAST COMBO</u>	Spectrograph: <u>FAST</u> Grating: <u>300 R; 3" slit</u> Date: <u>12/26/97</u>
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Number	Object	R.A.	Dec.	L/R	Exp	Comments
109	ngc 011.024	9:30	30:27		600	
110	COMP	↑				
111	SN 1997ei	11:55	57:29		600	bin by 2 #2
112	"	"	"		"	" "
113	COMP	↑				for both 111 & 112
114	N4051	12:00	44:44		180	#6
115	COMP	↑				
116	N425P	12:16	47:35		150	#6
117	COMP	↑				
118	MX 277	13:31	62:33		120	#6
119	COMP	↑				
120	N554P	14:15	25:22		180	#6
121	COMP	↑				
122	11244	13:21	36:23		90	#6
123	COMP	↑				
124-133	DARK				900	x4
		END	OF	NIGHT		

60 inch Telescope Log
 Observer: MACRI
 PI: FAST COMBO
 Spectrograph: FAST
 Grating: 300 Å; 3" alt
 Date: 12/23/97
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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					x4
11-20	BIAS					x2
21-25	DARK				1200	x2
26-35	FLAT				12	x2
36-45	FLAT				6	x4
46-50	SKY				var.	x2
51-55	SKY				var.	x4
56	CI Cyg	19:50	35:41		1	#12
57	"	"	"		30	#12
58	COMP	↑				
59	Z And	23:33	47:49		0.5	
60	"	"	"		12	#12
61	COMP	01:36 00:20.45	53:58.50			telescope moving for comp
62	AX Per	1:36	54:15		3	#12
63	"	"	"		70	
64	COMP	↑				
65	Mrk 335	0:03	19:55		180	#6
66	COMP	↑				
67	Mrk 504	20:41	-10:54		150	#6
68	COMP	20:58.12	-09:40.38			telescope moving - used anyway
69	N7469	23:03	8:52		150	#6
70	COMP	23:04.11	08:41.28			telescope moving - used anyway
71	Feige 24	2:35	3:44		180	STD
72	COMP	↑				
73	Sagal-218	20:34	7:59		900	#60
74	COMP	↑				
75	Sagal-227	20:48	16:44		1200	#60 (in bin by 2)
76	COMP	↑				bright & very close!
77	Sagal-232	21:08	18:11		720	#60 forget to change to x4
78	COMP	↑				sorry... NO PROBLEM!

used anyway

used anyway

used anyway

60 inch Telescope Log

Spectrograph: FAST

Observer: MACCI

Grating: 300 L; 3" slit

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PI: FAST COMBO

Date: 12/27/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
79	SN 1997dt	23:00	15:54		600	#2
80	"	"	"		"	
81	COMP	↑				79180
82	Sogal - 271	23:03	8:53		470	#60
83	COMP	↑				
84	Sogal - 285	23:21	8:59		600	#60 Superposed * <i>good em</i>
85	Sogal - 286	23:21	9:04		900	#60
86	COMP	↑				84185
87	Sogal - 289	23:21	5:00		900	#60 } pretty faint
88	Sogal - 290	23:21	5:02		480	#60 } red?
89	COMP	↑ <i>NO</i>				17688; 90 (forgot COMP)
90	Sogal - 291	23:36	2:09		360	#60
91	Sogal - 292	23:36	2:09		450	#60 stopped due to clouds <i>redo</i>
92	531 - 33509	2:53	6:16		450	#55
93	COMP	↑				winds picking up
94	534 - 39610	4:12	5:33		600	#55
95	COMP	↑				
96	534 - 91995	4:16	8:10		600	#55
97	COMP	↑				
98	534 - 66935	4:06	6:56		480	#55
99	COMP	↑				
100	534 - 89510	3:56	2:06		480	#55
101	COMP	↑				
102	534 - 25679	4:17	4:47		480	#55
103	COMP	↑				
104	533 - 56228	3:42	8:04		480	#55
105	COMP	↑				
106	533 - 35164	3:54	6:13		480	#55
107	COMP	↑				
108	533 - 03319	3:34	3:33		480	#55

60 inch Telescope Log				Spectrograph: <u>FAST</u>		
Observer: <u>MACRI</u>				Grating: <u>300 L: 3"</u>		Page: <u>5881</u>
PI: <u>FAST COMBO</u>				Date: <u>12/29/97</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
110	532-03864	3:20	3:35		480	#55
111	COMP	↑				
112	532-14998	3:26	4:32		360	#55
113	COMP	↑				
114	532-31601	3:08	5:58		480	#55
115	COMP	↑				
116	531-69927	2:55	9:27		600	#55
117	COMP	↑				
118	rg h012.02	9:53	33:54		480	#59
119	COMP	↑				
120	rg h012.04	9:53	34:02		480	#59
121	COMP	↑				
122	rg h 012.06	9:53	33:39		480	#59
123	COMP	↑				CLOSE DUE TO WINDS
124-133	DARK					

<p>60 inch Telescope Log</p> <p>Observer: <u>MACLI</u></p> <p>PI: <u>FAST COMB D</u></p>	<p>Spectrograph: <u>FAST</u></p> <p>Grating: <u>300 L₁ 3" x 6"</u></p> <p>Date: <u>12/20/97</u></p> <p style="text-align: right;">Page: <u>5273</u></p>
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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					x2
11-20	BIAS					x4
21-30	FLAT				6	x2
31-40	FLAT				12	x4
41-45	SKY				var	x4
46-50	SKY				var	x2
51	C1 Cy4	14:50	35:41		2	#12
52	"	"	"		40	"
53	COMP	↑				
54	7 And	23:34	48:49		3	#12
55	"	"	"		30	"
56	COMP	↑				
57	AX Per	1:36	54:15		5	#12
58	"				150	"
59	COMP	↑				
60	N 7469	23:03	8:52		180	#6
61	COMP	↑				
62	Mrk 335	0:04	20:11		240	#6
63	COMP	↑				
64	Felge 24	2:32	3:30		240	540
65	COMP	↑				getting cloudy
66	524-17354	0:04	5:12		600	#55
67	COMP	↑				
68	524-17330	0:05	5:12		480	#55
69	COMP	↑				
70	524-10670	0:01	4:33		600	#55
71	COMP	↑				
72	524-12447	23:59	4:46		600	#55 used comp 71
73	COMP	23:59:51	+05:30:27			moved telescope
74	524-20499	23:59	5:30			#55

telescope frequently moved during comp
 see over for how problem was handled

60 inch Telescope Log

Observer: MACCI

PI: FAST COMBO

Spectrograph: FAST

Grating: 300 R: 3" 247

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Date: 12/21/99

Number	Object	R.A.	Dec.	L/R	Exp	Comments
75	COMP	↑				
76	524-28065	0:01	6:14		480	#55
77	COMP	↑				
78	525-24069	0:31	5:10		470	#55
79	COMP	↑				
80	524-36939	0:16	7:05		490	#55
81	COMP	↑				
82	525-34839	0:31	5:52		470	#55
83	COMP	↑				
84	525-37562	0:39	6:01		600	#55
85	COMP	↑				
86	525-47710	0:25	6:40		600	#55
87	COMP	↑				
88	526-05845	0:48	4:06		600	#55 bright emission lines
89	COMP	↑				
90	526-45128	0:51	7:43		470	#55
91	COMP	↑				
92	526-23970	0:54	5:46		470	#55
93	COMP	↑				
94	525-75471	0:31	8:28		600	#55
95	COMP	↑				
96	531-36287	2:56	6:29		600	#55
97	COMP	↑				
98	531-36475	2:48	6:31		600	#55 emission lines
99	COMP	↑				
100	531-50095	2:43	7:42		600	#55
101	COMP	↑				
102	529-49234	1:48	6:32		600	#55
103	COMP	↑				
104	528-71529	1:44	7:52		600	#55

60 inch Telescope Log

Observer: MACEIPI: FAST COMBOSpectrograph: FASTGrating: 300 R; 3" slit?Page: 5279Date: 12/28/93

Number	Object	R.A.	Dec.	L/R	Exp	Comments
105	COMP	↑				
106	DG Tau	4:27	26:06		10	#12
107	"	"			90	
107	COMP	↑				
109	DL Tau	4:33	25:20		10	#12
110	"	"			150	
111	COMP	↑				
112	DL Tau	4:43	16:57		10	#12
113	"	"			75	
114	COMP	↑				
115	Akn 120	5:13	-0:12		180	#6
116	COMP	↑				
117	SN 1997c.	7:57	49:33		1200	x2 #2
117	"	"	"		"	
118	COMP	↑				
120	rgn 012.08	9:34	33:54		300	#59
121	COMP	↑				
122	rgn 012.09	9:35	34:44		360	#59 used comp 121
123	COMP	09:35:15	34:13:51			moving telescope
124	rgn 012.10	9:35	33:39		420	#59
125	COMP	↑				
126	rgn 012.11	9:35	34:59		420	#69
127	COMP	↑				
128	rgn 012.12	9:37	33:49		480	#59
129	COMP	↑				
130	rgn 017.01	9:37	35:35		420	gal @ 40; * @ 44 #59
131	COMP	↑				
132	rgn 017.05	9:39	36:33		480	#59
B3	COMP	↑				
134	rgn 017.09	9:42	36:20		300	#59

60 inch Telescope Log
 Observer: MACRI
 PI: FAST COMBO

Spectrograph: FAST
 Grating: 300 L: 3" slot
 Date: 12/28/92

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
135	COMP	↑				
136	rg h 017.10	9:43	36:13		360	#59
137	COMP	↑				
138	rg h 017.12	9:43	36:15		300	#59
139	COMP	↑				
140	rg h 017.14	9:43	36:10		480	#59
141	COMP	↑				
142	rg h 017.15	9:45	36:33		360	#59 superposed slow found em velocity z emsa
143	COMP	↑				
144	rg h 017.16	9:45	36:09		300	x2 #59; galaxy @ 8)
145	COMP	↑				
146	rg h 021.01	11:07	28:43		300	#59
147	COMP	↑				
148	rg h 029.02	11:07	28:35		360	#59
149	COMP	↑				
150	rg h 029.03	11:07	28:49		480	#59
151	COMP	↑				
152	ngc 21 - 150	11:40	15:21		300	#60 used comp 157
153	ngc 21 - 151	11:40	15:21		600	" used comp 157
154	COMP	11:51 46	+16 49 34			152 & 153 MOVED TELESCOPE
155	ngc 21 - 183	11:51	16:49		480	#60
156	ngc 21 - 184	11:52	16:51		720	"
157	COMP	11:52:31	16:56			155 & 156
158	ngc 21 - 192	11:58	25:14		480	#60 used comp 157
159	ngc 21 - 195	11:58	25:16		480	" used comp 157
160	COMP	12:05:27	+21:06:43			158 & 159 MOVED TELESCOPE
161	ngc 21 - 210	12:05	8:54		300	#60
162	ngc 21 - 212	12:05	8:54		900	"
163	COMP					161 & 162
164	ngc 21 - 213	12:09	24:15		600	#60

60 inch Telescope Log

Observer: MACKI

PI: FAST COMBO

Spectrograph: FAST

Grating: 300 L; 3" slit

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Date: 12/24/99

Number	Object	R. A.	Dec.	L/R	Exp	Comments
165	COMP	↑				
166	NGC 214	12:09	29:10		360	#60
167	COMP	↑				
168	NGC 217	12:12	29:11		240	#60
169	NGC 218	12:12	29:08		720	#60
170	NGC 219	12:12	29:10		600	#60
171	COMP	↑				168, 169, 170
172	SN 1997eg	13:11	22:56		600	#2 x2
173	"	"	"		"	"
174	COMP	↑				
175	NGC 29.04	11:07	27:31		360	#59 x4
176	COMP	↑				
177	NGC 29.05	11:08	28:31		480	#59
178	COMP	↑				
179	NGC 29.06	11:08	28:32		360	#59
180	COMP	↑				
181	NGC 29.07	11:08	28:31		600	#59
182	COMP	↑				
183	NGC 29.10	11:08	28:51		600	#59
184	COMP	↑				
185	NGC 29.11	11:08	28:52		600	#59
186	COMP	11:08	28:57			
187	NGC 29.10	11:08	28:51		600	#6 used comp 186
188	COMP	11:04:25	22:37:50			moved telescope
189	Mrk 421	11:01	38:24		300	#6 used comp 186
190	COMP	11:57:20	44:26:00			moved telescope; used comp
191	NGC 51	12:00	44:48		180	#6
192	COMP	↑				
193	NGC 51	12:10	39:25		45	#6
194	COMP	↑				

195-199 DARK
200-209 DARK

1200 x2
400 x4

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>MACRI</u>		Grating: <u>300L; 3° slit</u>			Page: <u>5889</u>	
PI: <u>FAST COM80</u>		Date: <u>12/29/97</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					x4
11-20	BIAS					x2
21-30	FLAT				6	x4
31-40	FLAT				12	x2
41-45	DARK				1200	x2 cloudy for 6 hrs...
46	SN1997ef	7:57	49:34		1200	#2 x2
47	"	"	"		"	"
48	COMP	↑				
49	DL Tau	4:27	26:06		15	#12
50	"	"	"		110	#12
51	COMP	↑				
52	DL Tau	4:33	26:20		15	#12
53	"	"	"		180	#12
54	COMP	↑				
55	DR Tau	4:47	16:58		15	#12
56	"	"	"		100	#12
57	COMP	↑				getting cloudy again. 1 1/2 hr
58	rg h 029-12	11:09	28:28		360	#59 re-opened
59	COMP	↑				
60	rg h 029-14	11:09	28:40		600	#59
61	COMP	↑				
62	rg h 029-16	11:09	28:37		900	#59
63	COMP	↑				
64	rg h 029-17	11:09	28:55		900	#59
65	COMP	↑				
66	rg h 029-20	11:10	28:57		900	#59
67	COMP	↑				
67	rg h 029-13	11:09	28:08		900	#59 ; # ~ 60, 80 & 40
69	COMP	↑				
70	rg h 029-21	11:10	28:56		1200	#59

60 inch Telescope Log
 Observer: P Berlin
 PI: Kenny Geller

Spectrograph: FAST
 Grating: 300R
 Date: 12/30/97

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	BIAS				0s	
11-20	FLAT				6s	
21-30	BIAS				0s	
31-40	FLAT				12s	
41-45	sky				3s	on clouds
46	comp				6s	
47-51	DARK				15m	solid cloud after sunset
52	DARK				20m	
53-54	ARPer	01:36	+54:15	12	3m	
55	comp			↑		lots of cloud
56	DGTar	01:27	+16	12	3m	open ~8:30
57				↑		
58	DLTar	04:53	+25	12	3m	
59				↑		
60-61	DRTar	04:47	+16	12	6m 90s	
62				↑		
63-64	M31	00:40	+40:59	57	2m	
65	comp			↑		
66-67	M32	00:39	+40:35	57	2m	
68	comp			↑		
69	225m180	00:41	+41:05	57	10m	
70	comp			↑		
71	467, 005262	01:31	+09:57	55	10m	em
72	comp			↑		
73	467, 062749	01:28	+13:47	55	12m	em
74	comp			↑		
75	467, 065751	01:30	+14:06	55	5m	em
76	comp			↑		
77	467, 072401	01:21	+14:30	55	6m	
78	comp			↑		

only 1 bin by 2 darks

60 inch Telescope Log
 Observer: PB
 PI: Geller

Spectrograph: FAST
 Grating: 300R
 Date: 12/30/97

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
79	467.072811	01:25	+14:31	SS	5m	
80	COMP			↑		clearing??!!
81	528.055814	01:53	+06:54	SS	10m	
82	COMP			↑		
83	528.048661	01:32	+06:31	SS	8m	redo from 12/26
84	COMP			↑		
85	528.086577	01:55	+06:54	SS	6m	
86	COMP			↑		
87	528.081470	01:53	+09:12	SS	10m	
88	COMP			↑		
89	529.007109	01:56	+04:04	SS	4m	
90	COMP			↑		
91	529.003272	02:11	+03:46	SS	4m	em+
92	COMP			↑		
93	529.016321	02:03	+04:47	SS	10m	em LSB
94	COMP			↑		
95	529.020790	02:09	+08:06	SS	10m	em
96	COMP			↑		
97	529.015520	02:13	+04:44	SS	5m	em
98	COMP			↑		
99	529.021116	02:16	+05:04	SS	8m	em
100	COMP			↑		
101	531.000582	02:50	+03:31	SS	4m	em+
102	COMP			↑		
103	531.012374	02:51	+04:27	SS	5m	em+ ; *burst
104	COMP			↑		
105	531.012962	03:03	+04:29	SS	6m	em
106	COMP			↑		
107	531.022053	02:14	+06:20	SS	5m	em
108	COMP			↑		

60 inch Telescope Log
 Observer: PB
 PI: Griener/Adams-Walk/Kirshner/Joanna K.
 Spectrograph: FAST
 Grating: 300R
 Date: 12/30/97
 Page: 5891

Number	Object	R. A.	Dec.	L/R	Exp	Comments
109	S31.013255	02:56	-07:31	SS	12m	cm
110	COMP			↑		
111	S31.028222	02:58	+05:50	SS	5m	
112	COMP			↑		a few clouds
113	S31.033510	02:59	+06:15	SS	5m	nice seeing!
114	COMP			↑		
115-119	FLAT2	05:38	-02	71	8s	2" slit; filt=677.0 ↓
120	COMP			↓	5s	test $\lambda_c = 6500\text{\AA}$
121,123	POS385SM0141	05:38	-02:41	71	15m	for S.Walk + N.Adams
122,124	COMP			↑		
125,127	POS3808 m0235	05:38	-02:35	71	15m	
126,128	COMP			↑		
129,131	POS3817 m0247	05:38	-02:47	71	15m	
130,132	COMP			↑		
133-137	FLAT2	05:38	-02:47	71	8s	
138-139	Hiltner 60	06:42	+02	71	75s	
140	COMP			↑		3" slit; filt=607.0 ↓
141	SN1997do	07:26	+47:05	2	20m	bin x 2
142	COMP			↑		bin x 2
143	Q0915 p165	09:18	+16:18	69	12m	2" slit ↓
144	COMP			↑		for Joanna Kureszkiewicz
145	Q1004 p130	10:07	+12:48	69	15m	
146	COMP			↑		great seeing!!
147,149	Q1007 p117	10:16	+11:32	69	15m	x2
148,150	COMP			↑		
151	Q1048 m090	10:51	-09:18	69	20m	
152	COMP			↑		Seeing worse down here
153,155	Q1049 m005	10:51	-02:51	69/66	15m	Wilkes #66 + Joanna #69
154,156	COMP			↑		Sec = 1.2

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>300L</u>		Page: <u>5892</u>	
PI: _____			Date: <u>12/30/97</u>			
Number	Object	R. A.	Dec.	L/R	Exp	Comments
157	Q1049m00S	10:51	-02:51	69/26	6m	5" slit ↓
158	COMP			↑		
159-160	Feyge 34	10:36	+43:21	56	1m	"
161	COMP			↑		
162-163	Feyge 66	12:34	+25:20	56	1m	"
164	COMP			↑		← bad comp used 161 instead
165	SN1997dq	11:40	+11:28	2	20m	3" slit ↓ bin x 2
166	COMP			↑		bin x 2
167	09446 p0056N	09:44	+10:56	43	10m	emt "
168	09446 p0056S	09:44	+10:56	43	6m	" "
169	COMP			↑		
170,172	Q1103m00x	11:06	-10:52	69	15m	2" slit ↓
171,173	COMP			↑		
174	SN1997eg	13:11	+22:55	2	15m	" bin x 2 ^{not} reduced
175	COMP			↑		"
176	11179 p6341	11:79	+63:41	43	10m	3" slit ↓ em
177	COMP			↑		* to W
178	N5518	14:15	+25:22	6	3m	
179	COMP			↑		
180	M27E	13:51	+69:33	6	2" m	
181	COMP			↑		
182	N4258	12:16	+47:34	6	2" m	
183	COMP			↑		1 cloud to far W @ dawn
184-185	H244	13:21	+78:23	56	90s	
186	COMP			↑		
187-196	BIAS				0s	
197-206	FLAT				6s	
207-216	BIAS				0s	bin by 2
217-226	FLAT				12s	" ; 3" slit
227-236	FLAT				15s	" ; 2" slit
237-246	FLAT				9s	bin by 4; 2" slit
247-256	FLAT				4s	" ; 5" slit
257-266	DARK				15m	

174 NOT reduced because it is the only
2" slit bin by 2 observation

60 inch Telescope Log		Spectrograph: <u>FAST</u>			Page: <u>5893</u>	
Observer: <u>P. Berlind</u>		Grating: <u>300R</u>				
PI: <u>All</u>		Date: <u>12/31/97</u>				
Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	DARK				15m	
11-20	BIAS				0s	
21-30	FLAT				6s	
31-40	BIAS				0s	bin by 2
41-50	FLAT				12s	"
51-55	sky	22:11h		S7	2s	
56	COMP			↑		clear skies!!!
57-59	HD214978	23:19	62:44	S7	4s	
60	COMP			↑		
61-63	HD223773	23:47	52:27	S7	4s	
64	COMP			↑		
65-67	HD 708	00:06	67:40	S7	6s	
68	COMP			↑		
69-71	HD 225146	00:03	61:06	S7	6s	
72	COMP			↑		
73-75	HD 225160	00:04	62:13	S7	6s	
76	COMP			↑		
77-79	HD 4404	00:47	60:16	S7	7s	
80	COMP			↑		
81-83	HD 1326	00:18	44:41	S7	7s	
84	COMP			↑		
85-86	ZAr	23:53	+45:49	12	0.5s, 12s	
87	COMP			↑		
88-89	AXPer	01:26	+54	12	3, 80s	
90	COMP			↑		
91-92	HD217086	22:54	+62:27	S6	5s	
93	COMP			↑		
94	Felix 110	23:17	-05:26	S6	2m	
95	COMP			↑		

NO BIN BY 2 DARKS!

60 inch Telescope Log

Observer: RB

PI: Geller

Spectrograph: FAST

Grating: 300R

Date: 12/31/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
96	N7469	23:03	+08:52	6	2m	
97	COMP			↑		
98	MLK335	00:03	+19:55	6	3m	
99	COMP			↑		
100	158m213	00:40	+40:50	57	5m	* to E
101	COMP			↑		
102	S18.171523	21:50	+14:06	55	4m	em
103	COMP			↑		
104	S18.225202	21:53	+15:36	55	4m	em
105	COMP			↑		
106	S19.002035	22:05	+09:39	55	3m	
107	COMP			↑		
108	S19.137906	22:13	+13:45	55	4m	em
109	COMP			↑		
110	S19.155961	22:06	+14:18	55	3m	pec
111	COMP			↑		
112	S19.185663	22:01	+15:10	55	4m	
113	COMP			↑		
114	S19.188256	22:02	+15:05	55	6m	em; wk cont
115	COMP			↑		
116	S20.114717	22:36	+14:24	55	6m	* to W; em
117	COMP			↑		(Frank)
118	S21.007525	23:07	+09:57	55	8m	em
119	COMP			↑		
120	S21.068466	22:59	+14:05	55	8m	em
121	COMP			↑		
122	S21.090331	23:05	+14:10	55	4m	em
123	COMP			↑		
124	S21.093879	23:05	+14:21	55	6m	em
125	COMP			↑		

CCD filter

60 inch Telescope Log

Observer: PB
 PI: Geller

Spectrograph: FAST
 Grating: 3000
 Date: 12/31/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
126	522.005782	23:07	+09:57	SS	6m	em
127	COMP			↑		
128	522.006197	23:11	+09:59	SS	6m	em
129	COMP			↑		
130	522.008157	23:13	+13:59	SS	4m	em
131	COMP			↑		
132	522.008571	23:25	+14:12	SS	90s	
133	COMP			↑		
134	522.103106	23:25	+15:11	SS	2m	
135	COMP			↑		
136	522.114666	23:16	+15:51	SS	7m	em em extended
137	COMP			↑		
138	523.012507	23:43	+10:23	SS	6m	em
139	COMP			↑		
140	523.008344	23:55	+14:22	SS	5m	a.k.a. 464.094265
141	COMP			↑		em
142	464.081465	23:56	+13:46	SS	4m	em
143	COMP			↑		
144	464.103883	23:59	+14:48	SS	4m	
145	COMP			↑		
146	464.094923	00:13	+14:24	SS	4m	v. blue em
147	COMP			↑		
148	465.052445	00:24	+14:14	SS	3m	
149	COMP			↑		
150	465.057330	00:23	+14:11	SS	5m	em
151	COMP			↑		
152	465.067732	00:19	+15:14	SS	4m	
153	COMP			↑		
154	525.007467	00:20	+07:42	SS	6m	
155	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>5896</u>	
Observer: <u>PB</u>		Grating: <u>3022</u>		Date: <u>12/31/97</u>			
PI: <u>Geller & Barton</u>							
Number	Object	R.A.	Dec.	L/R	Exp	Comments	
156	526.047036	00:47	+07:54	SS	2m		
157	COMP			↑			
158	527.001870	01:21	+103:38	SS	7m		
159	COMP			↑			
160	527.068192	01:14	+104:11	SS	3m		
161	COMP			↑			
162	527.009691	01:18	+104:20	SS	5m		
163	COMP			↑			
164	527.020737	01:15	+105:19	SS	90s	R to W	
165	COMP			↑			
166	527.021307	01:15	+105:22	SS	5m	em	
167	COMP			↑			
168	Soga1 73	01:21	+110:29	60	20m		
169	COMP			↑			
170	Soga1 72	01:21	+110:28	60	19m		
171	COMP			↑			
172	Soga1 78	01:21	+110:29	60	9m		
173	COMP			↑			
174	Soga1 83	01:24	+133:28	60	10m		
175	COMP			↑			
176	529.021577 S	2:14	+105:10	SS	3m	N-1/2 nice ring galaxy	
177	529.021577 N	2:14	+105:10	SS	5m	← 200s em	
178	COMP			↑			
179	529.028778	02:03	+105:39	SS	4m		
180	COMP			↑			
181	529.038919	02:01	+106:31	SS	4m		
182	COMP			↑			
183	529.047011	02:03	+106:46	SS	6m	em	
184	COMP			↑			

60 inch Telescope Log

Observer: PB

PI: NI

Spectrograph: FAST

Grating: 3002

Date: 12/31/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
185	S29.050896	02:02	+07:31	SS	6m	em
186	COMP			↑		
187	S29.052580	02:11	+07:40	SS	5m	
188	COMP			↑		
189	S29.050044	02:08	+07:58	SS	4m	em
190	COMP			↑		
191-192	DGTea	04:07	+76:06	12	10, 40s	
193	COMP			↑		
194-195	DLTea	04:33	+75:20	12	10, 150s	
196	COMP			↑		
197-198	DRTea	04:47	+76:58	12	10, 75s	
199	COMP			↑		
200	AKn20	05:13	+0:12	6	3m	
201	COMP			↑		
202-3	Hiltner60	06:42	+02:11	SC	30s	
204	COMP			↑		
205, 207	SN1997ef	07:57	+49:33	2	20m	
206, 208	COMP			↑		
209	A000962	09:14	+76:06	60	5m	*'s in slit em
210	COMP			↑		
211	Z002310	09:19	+26:16	60	90s	
212	COMP			↑		
213	Z011226	09:16	+11:27	60	6m	
214	COMP			↑		
215, 217	09291p5206	09:29	+52:06	43	20m	v. faint LSB; please add to spectra taken in '96+'97
216, 219	COMP			↑		
219	Z000048	09:22	+50:58	60	1m	
220	COMP			↑		
221	Z008844	09:32	+59:44	60	3m	
222	COMP			↑		

215 + 217

CANNOT FIND ANY OTHER SPECTRA OF THIS OBJECT IN DATABASES

60 inch Telescope Log

Observer: PB

PI: Geller / Joannak.

Spectrograph: FAST

Grating: 300R

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Date: 12/31/97

Number	Object	R.A.	Dec.	L/R	Exp	Comments
222	Z000129	09:24	+3:30	60	1m	
224	COMP			↑		
225	Z013698	09:28	+29:42	60	3m	
226	COMP			↑		
227	Z001071	09:35	+31:42	60	90s	
228	COMP			↑		
229	Z006353	09:43	+41:41	60	3m	
230	COMP			↑		
231	Z002904	09:41	+06:56	60	3m	
232	COMP			↑		
233	Z060293	09:46	+05:42	60	3m	em
234	COMP			↑		
235	Z007008	09:49	+04:18	60	6m	em
236	COMP			↑		
237	Z007111	09:51	+10:55	60	3m	
238	COMP			↑		
239	N002785	09:57	+15:28	60	8m	em
240	COMP			↑		
241	Z011524	10:00	+22:18	60	5m	em
242	COMP			↑		
243,245	Q1104p167	11:07	+16:28	69	15m	2" Slit ↓
244,246	COMP			↑		
247,249	Q1156p295	11:59	+29:14	69	20m	clouds in far SW
248,250	COMP			↑		
251,253	Q1156p631	11:58	+6:24	69	20m	clouds in NW
252,254	COMP			↑		
255,257	Q1136m135	11:39	-13:50	69	20m	
256,258	COMP			↑		clear!
259,261	Q1259p593	13:01	+59:02	69	15m	
260,262	COMP			↑		2" Slit ↑

60 inch Telescope Log
 Observer: PB
 PI: All

Spectrograph: FAST
 Grating: 300R
 Date: 12/31/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
263	N002424	09:44	+83:48	60	6m	3" slit ↓ em
264	COMP			↑		
265	0000001	09:55	+69:41	60	60s	M82: center
266	COMP			↑		
267	rg1029.26	11:10	+28:17	59	5m	
268	COMP			↑		
269	029.29	11:10	+29:26	59	5m	bright ✕ to E em
270	COMP			↑		
271	029.33	11:10	+28:19	59	2m	
272	COMP			↑		
273	N5548	14:15	+25:22	6	3m	
274	COMP			↑		
275	MRK279	13:51	+61:37	6	3m	
276	COMP			↑		
277	H214	13:21	+76:22	56	2m	
278	COMP			↑		Clear
279-280	Fergell	11:2:34	+75:20	56	1m	☉ down
281	COMP			↑		
282	N4151	12:08	+99:41	6	30s	
283	COMP			↑		
284-293	BIAS			0	0s	
294-303	FLAT			0	6s	
304-313	FLAT			69	9s	2" slit
314-323	DARK				15m	