

60 inch Telescope Log
 Observer: P. Barlow
 PI: Kenny/Huahn
 Spectrograph: FAST
 Grating: 3002
 Date: 2/1/98
 Page: 6017

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-5	DARK				15m	bmbly 1 negligible structure
6-10	DARK				20m	bmbly 2 5 cuts in 20-run @ far red end
11-20	BIAS				0s	
21-30	FLAT				6s	
31-40	BIAS				0s	bmbly 2
41-50	FLAT				12s	"
51-55	sky	zenith		57	2s	
56	COMP			↑	6s	clear stars!!
57-58	ZW	23:33	+46:49	12	6, 20s	
59	COMP			↑		
60-61	AXPer	01:56	+54	12	4s, 7s	
62	COMP			↑		seeing rough
63-64	DGTan	04	+26	12	12s, 90s	
65				↑		
66-67	DRTan	04	+26	12	12s, 80s	
68				↑		
69-70	PLTan	05	+16	12	5s, 30s	
71				↑		
72-73	DLTan	04	+25	12	30s, 200s	
74	COMP			↑		
75	H2N	04	+11	56	5m	
76	COMP			↑		
77	MRK335	00:03	+19:55	6	3m	
78	COMP			↑		
79	ZMO3027.7	00:30	+14:48	68	10m	redo from 1/31/98 bright sky
80	COMP			↑		em
81	Zw 125A	00:01:38	+23:29:01	68	3m	nice interacting pair SW
82	Zw 125B	00:01:42	+23:29:14	68	5m	→ em ↑ NE
83	COMP			↑		extended em; also arm from A @ row 18 to W

6554.6 Å Ha
 6655

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>6018</u>	
Observer: <u>PB</u>			Grating: <u>3002</u>		Date: <u>2/1/98</u>	
PI: <u>Huchen</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
84	2M00320.5	00:33	+12:03	68	10m	bright sky
85	COMP			↑		
86	2M004258.8	02:42	+15:59	68	15m	redo from 1/31/98 ; burn-in @90°
87	COMP			↑		
88	2M032555.4	03:25	+78:57	68	20m	redo from 12/4/97 per
89	COMP			↑		seeing = 2.5"
90	2M03606.4	03:26	+75:49	68	20m	redo from 1/21/98
91	COMP			↑		
92	2M035603.2	03:56	+75:52	68	4m	
93	COMP			↑		
94	2M055605.1	03:56	+18:35	68	6m	
95	COMP			↑		
96	2M035638.9	03:56	+73:29	68	2m	sup * - junk
97	2M035638.9	"	"	68	7m	fuzzier to N ; faint (redo) in better seeing
98	COMP			↑		
99	2M035851.0	03:58	+21:49	68	4m	
100	COMP			↑		
101	2M035908.0	03:59	+21:35	68	3m	
102	COMP			↑		
103	2M035929.9	03:59	+21:45	68	5m	* to E bin by 2" or so
104	COMP			↑		
105	2M040000.6	04:00	+18:38	68	5m	* to E
106	COMP			↑		
107	2M040012.9	04:00	+18:45	68	5m	
108	COMP			↑		
109	2M040036.4	04:00	+23:29	68	4m	
110	COMP			↑		
111	2M040043.7	04:00	+18:48	68	5m	wk ; redboxed ; looks ok
112	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Huchra

Spectrograph: FAST

Grating: 3002

Date: 2/1/98

Page: 609

Number	Object	R.A.	Dec.	L/R	Exp	Comments
113	ZM04051.6	04:40	+18:43	68	10m	brood em
114	COMP			↑		
115	ZM040104.9	04:41	+18:56	68	12m	
116	COMP			↑		
117	ZM040144.2	04:01	+19:24	68	8m	22
118	COMP			↑		Seeing a little better - 2'
119	ZM040145.2	04:01	+19:28	68	7m	23
120	COMP			↑		
121	ZM040158.6	04:01	+19:51	68	6m	24 * to W
122	COMP			↑		
123	ZM040202.4	04:02	+19:28	68	7m	26
124	COMP			↑		
125	ZM040210.6	04:02	+19:57	68	3m	28
126	COMP			↑		
127	ZM040213.0	04:02	+19:29	68	5m	
128	COMP			↑		
129	ZM040214.7	04:02	+19:38	68	5m	
130	COMP			↑		
131	ZM040224.4	04:02	+19:11	68	5m	
132	COMP			↑		
133	ZM040253.3	04:02	+18:35	68	9m	to E
134	COMP			↑		weak.
135	06476p6309W	06:47	+63:09	43	4m	SW comp bmbg 2; NE to E
136	06476p6309E	06:47	+63:09	43	7m	NE comp (em.)
137	COMP			↓		
138	06476p6309W	06:47	+63:09	43	10m	redo of #135 ↑ no em.
139	COMP			↑		
140	06567p2738S	06:56	+27:38	43	20m	LSB resolved dwarf, redo from 1/31
141	COMP			↑		... ??? reject city!

NO -
not even extracted

60 inch Telescope Log
 Observer: PB
 PI: Huchra & Carter
 Spectrograph: FAST
 Grating: 3002
 Date: 2/1/98
 Page: 6020

Number	Object	R.A.	Dec.	L/R	Exp	Comments
142	07028p3915	07:02	+39:15	43	15m	sup to S - em!
143	COMP			↑		K to W
144	07070p8619	07:07	+86:19	43	20m	dx another LSB extendy ^{stellar}
145	COMP			↑		em p/r 2005 ^{valley} Note -160
146	07391p5505S	07:39	+55:05	43	5m	redo from 1/31/98 S
147	07391p5505M	07:39	+55:05	43	5m	em M
148	07391p5505N	07:39	+55:05	43	6m	N
149	COMP			↑		Seeing worse
150	07430p4454N	07:43	+44:54	43	5m	
151	07430p4454S	07:43	+44:54	43	2m	
152	COMP			↑		
153	07531p4601	07:53	+46:01	43	10m	em
154	COMP			↑		
155	07596p3555	07:59	+35:55	43	3m	
156	COMP			↑		
157	07597p6307E	07:59	+63:07	43	8m	W gal partially m/bt to W em
158	07597p6307W	07:59	+63:07	43	6m	E " " " E em
159	07597p6307S	07:59	+63:07	43	8m	S em
160	COMP			↑		
161	N002935	09:23	+26:49	75	10m	faint LSB em
162	COMP			↑		
163	N002256	09:29	+20:08	75	8m	binby 2 ³⁰ clumpy em
164	COMP			↑		
165	Z013702	09:29	+16:26	75	4m	
166	COMP			↑		1st clean-up.
167	Z007356	09:30	+16:36	75	4m	nice face-on spiral em
168	COMP			↑		
169	Z008549	09:30	+27:46	75	5m	em
170	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Koranyi

Spectrograph: FAST

Grating: 30R

Date: 2/1/98

Page: 6021

Number	Object	R. A.	Dec.	L/R	Exp	Comments
171	mk64-17	12:05	+02:05	35	4m	
172	COMP			↑		
173	-18	12:05	+01:35	35	4m	
174	COMP			↑		
175	-19	12:03	+01:50	35	4m	
176	COMP			↑		
177	-20	12:05	+02:17	35	4m	
178	COMP			↑		
179	-21	12:03	+01:13	35	3m	
180	COMP			↑		
181	-22	12:06	+01:17	35	5m	done runs away
182	COMP			↑		
183	-23	12:06	+01:36	35	5m	em
184	COMP			↑		
185	-24	12:03	+01:24	35	4m	em
186	COMP			↑		
187	-25	12:02	+01:31	35	4m	
188	COMP			↑		
189	-26	12:04	+01:49	35	6m	em
190	COMP			↑		
191	-27	12:04	+01:44	35	5m	
192	COMP			↑		
193	-28	12:01	+01:59	35	4m	
194	COMP			↑		
195	-29	12:02	+01:51	35	8m	
196	COMP			↑		
197	-30	12:04	+01:12	35	9m	
198	COMP			↑		
199	-31	12:03	+02:05	35	10m	high cz; em
200	COMP			↑		

60 inch Telescope Log

Observer: PBPI: GedlerSpectrograph: FASTGrating: 300gPage: 6022Date: 2/1/98

Number	Object	R.A.	Dec.	L/R	Exp	Comments
201	a1367.1708	11:45	+20:43	64	10m	Wk em
202	COMP			↑		
203	.1721	11:52	+20:39	64	7m	em +
204	COMP			↑		
205	.1726	11:52	+20:40	64	4m	
206	COMP			↑		
207	.1731	11:53	+20:41	64	5m	
208	COMP			↑		
209	.1753	11:59	+20:39	64	5m	* to E
210	COMP			↑		
211	.1764	11:39	+20:23	64	4m	
212	COMP			↑		
213	.1791	11:49	+20:23	64	5m	em
214	COMP			↑		
215	.1800	11:52	+20:19	64	4m	em
216	COMP			↑		
217	.1808	11:54	+20:22	64	5m	em
218	COMP			↑		
219	.1810	11:43	+20:18	64	3m	
220	COMP			↑		
221	.1819	11:45	+20:09	64	6m	pec. no sep +
222	COMP			↑		
223	.1852	11:45	+20:17	64	6m	prob @ 48"
224	COMP			↑		
225	.1877	12:00	+20:16	64	4m	
226	COMP			↑		
227	SN1998D	14:00	+34:44	2	20m	bim by 2 * to E
228	COMP			↑		good arc!
229	SBS1425 p606	14:25	+60:39	6	10m	
230	COMP			↑		

60 inch Telescope Log
 Observer: PB
 PI: Wilkes & Mahdavi
 Spectrograph: FAST
 Grating: 300R
 Date: 2/1/98
 Page: 6023

Number	Object	R.A.	Dec.	L/R	Exp	Comments
231	MRK279	13:51	+69:33	6	3m	
232	COMP			T		
233	N5518	14:15	+25:22	6	3m	
234	COMP			T		
235	N4258	12:16	+47:34	6	2m	
236	COMP			T		
237	N4051	12:20	+44:48	6	2m	
238	COMP			T		
239	N4151	12:08	+38:41	6	30s	
240	COMP			T		
242	H214	13:21	+76:23	56	90s	
243	COMP			T		
244	CGH044.14	11:44	+33:19	59	4m	
245	COMP			T		
246	.11	11:44	+33:21	59	3m	
247	COMP			T		
248	.12	11:44	+32:40	59	3m	
249	COMP			T		
250	.16	11:44	+33:20	59	2m	
251	COMP			T		
252	.19	11:45	+32:58	59	3m	on wk
253	COMP			T		
254	.23	11:46	+33:09	59	2m	
255	COMP			T		
256	.25	11:46	+33:06	59	2m	
257	COMP			T		
258-9	AGDRA	16:01	+66:48	12	20s, 1s	
260	COMP			T		
261-262	Feyo 98	14:36	+27:42	56	1m	misty clear @ dawn!
263	COMP			T		a few clouds

264-273
 274-283
 284-293
 294-303

BIAS
 FLAT
 BIAS
 FLAT

01
 6
 05
 123

60 inch Telescope Log

Observer: P. Berlink
 PI: G. Torres

Spectrograph: FAST
 Grating: 1200R; 1.1" slit
 Date: 2/2/98

Page: 6024

Number	Object	R.A.	Dec.	L/R	Exp	Comments
15	DARK				15m	binby 4
6-15	BITS				0s	
6-25	FLAT				6s	300R; 3" slit; binby 4; standard
26-35	BITS				0s	
36-45	FLAT				12s	300R; 3" slit; binby 2; standard
46	test comp	1200R;	1.1" ↓	76	10s	1200R; tilt=340 (no spacer)
47-56	FLAT			76	60s	slit=1.1" $\lambda_c=6562$ ↓
57	AXPer	H-d test		76	10s	focus=960
				1		
58-59	C11mY022	04:58	+10:27	76	15s	scattered clouds
60				↑	10s	bright moon
61-62	C11mY053	05:08	+07:00	76	15s	
63				↑		
64-65	C12m1798	04:43	+09:37	76	45s	• •
66				↑		
67-68	strmY022	04:26	+01:43	76	30s	
69	COMP			↑		
70-71	C13mer02	05:20	+10:57	76	45s	
72				↑		
73-74	C13mer28	05:41	+12:51	76	30s	
75				↑		
76-77	C13mer36	05:30	+10:57	76	70s	
78				↑		
79-81	C13mer38	05:54	+10:16	76	7s-1s	
82				↑		
83-84	C13mer01	05:17	+12:24	76	3m	
85				↑		
86-87	C13mer40	05:57	+10:54	76	30s	
88	COMP			↑		
89	strmY054	05:08	+02:49	76	7m	

60 inch Telescope Log

Observer: PB

PI: Torres

Spectrograph: FAST

Grating: 1200L

Date: 2/2/98

Page: 6025

Number	Object	R. A.	Dec.	L/R	Exp	Comments
90	COMP			↑		1200L/mm grating
91	strm V095	05:29	+02:59	76	6m	1.1" slit
92	COMP			↑		76 = 6560
93	strm V098	05:29	-01:02	76	3m	
94	COMP			↑		clear sky
95	strm V123	05:43	+05:10	76	4m	bright moon
96	COMP			↑		
97	strm V155	06:11	+06:09	76	4m	
98	COMP			↑		
99	strm V165	06:30	+16:25	76	4m	16
100	COMP			↑		
101	strm V133	05:52	+07:29	76	6m	17 wk
102	COMP			↑		
103	strm V006	03:41	-14:17	76	7m	19
104	COMP			↑		
105	strm V027	04:38	-02:49	76	7m	20
106	COMP			↑		
107	C13mer14	05:32	+15:38	76	7m	19
108	COMP			↑		
109	C13mer24	05:38	+17:06	76	10m	*to W (cont)
110	COMP			↑		
111	C13mer37	05:53	+25:08	76	7m	Cosmic Ray (big one!) near H- α
112	COMP			↑		
113-114	RW Aur	05:07	+30:24	76	1m, 2m	(also for Scott Kenyon)
115	COMP			↑		
116	Hiltner 60	06:42	+02	76	2m	
117	COMP			↑		
						that's all for 1200L obs.

60 inch Telescope Log				Spectrograph: <u>FAST</u>		
Observer: <u>PB</u>				Grating: <u>300L @ 2 tilts</u>		Page: <u>6026</u>
PI: <u>Walky McClintock & Kenyon</u>				Date: <u>2/2/98</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
118-122	FLAT	05:39	-02:38	71	8s	300L grating; 2" slit
123	053925m0238	05:39	-02:38	71	10m	tilt = 677.0 (red)
124	COMP			↑	5s	
125	053933m0236	05:39	-02:36	71	9m	Scott Walk + 's
126	COMP			↑		
127	053906m0249	05:39	-02:49	71	5m	
128	COMP			↑		
129	053909m0225	05:39	+02:25	71	5m	* partially in slit to E
130	053911m0225	05:39	+02:25	71	5m	" " W
131	COMP			↑		
132	053848m0224	05:38	-02:24	71	5m	
133	COMP			↑		
134	053850m0226	05:38	-02:26	71	15m	
135	COMP			↑		
136	053907m0246	05:39	-02:46	71	15m	
137	COMP			↑		
138	053902m0229	05:39	-02:29	71	15m	
139	COMP			↑		seems worse
140-144	FLAT	05:39	-02:29	71	8s	
145	Hiltner 60	0642	+02	71	75s	
146	COMP			↑		done
147-149	HD 245770	05:38	+26:18	77	30s	300L; tilt = 607 (std tilt)
150	COMP			↑	8s	1.1" slit ←! for Jeff McClintock
151-152	DG Tau	04	+26	12	12, 90s	300L; tilt = 607; 3" slit ↓
153	COMP			↑		(standard setup)
154-155	DL Tau	04	+25	12	30, 4m	
156	COMP			↑		

60 inch Telescope Log
 Observer: PB
 PI: Alves & Carter
 Spectrograph: FAST
 Grating: 300R
 Date: 2/2/88
 Page: 6027

Number	Object	R.A.	Dec.	L/R	Exp	Comments
157-158	DRTau	04	+16	12	12, 80s	300R; tilt=60°, 3" slit
159	COMP			↑		focus=940 "normal setup" ↓
160-161	RWAur	05	+30	12	5x 20s	
162	COMP			↑		
163-164	Hiltner 60	06:42	+02	56	45s	
165	COMP			↑		
166	L164SNE	06:59	-07:46	99	2m	for Jaco Alves
167	L161SSW	06:59	-07:10	99	2m	"
168	COMP			↑		
169	N2362, red	07:18	-24:59	99	2m	"
170	COMP			↑		
171	N002936	09:36	+3:19	75	10m	em
172	COMP			↑		
173	N002937	09:38	+29:56	75	7m	pec; em
174	COMP			↑		
175	Z013706	09:38	+27:39	75	8m	em
176	COMP			↑		
177	Z04591	09:38	+28:03	75	2m	Seemg ~2"
178	COMP			↑		
179	Z011646	09:39	+18:12	75	5m	em
180	COMP			↑		
181	N002938	09:40	+27:46	75	5m	
182	COMP			↑		
183	N002939	09:41	+32:09	75	4m	no sup * visible
184	COMP			↑		
185	N602257	10:27	+28:38	75	12m	
186	COMP			↑		
187	Z013710	10:32	+27:10	75	4m	em
188	COMP			↑		

60 inch Telescope Log

Observer: PB
 FI: Carter / Mahdavi

Spectrograph: FAST
 Grating: 3002
 Date: 2/2/98

Page: 6028

Number	Object	R.A.	Dec.	L/R	Exp	Comments
189	A000939	10:37	+27:21	75	4m	moon set
190	COMP			↑		
191	Z007361	10:37	+26:43	75	4m	em+
192	COMP			↑		
193	Z013711	10:42	+30:47	75	5m	em
194	COMP			↑		
195	N002542	10:42	+28:01	75	4m	
196	COMP			↑		
197	Z010008	10:42	+26:50	75	4m	
198	COMP			↑		
199	Z013712	10:43	+31:31	75	4m	
200	COMP			↑		
201	N002258	10:44	+30:43	75	4m	
202	COMP			↑		
203	Z011655	10:44	+27:28	75	3m	
204	COMP			↑		
205	Z006240	10:45	+27:35	75	2m	em+
206	COMP			↑		
207	Z002671	10:47	+26:32	75	4m	em+ extended
208	COMP			↑		
209	N001746	10:49	+27:55	75	10m	em pix 2030 - Hx
210	COMP			↑		
211	rg h029.74	11:11	+29:25	59	12m	em
212	COMP			↑		
213	75	11:12	+28:48	59	10m	em
214	COMP			↑		
215	78	11:12	+28:16	59	6m	
216	COMP			↑		
217	79	11:12	+28:01	59	10m	em
218	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Mahdavi & Geller

Spectrograph: FAST

Grating: 3002

Date: 2/2/98

Page: 6029

Number	Object	R.A.	Dec.	L/R	Exp	Comments
219	rgk 029.80	11:13	+28:45	59	5m	
220	COMP			↑		
221	.81	11:13	+28:57	59	5m	
222	COMP			↑		
223	.83	11:14	+28:37	59	10m	Wk em pin 2139; also cosme
224	COMP			↑		
225	rgk 044.21	11:46	+33:06	59	2m	
226	COMP			↑		
227	.24	11:46	+33:12	59	2m	
228	COMP			↑		
229	a1367.961	11:38	+23:26	64	6m	Finally; down to business.
230	COMP			↑		em
231	.964	11:40	+23:23	64	12m	
232	COMP			↑		
233	.971	11:43	+23:31	64	5m	
234	COMP			↑		
235	.977	11:49	+23:26	64	2m	
236	COMP			↑		
237	.1794	11:50	+20:29	64	12m	em!
238	COMP			↑		
239	.296	11:33	+22:41	69	4m	
240	COMP			↑		
241	.300	11:34	+22:39	64	5m	
242	COMP			↑		
243	.326	11:32	+22:37	64	5m	em
244	COMP			↑		
245	.332	11:34	+22:31	64	5m	
246	COMP			↑		
247	.334	11:34	+22:29	64	5m	
248	COMP			↑		

60 inch Telescope Log

Observer: PB
 PI: Geller & Krishnaer

Spectrograph: FAST
 Grating: 301L
 Date: 2/2/98

Page: 6030

Number	Object	R.A.	Dec.	L/R	Exp	Comments
249	a1367.423	11:33	+21:51	64	5m	em
250	COMP			↑		
251	.559	11:37	+21:05	64	5m	em; pec.
252	COMP			↑		
253	.560	11:34	+21:02	64	5m	
254	COMP			↑		
255	.561	11:34	+21:06	64	5m	
256	COMP			↑		
257	.610	11:35	+20:40	64	5m	em
258	COMP			↑		
259	.644	11:35:35	+20:30:44	64	5m	em
260	COMP	11:35:23	+20:18:58	↑		moved telescope
261	.669	11:35:22	+20:18:	64	5m	em +20:19:08
262	COMP	11:35:20	+20:19:07	↑		
263	.698	11:32	+20:09	64	5m	em
264	COMP			↑		
265	.702	11:33	+20:01	64	5m	em
266	COMP			↑		
267	.2574	11:47	+20:14	64	6m	bright star nearby; lots of scattered light - uneven
268	COMP			↑		
269	.2582	11:52	+20:11	64	5m	em
270	COMP			↑		clouds in the west + N
271	SN1998D	14:03	+34:44	2	20m	-get new while getting, ugged
272	COMP			↑		bin by 2
273	a1367.2594	11:35	+20:02	64	5m	* to far W
274	COMP			↑		
275	.2619	11:43	+19:56	64	6m	increasing clouds yes, redo
276	COMP			↑		↳ redo
277	MRK279	13:51	+69:33	6	6m	
278	COMP			↑		

used file 262 as comp for 259.

shift between 259 + 262 in .022

shift between 258 + 262 in .026

60 inch Telescope Log

Observer: P. Berline & B. Carter

PI: Scott

Spectrograph: EAST

Grating: 300R

Date: 2/21/98

Page: 6040

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-5	DARK				15m	
6-10	DARK				20m	bin by 2
11-20	BIAS				0s	
21-30	FLAT				6s	
31-40	BIAS				0s	bin by 2
41-50	FLAT				120	bin by 2
51-60	FLAT	1.1" slit			20s	1.1"
61-65	sky	3" slit	zenith		2s	solid strato-cirrus
66	COMP			↑	6s	
67-68	AKR	01:36	+54	12	6s, 9s	
69	COMP			↑		
70-71	DGTan	4:27	+26	12	25s, 180s	
72	COMP			↑		
73-74	DLTan	4:33	+25	12	60s, 570s	
75	COMP			↑		lots of clouds
76-77	DRTan	4:47	+16	12	30s, 180s	
78	COMP			↑		
79-80	RWAur	5:07	+30	12	10s, 60s	
81	COMP			↑		
82-83	NGC 1700	4:56	-4	57	300s	vel std
84	COMP			↑		
85	AKN 120	5:16	-0	6	360s	AGN
86	COMP			↑		
87-89	HD 245770:	05	+25	77	45s	1.1" slit
90	COMP			↑		
91, 93	ZM 04057	04:04	+20:02	68	12m, 20m	Saint, so tried again
92	COMP			↑		
94	COMP			For #93		
95	ZM 04 0334.7	4:03	+23:58	68	15m	still faint
96	COMP			↑		

60 inch Telescope Log

Observer: P. Berlind & B. Carter

PI: Andi

Spectrograph: FAST

Grating: 300L

Page: 6041

Date: 2/21/98

Number	Object	R.A.	Dec.	L/R	Exp	Comments
97	nr gb 004.02	8:35	+25	59	15m	nailed it! strong emission
98	COMP			↑		
99	nr gb 004.09	8:37	+24:56	59	8m	
100	COMP			↑		
101	nr gb 004.12	8:37	+24:59	59	5m	strong absorption lines
102	COMP			↑		
103	nr gb 004.11	8:37	+24:36	59	15m	broad em?
104	COMP			↑		
105	nr gb 004.15	8:37	+25:10	59	5m	abs. lines
106	COMP			↑		
107	nr gb 004.13	8:37	+24:27	59	7m	abs. lines
108	COMP			↑		sky getting better? (still cloudy)
109	nr gb 004.14	8:37	+25:18	59	8m	H α
110	COMP			↑		
111	nr gb 004.16	8:38	+25:02	59	8m	abs. lines
112	COMP			↑		
113	nr gb 004.10	8:37	+26:01	59	15m	(faint!) ^{strong} emission lines
114	COMP			↑		
115	nr gb 004.07	8:36	+25:08	59	12m	a bit faint - nucleus only?
116	COMP			↑		
117	nr gb 004.06	8:36	+25:06	59	800s	emission lines
118	COMP			↑		
119	nr gb 004.05	8:36	+25:36	59	15m	
120	COMP			↑		
121	N001747	11:05	+28:21	75	270s	star on slit to E
122	COMP			↑		
123	Z010011	11:06	+29:55	75	5m	
124	COMP			↑		
125	Z00764	11:06	+28:17	75	3m	
126	COMP			↑		

12

60 inch Telescope Log

Observer: P. Berlind, B. Carter

PI: Barbara

Spectrograph: FAST

Grating: 3002

Page: 6042

Date: 2/21/98

Number	Object	R.A.	Dec.	L/R	Exp	Comments
127	A 000940	11:07	+28:35	75	6m	bar? along slit 195
128	COMP			↑		
129	Z007365	11:07	+28:31	75	3m	196
130	COMP			↑		
131	Z013714	11:08	+28	75	3m	197
132	COMP			↑		
133	Z011659	11:08	+28:50	75	4m	198
134	COMP			↑		
135	Z008554	11:08	+28:28	75	3m	199
136	COMP			↑		
137	A000747	11:08	+26:36	75	6m	extended 200
138	COMP			↑		
139	Z011660	11:09	+28:40	75	3m	
140	COMP			↑		
141	Z007367	11:10	+28:39	75	3m	
142	COMP			↑		
143	Z004594	11:10	+28:32	75	3m	
144	COMP			↑		
145	Z015716	11:10	+27:05	75	5m	Hx
146	COMP			↑		
147	Z003469	11:11	+26:57	75	4m	East (Main) 205
148	COMP			↑		
149	Z003469	11:11	+26:57	75	5m	West (Companion) 205
150	COMP			↑		
151	Z006242	11:12	+27:35	75	210.5	201
152	COMP			↑		
153	Z005389	11:12	+28:29	75	6m	20
154	COMP			↑		
155	Z007372	11:12	+27:26	75	8m	20
156	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>			Page: <u>6043</u>
Observer: <u>P. Berlind, B. Carter</u>			Grating: <u>3002</u>			Date: <u>2/21/98</u>
PI: <u>Kirshner</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
157	2013721	11:12	+28	75	5m	109
158	COMP			↑		
159	2003999	11:13	+27:49	75	4m	110
160	COMP			↑		
161	2007373	11:13	+30:36	75	200s	windy 111
162	COMP			↑		
163	2013722	11:14	+27:14	75	7m	112
164	COMP			↑		
165	SN 1997 eg	13:11	+22:55	2	20m	binby2
166	COMP			↑	12s	"
167	SN 1998 D	14:03	+34:44	2	20m	binby2
168	COMP			↑	12s	"
169	a1367.2605	11:39	+20:00	64	7m	binby4 86
170	COMP			↑		
171	a1367.2619	11:43	+17:56	64	6m	redo from 2/2 87
172	COMP			↑		
173	a1367.2621	11:43	+20:00	64	8m	increasing clouds 88
174	COMP			↑		
175	a1367.2656	11:53	+19:57	64	8m	faint! autoguiding 90
176	COMP			↑		
177	a1367.2661	11:31	+19:42	64	10m	faint! can't autoguide 91
178	COMP			↑		
179	a1367.2664	11:33	+19:44	64	7m	92
180	COMP			↑		
181	a1106.2666	11:33	+19:47	64	12m	* ? yesterday - can't redo object
182	COMP			↑		
183	.2693	11:44	+19:47	64	15m	
184	COMP			↑		
185	.2695	11:44	+19:48	64	15m	
186	COMP			↑		

173. plots - pictures at back

60 inch Telescope Log

Observer: P. Berlind, B. Carter

PI: All

Spectrograph: FAST

Grating: 3001

Date: 2/21/98

Page: 6044

Number	Object	R.A.	Dec.	L/R	Exp	Comments
187	Z 013739	12:42	+26:38	75	5m	395
188	COMP			↑		
189	Z 003 008	12:43	+27:42	75	8m	lousy seeing - emission lines 397
190	COMP			↑		
191	Z 004 605	12:43	+31:05	75	5m	spiral (bar?) 398
192	COMP			↑		
193	Z 000023	12:43	+32:10	75	5m	star in slit to west? ^{proton} Huge sprawling mess (?) 399 _{at back}
194	COMP			↑		
195	A 000 605	12:44	+26:25	75	210s	low counts; emission! 400
196	COMP			↑		
197	Z 000343	12:45	+27:07	75	210s	emission lines 401
198	COMP			↑		
199	N4151	12		6	30s	
200	COMP			↑		
201	N41051	12		6	3m	
202	COMP			↑		
203	N4258	+12		6	3m	
204	COMP			↑		
205	MRK 279	13:5	+69	6	3m	
206	COMP			↑		
207	N5548	14:15	+25:22	6	3m	lots of clouds ↙
208	COMP			↑		
209-210	Feyze 98	14:36	+07:29	56	3m	
210	COMP			↑		
211	BDP332642	15:50	+330s	56	1m	
212	COMP			↑		
213	HE14	13:21	+26:23	56	3m	
214	COMP			↑		
215-216	AG Dra	16:44	+65:48	12	4, 30s	
217	COMP			↑		

218-227
228-237
238-247
248-257

BIAS
FLAT
BIAS
FLAT

0s
6s
0s
12s

60 inch Telescope Log

Observer: P Berlin & Carter

Spectrograph: FAST

Grating: 3002

Page: 6045

PI: Kenny & Huchra

Date: 2/22/98

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-5	DARK				900s	binby 4
6-10*	DARK				1200s	binby 2 (* #10 exptime is 900sec)
11-20	BIAS				0	binby 4
21-30	FLAT				6s	↓
31-40	BIAS				0	binby 2
41-50	FLAT				12s	↓
51-55	sky	zenith		57	2 sec	binby 4
56	COMP			↑	6s	↓
57-58	AXPer	01-36	+51	12	4500s	↓
59	COMP			↑		circus...
60-61	DLTun	04	+26	12	15, 120s	
62	COMP			↑		
63-64	DLTun	04	+16	12	10, 90	
65	COMP			↑		
66-67	RWAir	05	+33	17	15, 37	
68	COMP			↑		
69-70	DLTun	04	+25		5s, 240s	
71	COMP			↑		
72	2M040302.3	04:03	+21:44	68	8m	em
73	COMP			↑		
74	2M040321.7	04:03	+21:31	68	6m	
75	COMP			↑		
76	2M040324.1	04:03	+21:07	68	6m	
77	COMP			↑		
78	2M040409.6	04:04	+22:07	68	6m	41 NW → * to E
79	COMP			↑		2rem
80	2M040410.9	04:04	+22:07	68	4m	42 SE → * under scope
81	COMP			↑		7wk
82	2M040423.9	04:04	+22:25	68	6m	
83	COMP			↑		

60 inch Telescope Log
 Observer: POH
 PI: Huchra
 Spectrograph: FAST
 Grating: 300
 Date: 2/12/98
 Page: 6046

Number	Object	R.A.	Dec.	L/R	Exp	Comments
84	2M035548.4	0355	+21:40	68	20m	bright to E in slit
85	COMP			↑		
86	2M084915.7	0849	+08:48	68	20m	
87	COMP			↑		clearing nearby
88	2M085653.6	08:56	+15:09	68	5m	
89	COMP			↑		
90	2M084957.7	08:49	+08:45	68	4m	
91	COMP			↑		
92	2M085727.1	08:57	+16:38	68	4m	10
93	COMP			↑		
94	2M085735.1	08:59	+17:13	68	5m	11
95	COMP			↑		
96	2M090012.8	09:00	+17:33	68	4m	N
97	"	"	"	68	4m	S
98	COMP			↑		
99	2M090014.4	09:00	+17:23	68	5m	
100	COMP			↑		
101	2M090023.3	09:00	+17:10	68	6m	
102	COMP			↑		
103	2M090031.9	09:00	+16:14	68	4m	
104	COMP			↑		
105	2M090050.0	09:00	+12:13	68	1m	(tried to avoid star to W) Bright! used comp 21/104
106	COMP			↑		
107	2M090112.5	09:01	+17:33	68	4m	
108	COMP			↑		
109	2M090114.4	09:01	+13:44	68	5m	
110	COMP			↑		
111	2M090139.9	09:01	+16:28	68	5m	faint companion (off slit)?
112	COMP			↑		
113	2M090214.4	09:02	+14:30	68	4m	
114	COMP			↑		

0104 to 0106 shift = 0.045 ± 2.04 pixels
 0106 to 0108 shift = 0.053 ± 2.06 pixels

for file 105 - can only see one object in slit and it is a star; looked at image in line & it looks like 2 close stars.

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>6047</u>
Observer: <u>PB + BC</u>				Grating: <u>3001</u>		
PI: <u>Hucha SAndi</u>				Date: <u>2/22/98</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
115	ZM 090222.8	09:02	+14:31	68	4m	
116	COMP			↑		
117	ZM 090225.3	09:02	+15:53	68	5m	
118	COMP			↑		
119	ZM 090226.1	09:02	+14:27	68	3m	
120	COMP			↑		
121	ZM 090224.9	09:02	+16:56	68	5m	
122	COMP			↑		
123	ZM 090250.9	09:02	+13:32	68	5+	32
124	COMP			↑		
125	ZM 090301.6	09:03	+16:51	68	4m	33
126	COMP			↑		
127	ZM 084351.3 EW	08:48	+09:01	68	6m	bmbg 2 close E side comp
128	COMP			↑	12s	↓
129	ZM 084936.4	08:49	+09:48	68	5m	bmbg 2 to E to W #23
130	COMP			↑	12s	↓
131	nr 6001.01	08:33	+25:06	59	6m	
132	COMP			↑		
133	nr 6004.03	08:35	+24:56	59	6m	
134	COMP			↑		
135	nr 6004.04 N	08:36	+25:51	59	7m	N diffuse 4
136	" S	"	"	"	5m	S compact ← opp. it's a star
137	COMP			↑		
138	nr 6004.08	08:37	+24:52	59	6m	
139	COMP			↑		
140	a1367.2702	11:44	+19:49	64	2m	
141	COMP			↑		
142	.2666	11:33	+19:17	64	4m	redo from 2/21/98
143	COMP			↑		
144						

60 inch Telescope Log
 Observer: PB/DC
 PI: Greller
 Spectrograph: FAST
 Grating: 302; 3" slit
 Date: 2/22/98
 Page: 6048

Number	Object	R.A.	Dec.	L/R	Exp	Comments
144	a1367.2704	11:44	+19:45	64	4m	nice sky
145	COMP			↑		
146	.2706	11:44	+19:46	64	5+	
147	COMP			↑		
148	.2718	11:45	+19:46	64	5m	Faint comp to W; bin by 2
149	COMP			↑		gal to far E also
150	.2720	11:45	+19:48	64	5m	bin by 2
151	COMP			↑		
157	.2641	11:45	+20:01	64	9m	nice em
153	COMP			↑		
154	.2723	11:46	+19:51	64	8m	
155	COMP			↑		
156	.2729	11:47	+19:52	64	5m	102
157	COMP			↑		
158	.2725	11:52	+19:51	64	4m	103
159	COMP			↑		
160	.2746	11:38	+19:33	64	5m	104
161	COMP			↑		
162	.2750	11:38	+19:36	64	9m	em
163	COMP			↑		
164	.2751	11:39	+19:35	64	9m	
165	COMP			↑		
166	.2773	11:44	+19:36	64	5m	
167	COMP			↑		
168	.2774	11:44	+19:29	64	4m	
169	COMP			↑		
170	.2795	11:33	+19:22	64	7m	
171	COMP			↑		
172	.2820	11:33	+19:21	64	5m	
173	COMP			↑		

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>6049</u>		
Observer: <u>PB40C</u>		Grating: <u>300</u>		Date: <u>2/22/98</u>		
PI: <u>Greller/Koranyi</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
174	g1367.2812	11:40	+19:24	64	10m	
175	COMP			↑		
176	.2808	11:38	+19:17	64	5m	
177	COMP			↑		
178	.2817	11:42	+19:25	67	5m	
179	COMP			↑		
180	.2823	11:43	+19:26	69	7m	faint companion to W in slit
181	COMP			↑		faint companion to N not in
182	.2841	11:49	+19:18	64	4m	15
183	COMP			↑		
184	.2842	11:50	+19:24	64	4m	16
185	COMP			↑		
186	.2845	11:51	+19:21	64	7m	edge-on spiral almost aligned with slit 17
187	COMP			↑		
188	.2873	11:45	+19:09	64	6m	18
189	COMP			↑		
190	MKW4-32	12:01	+02:25	64	5m	
191	COMP			↑		
192	-33	12:04	+01:30	64	10m	WK em unexposed
193	COMP			↑		
194	-34	12:03	+02:29	64	5m	Sy 1 AGN!!
195	COMP			↑		
196	-35	12:04	+02:24	64	4m	
197	COMP			↑		
198	-36	12:04	+02:20	64	9m	huge cosmic ray ; em
199	COMP			↑		
200	-39	12:03	+02:18	64	6m	em+
201	COMP			↑		
202	-38	12:04	+01:56	64	5m	
203	COMP			↑		

60 inch Telescope Log

Observer: PB/BC

PI: Koranyi & Carter

Spectrograph: FAST

Grating: 3W2

Date: 2/22/98

Page: 6050

Number	Object	R.A.	Dec.	L/R	Exp	Comments
204	mkw4-39	12:05	+02:32	35	5m	
205	OMP			↑		
206	-40	12:06	+01:17	35	5m	
207	OMP			↑		
208	970602.19.576	11:44	+0:10	68	20m	pec. 950
209	OMP			↑		
210-211	H244			56	2m	
212	OMP			↑		
213	Z01012	11:14	+28:33	75	90s	
214	OMP			↑		
215	Z013723	11:14	+71:26	75	21m	
216	OMP			↑		
217	Z003700	11:14	+0:18	75	21m	pec ???
218	OMP			↑		
219	Z010103	11:14	+34:30	75	3m	
220	OMP			↑		
221	Z002672	11:15	+34:02	75	2m	
222	OMP			↑		
223	Z001969	11:17	+26:57	75	2m	
224	OMP			↑		
225	Z003470.5A.CAND	11:14	+30:48	75	10m	bm by 2 → New SN!!!
226	OMP			↑		4" W + 3" N of nucleus
227	Z007775	11:18	+30:24	75	3m	type II
228	Z008859	11:18	+30:23	75	2m	
229	OMP			↑		
230	Z006253	11:18	+26:57	75	4m	
231	OMP			↑		
232	Z00460	11:18	+28:15	75	4m	
233	OMP			↑		

60 inch Telescope Log

Observer: PSJ/K

PI: _____

Spectrograph: FAST

Grating: 30R

Date: 2/22/98

Page: 6051

Number	Object	R.A.	Dec.	L/R	Exp	Comments
234	Z004596	11:18	+28:13	75	2m	
235	COMP			↑		
236	Z013726	11:18	+28:31	75	2m	
237	COMP			↑		
238	Z022673	11:19	+28:39	75	10s	
239	COMP			↑		
240	Z028560	11:20	+30:30	75	10s	
241	COMP			↑		
242	Z004597	11:20	+27:13	75	5m	extended gal em+
243	COMP			↑		
244	Z011015	11:24	+27:10	75	2m	
245	COMP			↑		
246	SDSN25 p606	14:26	+60:25	6	10m	
247	COMP			↑		
248	ngal - 387	14:37	+42:57	73	9m	gal aligned with slit, * to E. slit
249	COMP			↑		
250	ngal - 388	14:38	+42:59	73	9m	30
251	COMP			↑		
252	ngal - 400	14:48	+42:36	73	14m	61
253	COMP			↑		
254	MRK 279			6	3m	7
255	COMP			↑		
256	N 2548	14:15	+25:22	6	3m	9
257	COMP			↑		
258, 259	BDp 332642	15:50	+33:05	56	1m	
260	COMP			↑		
261	AG Dra	16:01	+66:48	12	2s	
262	"	"	"	"	30s	
263	COMP			↑		
264-273	BIAS				0	
274-283	FLAT				6	
284-293	BIAS				0	
294-303	FLAT				12	bin by 2 ↓

60 inch Telescopa Log
 Observer: B. Carter
 PI: Kenyon, Malidani, McClintock

Spectrograph: FAST PA 90°
 Grating: 300A, 3" slit except as noted Page: 6052
 Date: 2/23/98 all binlog4 except as noted

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-5	DARK				15m	
6-10	DARK				20m	binlog2
11-20	BIAS				0	
21-30	BIAS				0	binlog2
31-40	FLAT				6	
41-50	FLAT				12	binlog2
51-60	FLAT				20	1.1" slit, binlog4
61, 62	AXPer	1:36	+54:15	12	4s, 100s	
63	COMP			↑		
64, 65	DGTau	04:27	+26:06	12	12s, 70s	
66	COMP			↑		
67, 68	DLTau	04:33	+25:20	12	30s, 240s	
69	COMP			↑		
70, 71	DRTau	04:47	+16:58	12	12s, 80s	
72	COMP			↑		
73, 74	RWAur	05:07	+30:24	12	5s, 30s	
75	COMP			↑		
76-78	HD 215770	05:38	+26:18	77	30s	1.1" slit
79	COMP			↑	8s	↓
80	srgeb 119.38	01:56	+03:37	59	4m	bright star to W (broad)
81	COMP			↑		
82	NGC 1700	04:54	-04:56	57	150s	
83	COMP			↑		
84	srgeb 004.17	08:38	+25:19	59	5m	
85	COMP			↑		
86	.18	08:38	+25:19	59	7m	
87	COMP			↑		
88	.19	08:38	+24:53	59	5m	
89	COMP			↑		
90	.20	08:38	+25:16	59	6m	
91	COMP			↑		

60 inch Telescope Log
 Observer: B. Carter
 PI: Huchra, Carter

Spectrograph: FAST
 Grating: 300A
 Date: 2/23/98

Page: 6053

Number	Object	R.A.	Dec.	L/R	Exp	Comments
92	nrq6004.25	08:38	+24:10	99	7m	agn!
93	COMP			↑		
94	nrq6004.26	08:38	+25:45	59	5m	sky is very dark
95	COMP			↑		
96	2M084842.1	08:48	+06:53	68	20m	#1
97	COMP			↑		
98	2M084847.9	08:48	+10:25	68	5m	* gusty wind #2
99	COMP			↑		
100	2M084851.7	08:48	+06:59	68	15m	#9
101	COMP			↑		
102	2M084854.5	08:48	+07:00	68	15m	#10
103	COMP			↑		
104	2M084857.0	08:48	+06:56	68	15m	gusts to 20mph #12
105	COMP			↑		
106	2M084859.2	08:48	+05:55	68	10m	#14
107	COMP			↑		
108	Z010002	09:41	+28:06	75	4m	#109
109	COMP			↑		
110	Z010003	09:41	+27:38	75	3m	#110
111	COMP			↑		
112	Z000165	09:42	+31:50	75	1m	huge! #111
113	COMP			↑		
114	Z000602	09:43	+31:55	75	1m	huge! #112
115	COMP			↑		
116	Z003993	09:43	+31:58	75	3m	#113
117	COMP			↑		
118	Z006238	09:44	+31:05	75	150s	#114
119	COMP			↑		
120	Z005385	09:46	+30:39	75	3m	#115
121	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>EAST</u>		Page: <u>6054</u>	
Observer: <u>B. Carter</u>			Grating: <u>300A</u>		Date: <u>2/23/98</u>	
PI: <u>Carter, Kirshner</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
122	Z 002066	09:49	+32:13	75	3 ^t m	116
123	COMP			↑		
124	Z 010004	09:50	+31:44	75	2m	still gushing to 20mph 117
125	COMP			↑		
126	Z 010005	09:50	+28:00	75	3 ^t m	118
127	COMP			↑		
128	N 000499	09:50	+31:29	75	6m	is this a galaxy? or smudge on plate
129	COMP			↑		slightly to W of "gal" (can't see "galaxy")
130	Z 007357	09:50	+30:29	75	3m	120
131	COMP			↑		
132	Z 001331	09:50	+28:33	75	5m	large, aligned along slit. 121
133	↑ COMP			↑		
134	Z 001331 sky	09:50	+28:33	75	5m	sky for background subtr.)
135	COMP			↑		
136	Z 007358	09:51	+30:35	75	4m	em. lines 122
137	COMP			↑		
138	Z 013707	09:51	+26:17	75	3m	123
139	COMP			↑		
140	Z 011647	09:54	+31:37	75	6m	faint face-on disk (sharply defined nucleus in chart) 124
141	COMP			↑		
142	Z 010006	09:55	+31:29	75	5m	125
143	COMP			↑		
144	Feige 34	10:36	+43:21	56	90s	
145	COMP			↑		
146	SN 1998R	11:14	+30:18	2	15m	binby 2 (the SN we found)
147	COMP			↑	12s	↓
148	N 000279	08:56	+27:13	75	2m	em. lines 126
149	COMP			↑		
150	A 000938	09:58	+32:04	75	2m	127
151	COMP			↑		

60 inch Telescope Log
 Observer: B Carter
 PI: Carter, Geller
 Spectrograph: FAST
 Grating: 300 l
 Date: 2/23/98
 Page: 6055

Number	Object	R.A.	Dec.	L/R	Exp	Comments
152	Z 011649	09:58	+31:37	75	2m	H α em 125
153	COMP			↑		
154	N 002940	09:59	+31:40	75	5m	129
155	COMP			↑		
156	N 000192	10:04	+31:11	75	2m	130
157	COMP			↑		
158	Z 011650	10:06	+28:10	75	5m	131
159	COMP			↑		
160	Z 013708	10:06	+32:13	75	6m	132
161	COMP			↑		
162	N 001745	10:06	+31:05	75	3m	133
163	COMP			↑		
164	Z 008530	10:06	+31:28	75	3m	134
165	COMP			↑		
166	Z 011652	10:07	+30:22	75	5m	135
167	COMP			↑		
168	Z 000936	10:08	+31:51	75	3m	big edge-on spiral 136
169	COMP			↑		
170	a 1367.2875	11:45	+19:09	64	5m	139
171	COMP			↑		
172	.2879	11:47	+19:09	64	5m	120
173	COMP			↑		
174	.2897	11:41	+19:03	64	5m	131
175	COMP			↑		
176	.2932	11:34	+18:40	64	15m	strong emission lines * on slit to W 122
177	COMP			↑		
178	.2942	11:41	+18:43	64	7m	abs. lines 133
179	COMP			↑		
180	.3028	11:38	+18:20	64	10m	134
181	COMP			↑		

60 inch Telescope Log
 Observer: B. Carter
 PI: Geller, Carter, Kirshner, Barton
 Spectrograph: FAST
 Grating: 3001
 Date: 2/23/98
 Page: 6056

Number	Object	R.A.	Dec.	L/R	Exp	Comments
182	a1367.3066	11:37	+18:11	64	7m	still very windy 125
183	COMP			↑		
184	a1367.3071	11:38	+18:13	64	5 ⁺ m	126
185	COMP			↑		
186	H244	13:21	+36:23	56	30s	
187	COMP			↑		
188	Z013739 N	12:42	+26:38	75	10m	} interacting pair? 302 ← name wrong in header, change N→S
189	Z013739 S	"	"	75	10m	
190	COMP			↑		
191	N000148	12:45	+27:03	75	3m	302
192	COMP			↑		
193	Z007385	12:46	+29:44	75	3 ⁺ m	403
194	COMP			↑		
195	Z006251	12:46	+26:33	75	3m	404
196	COMP			↑		
197	SN1998 D	14:02	+34:44	2	20m	bin by 2
198	COMP			↑	12s	↓
199	H244	13:21	+36:23	56	2m	bin by 2 for the SNe
200	COMP			↑	12s	↓
201	ngal-421	15:04	+13:03	73	12m	34
202	COMP			↑		
203	ngal-422	15:04	+13:02	73	10m	35
204	COMP			↑		
205	ngal-426	15:05	+19:46	73	10m	oops! that was supposed to be 6 minutes... oh well! 36
206	COMP			↑		
207	ngal-439	15:26	+43:06	73	6m	37
208	COMP			↑		
209	ngal-445	15:34	+43:40	73	9m	Star to E? 39
210	COMP			↑		
211	ngal-472	16:02	+17:53	73	11m	edge-on spiral along slit, has a small companion gal to E. 40
212	COMP			↑		

60 inch Telescope Log

Observer: B. Carter

PI: Kenyon, Wilkes, Mahdavi

Spectrograph: FAST

Grating: 3001

Page: 6058

Date: 2/25/98

3" slit, binby if unless otherwise noted

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-5	DARK				15m	Frame 1 has incorrect slit in Comment field (should be 3")
6-8	DARK				20m	binby 2
7-13	sky				8s	clouds!
14	COMP			↑	6s	focus looks good
15-24	BIAS				0	
25-34	BIAS				0	binby 2
35-44	FLAT				12s	binby 2
45-54	FLAT				6s	
55, 56	RW Aur	05:07	+30:24	12	1m	very cloudy! star is mostly obscured except occasionally appears thru the clouds.
57	COMP			↑		
58, 59	RW Aur	05:07	+30:24	12	5m	
60	COMP			↑		
61	HD 52971	06:57	+27:13	57	90s	
62	COMP			↑		
63, 64	DARK				20m	binby 2
65	HD 52971	06:57	+27:13	57	2m	↓ still almost solid clouds
66	COMP			↑	8s	
67	AKN 120	05:13	-00:12	6	5m	airmass = 2.4 stars together
68	COMP			↑		
69	ncg 6004.24	08:38	+24:53	59	15m	
70	COMP			↑		
71	Feige 34	10:36	+43:21	56	5m	
72	COMP			↑		
73	Feige 34	"	"	56	5m	
74	COMP			↑		
75, 76	N4486B	12:30	+12:29	57	5m	
77	COMP			↑		
78	N4051	12:08	+44:48	6	5m	
79	COMP			↑		
80	N4151	12:08	+39:41	6	90s	
81	COMP			↑		

#58 is bad.
#59 is ok.

60 inch Telescope Log

Observer: B. Carter

PI: Wilkes, Geller, Konyan, Carter

Spectrograph: FAST

Grating: 3001

Page: 6059

Date: 2/25/98

Number	Object	R. A.	Dec.	L/R	Exp	Comments
82	N4258	12:16	+47:34	6	3m	still very cloudy
83	COMP			↑		
84, 85	N4548	14:15	+25:22	6	15, 15 ⁺ m	
86	COMP			↑		
87	MRK421	11:01	+38:28	6	15m	
88	COMP			↑		
89	H244	13:21	+36:23	56	90s	
90	COMP			↑		
91	a1367.3241	11:36	+17:21	64	20m	low S/N (still very cloudy)
92	COMP			↑		
93	a1367.2108	11:32	+18:50	64	20m	better S/N
94	COMP			↑		
95-97	AG Dra	16:01	+66:48	12	5s, 1s, 30s	clouds clearing (5am)
98	COMP			↑		
99	MRK 279	13:51	+69:33	6	5m	
100	COMP			↑		
101	Z003009	12:47	+29:47	75	8m	
102	COMP			↑		
103	A000473	12:47	+27:27	75	10m	windy
104	COMP			↑		
105	A000208	12:47	+26:58	75	5m	
106	COMP			↑		
107	Z001655	12:47	+27:13	75	4m	
108	COMP			↑		
109	PG1708p602	17:08	+60:13	56	1m	
110	COMP			↑		
111	PG1545p035	15:45	+03:32	56	2m	
112	COMP			↑		
113-122	BIAS				0	
123-132	FLAT				6s	

60 inch Telescope Log Observer: <u>B. Carter</u> PI: <u>Kenyon, Huchra, Carter</u>	Spectrograph: <u>FAST</u> Grating: <u>300L, 3" slit, binby4</u> Page: <u>6060</u> Date: <u>2/26/98</u> <small>except as noted</small>
---	---

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-5	DARK				15m	
6-10	DARK				20m	binby2
11-20	BIAS				0	
21-30	BIAS				0	binby2
31-40	FLAT				12s	binby2
41-50	FLAT				6s	
51-60	FLAT				20s	1.1" slit
61-65	sky	zenith			1s	
66	COMP			↑		
67,68	AXPer	01:26	+54:15	12	10s, 2m	
69	COMP			↑		
70,71	DGTau	04:27	+26:06	12	12s, 2m	
72	COMP			↑		
73,74	DLTau	04:33	+25:20	12	45s, 6m	ack! clouds!
75	COMP			↑		
76,77	DRTau	04:47	+16:58	12	30s, 3m	
78	COMP			↑		
79,80	RWAur	05:07	+30:24	12	30s, 3m	dreadful clouds—
81	COMP			↑		took exposures during lucky bre
82,83	2M084930.5	08:49	+08:47	68	10m, 15m	#82 no good, #83 is ok.
84	COMP			↑		
85	2M084917.4	08:49	+08:18	68	20m	probably should redo—
86	COMP			↑		too many clouds, low signal
87	Z007360	10:09	+30:19	75	10m	galaxy aligned with slit
88	COMP			↑		
89	Z005386	10:10	+32:04	75	10m	
90	COMP			↑		
91	Z003466	10:10	+27:57	75	10m	
92	COMP			↑		
93	Z002332	10:12	+27:51	75	10m	
94	COMP			↑		

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>6062</u>		
Observer: <u>P. Berhel</u>		Grating: <u>300; 35 slit</u>		Date: <u>2/27/98</u>		
PI: <u>Kenny/Jeff M</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-3	DARK				15m	
4-15	BENS				0s	
16-25	FLAT				6s	
16-25	BENS				0s	bimby 2
36-45	FLAT				12s	bimby 2
46-50	SKY	zenith		57	2s	few clouds
51	COMP			↑	6s	
52-60	FLAT			77		1.1" slit
61-62	AR Per	07:26	+91	12	4, 80s	
63	COMP			↑		clear; cold; windy
64-65	RuWe	05	+30	12	5, 30s	
66	COMP			↑		
67-68	DR Tau	04	+16	12	15, 80s	
69	COMP			↑		
70-71	DR Tau	04	+16	12	15, 90s	
72	COMP			↑		poor seeing
73-74	DL Tau	04	+25	12	30, 4m	
75	COMP			↑		
76	HEU	04:11	+10:59	56	5m	
77	COMP			↑		
78	COMP			↓		11" slit - per Jeff request
79-80	HD 245770	05	+76	77	35s	
81-82	HD 39478	05	+26	77	35s	E+
83	COMP			↑		
84	2M 085008.6	08:50	+11:25	68	20m	3" slit K+H @ SWOA
85	COMP			↑		
86	nr gal W4.21	08:38	+21:53	59	5m	
87	COMP			↑		
88	604.22	08:38	+25:17	59	5m	
89	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>EAST</u>		Page: <u>6063</u>	
Observer: <u>PB</u>			Grating: <u>3WR</u>			
PI: <u>Hucha</u>			Date: <u>2/27/98</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
90	nrq6 001.23	08:38	+75:05	59	4m	Cold + windy !!
91	COMP			↑		
92	ZM081911.0	08:49	+69:02	68	15m	
93	COMP			↑		
94	ZM081952.5	08:49	+10:32	68	15m	
95	COMP			↑		
96	ZM084953.4	08:49	+08:43	68	17m	em
97	COMP			↑		
98	ZM085000.1	08:50	+11:17	68	15m	terrible seeing!
99	COMP			↑		
100	ZM085000.6	08:50	+07:02	68	20m	
101	COMP			↑		
102	ZM085021.2	08:50	+09:31	68	15m	
103	COMP			↑		
104	ZM085648.9	08:56	+16:52	68	12m	
105	COMP			↑		
106	ZM085646.3	08:56	+16:47	68	12m	
107	COMP			↑		
108	Z04590	09:24	+78:17	75	4m	em
109	COMP			↑		
110	Z061007	10:12	+70:34	75	4m	
111	COMP			↑		
112	Z04592	10:20	+07:49	75	4m	em
113	COMP			↑		
114	N001356	10:21	+27:55	75	3m	
115	COMP			↑		
116	Z011653N	10:21	+78:01	75	4m	
117	Z011653S	"	"	75	7m	
118	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>6064</u>	
Observer: <u>PB</u>			Grating: <u>3002, 3" slit</u>			
PI: <u>B. Carter</u>			Date: <u>2/27/98</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
119	Z003994	10:24	+28:09	75	3m	windy; cold
120	WMP			↑		poor seeing
121	Z013709	10:25	+28:27	75	5m	
122	WMP			↑		
123	Z001072	10:48	+28:36	75	2m	
124	WMP			↑		
125	Z007316	11:28	+27:23	75	4m	scattered + light to W
126	WMP			↑		
127	Z007379	11:28	+27:29	75	5m	* to W emt
128	WMP			↑		
129	Z010016	11:28	+26:54	75	3m	* to W
130	WMP			↑		
131	N001748	11:28	+27:23	75	11m	WK extended
132	WMP			↑		
133	Z0015578	11:29	+28:32	75	2m	
134	WMP			↑		
135	Z011663	11:29	+28:15	75	4m	em
136	WMP			↑		
137	Z013729	11:31	+26:43	75	5m	* to W
138	WMP			↑		
139	Z008663	11:31	+28:12	75	3+	em
140	WMP			↑		
141	A000942	11:31	+26:17	75	5m	WK
142	WMP			↑		
143	Z002674	11:31	+28:09	75	2m	
144	WMP			↑		
145	Z002334	11:31	+28:21	75	2m	emt
146	WMP			↑		
147	Z011664	11:31	+31:52	75	7m	
148	WMP			↑		

60 inch Telescope Log

Observer: PB

PI: Barb's Andi

Spectrograph: FAST

Grating: 3002

Page: 6065

Date: 2/27/98

Number	Object	R.A.	Dec.	L/R	Exp	Comments
149	Z011665	11:32	+27:10	75	2m	continued windy
150	COMP			T		poor seeing
151	Z006245	11:32	+28:02	75	2m	
152	COMP			T		
153	Z005390	11:36	+26:51	75	4m	em
154	COMP			T		
155-156	Ferp34	10:39	+43	56	2m	sec 102
157	COMP			T		
158	048.01	11:45	+31:17	59	2m	em
159	COMP			T		
160	048.02	11:52	+32:29	59	90s	em
161	COMP			T		
162	048.03	11:53	+33:21	59	2m	wk; em; huge cosmiz ray
163	COMP			T		
164	048.04	11:57	+30:42	59	10m	em
165	COMP			T		
166	048.05	11:55	+33:08	59	6m	wk; good em
167	COMP			T		
168	048.06	11:55	+33:07	59	4m	em
169	COMP			T		
170	048.07	11:55	+32:11	59	2m	em+
171	COMP			T		a few clouds
172	048.08	11:56	+32:02	59	10m	
173	COMP			T		
174	048.09	11:56	+32:37	59	9m	em
175	COMP			T		seeing even worse > 3"
176	048.10	11:56	+32:41	59	3m	
177	COMP			T		
178	048.11	11:56	+32:09	59	3m	
179	COMP			T		

60 inch Telescope Log

Observer: PB
 PI: Andi

Spectrograph: FAST
 Grating: 300
 Date: 2/27/98

Page: 6066

Number	Object	R.A.	Dec.	L/R	Exp	Comments
180	rg h 048.18	11:59	+70:50	S9	3m	terrible seeing
181	COMP			r		windy
182	048.12	11:59	+70:23	S9	3m	
183	COMP			r		many duplicate charts
184	048.20	12:02	+79:50	S9	6m	em some already
185	COMP			r		observed twice
186	048.21	12:02	+79:51	S9	3m	em
187	COMP			r		
188	048.22	12:02	+79:28	S9	11m	
189	COMP			r		
190	049.01	11:53	+76:12	S9	3m	
191	COMP			r		
192	049.21	12:08	+79:18	S9	3m	
193	COMP			r		
194	049.22	12:09	+79:14	S9	3m	em
195	COMP			r		
196	049.24	12:09	+79:10	S9	3m	
197	COMP			r		48" images → 6" Fwhm seeing
198	057.14	12:11	+77:36	S9	4m	such
199	COMP			r		
200	057.15	12:12	+77:10	S9	10s	
201	COMP			r		
202	057.16	12:12	+78:49	S9	3m	
203	COMP			r		
204	057.17	12:12	+79:08	S9	2m	
205	COMP			r		
206	057.18	12:12	+79:10	S9	2m	
207	COMP			r		
208	057.19	12:13	+78:50	S9	3m	
209	COMP			r		

60 inch Telescope Log

Observer: PB

PI: Andi Barb

Spectrograph: FAST

Grating: 300

Page: 6067

Date: 2/27/98

Number	Object	R.A.	Dec.	L/R	Exp	Comments
210	19h05m7.20	12:13	+28:30	S9	4m	wk; no em beautiful
211	COMP			↑		continued poor seeing...
212	057.21	12:13	+28:08	S9	10m	em
213	COMP			↑		
214	057.22	12:14	+28:25	S9	10s	
215	COMP			↑		
216	057.24	12:18	+29:48	S9	90s	AGN! <u>Sy 1</u>
217	COMP			↑		
218-219	H244	13:21	+36:23	S6	2m	size = low
220	COMP			↑		
221	N001358	12:39	+27:06	75	3m	many duplicate charts
222	COMP			↑		between these 2
223	Z013758	12:40	+28:10	75	4m	em projects
224	COMP			↑		75+S9
225	N000511	12:40	+26:43	75	2m	and I recall a
226	COMP			↑		trip through Coma
227	Z011680	12:44	+20:07	75	3m	last year too.
228	COMP			↑		
229	Z005398	12:49	+26:53	75	3m	
230	COMP			↑		
231	N002266	12:49	+27:45	75	2m	
232	COMP			↑		
233	Z005576	12:50	+27:15	75	3m	
234	COMP			↑		
235	N002267	12:50	+30:50	75	8m	
236	COMP			↑		
237	N00593	12:50	+27:50	75	2m	
238	COMP			↑		
239	AW0945	12:51	+27:22	75	9m	em
240	COMP			↑		

60 inch Telescope Log
 Observer: PB
 PI: WillKeshAndi
 Spectrograph: F15
 Grating: 300R
 Date: 2/27/98
 Page: 6068

Number	Object	R.A.	Dec.	L/R	Exp	Comments
241	ZO10052	12:51	+27:06	75	7m	
242	COMP			↑		
243	ZO2540	12:51	+31:03	75	3m	
244	COMP			↑		
245	N4151	12:08	+39:41	6	40s	
246	COMP			↑		
247	N4050	12:40	+44:48	6	3m	
248	COMP			↑		
249	N4758	12:16	+47:34	6	3m	Seeing finally a little better
250	COMP			↑		
251	MRK279	13:51	+69:33	6	3m	
252	COMP			↑		
253	N5548	14:15	+25:22	6	4m	
254	COMP			↑		
255	NGC244.01	13:19	+13:29	59	7m	
256	COMP			↑		
257	244.02	13:19	+14:23	59	7m	
258	COMP			↑		
259	244.03	13:20	+14:14	59	6m	
260	COMP			↑		
261	244.04	13:20	+14:32	59	4m	
262	COMP			↑		
263	244.05	13:20	+14:31	59	5m	
264	COMP			↑		
265	244.06	13:20	+14:09	59	5m	
266	COMP			↑		
267	244.07	13:21	+14:43	59	6m	
268	COMP			↑		
269	244.08	13:21	+14:19	59	6m	
270	COMP			↑		

976-5650

60 inch Telescope Log

Observer: PB
 PI: Andi

Spectrograph: FAST

Grating: 3002

Page: 6069

Date: 2/27/98

Number	Object	R.A.	Dec.	L/R	Exp	Comments
271	Mrab 244.009	13:22	+13:22	S9	5m	
272	COMP			↑		
273	244.010	13:23	+13:56	S9	5m	em
274	COMP			↑		
275	244.011	13:23	+13:43	S9	5m	
276	COMP			↑		
277	244.012	13:23	+13:46	S9	5m	*to W
278	COMP			↑		
279	244.016	13:23	+13:53	S9	5m	
280	COMP			↑		
281	244.022	13:24	+13:58	S9	2m	
282	COMP			↑		
283	244.024	13:24	+14:05	S9	3m	
284	COMP			↑		
285	244.025	13:24	+13:44	S9	2m	
286	COMP			↑		
287-8	AGDR _a	16:01	+16:48	6	40s, 6s	a little bit
289	COMP			↑		
290-291	DDp37202	15:50	+17:05	S4	35s	
292	COMP			↑		clear @ dawn
293-302	BIAS			0	0s	
303-312	FLAT			0	6s	

60 inch Telescope Log
 Observer: P. Berlind
 PI: Scott & Andi
 Spectrograph: FAST
 Grating: 300L, 3" slit
 Date: 2/28/98
 Page: 6070

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-5	DARK				15m	bin by 1
6-10	DARK				20m	bin by 2
11-20	BIAS				0s	bin by 4
21-30	FLAT				6s	
31-40	BIAS				0s	bin by 2
41-50	FLAT				12s	"
51-55	sky	zenith		S7	2s	
56	COMP			↑	6s	clear skies!
57-58	RWAnc	05	+30	12	5s, 20s	
59				↑		
60-64	AKPer	04	+54	12	4s, 60s	
62	COMP			↑		
63-64	DRTan	04	+16	12	12s, 60s	
65				↑		
66-67	DRTan	04	+26	12	12s, 90s	
68	COMP			↑		
69-70	DLTan	04	+25	12	30s, 4m	
71				↑		
72	AKn120	05:13	-12:12	6	3m	
73	COMP			↑		
74	HZ14	04:41	+10:59	S6	5m	1.10
75	COMP			↑		
76	neighb 004.28	08:38	+25:50	S9	6m	"
77	COMP			↑		
78	004.27	08:38	+25:23	S9	6m	em
79	COMP			↑		
80	004.29	08:38	+25:35	S9	6m	18°
81	COMP			↑		
82	004.30	08:38	+24:53	S9	9m	em
83	COMP					

60 inch Telescope Log

Observer: PBPI: Andi/Huchra/KrishnaerSpectrograph: FASTGrating: 3002Page: 6071Date: 2/28/98

Number	Object	R.A.	Dec.	L/R	Exp	Comments
84	NGC 6004.31	08:38	+25:14	59	5m	gorgeous night
85	COMP			↑		
86	004.32	08:38	+25:04	59	5m	
87	COMP			↑		
88	604.33	08:39	+25:28	59	12m	300 cuts
89	COMP			↑		
90	004.34	08:39	+26:34	59	11m	em
91	COMP			↑		
92/93	Hiltner 60	08:42	-02	56	45s	bin by 2 1.15
94	COMP			↑		
95	2M084925.4	08:49	+10:50	68	20m	
96	COMP			↑		
97	2M084945.4	08:49	+10:27	66	15m	windy.
98	COMP			↑		
99	2M085022.5 EW	08:50	+11:17	68	15m	bin by 2; comp to W
100	COMP			↑		
101	2M085034.1	08:50	+10:02	68	15m	Faint gal to far W
102	COMP			↑		
103	2M085035.2	08:50	+10:11	68	12m	etc
104	COMP			↑		
105	2M085647.3	08:56	+12:01	68	10m	strong em
106	COMP			↑		
107,109	SN1997E	07:57	+49:33	2	20m	+2
108,110	COMP			↑		framb 248'
111	g1357.3073	11:40	+18:13	64	5m	
112	COMP			↑		
113	.3066	11:44	+18:04	64	5m	
114	COMP			↑		
115	.318	11:51	+17:55	69	31m	
116	COMP			↑		

60 inch Telescope Log
 Observer: PB
 PI: Geller
 Spectrograph: FAST
 Grating: 3002
 Date: 2/28/98
 Page: 6072

Number	Object	R.A.	Dec.	L/R	Exp	Comments
117	a1367.3156	11:35	+17:46	64	6m	em
118	COMP			↑		
119	.3167	11:38	+17:43	64	5m	em
120	COMP			↑		
121	.3175	11:40	+17:48	64	7m	wk ; wkempix 260
122	COMP			↑		
123	.3179	11:42	+17:39	64	4m	
124	COMP			↑		
125	.3183	11:42	+17:47	64	5m	em
126	COMP			↑		
127	.3263	11:55	+17:20	64	4m	
128	COMP			↑		
129	.3241	11:36	+17:21	64	4m	also obs 2/25/98 #91
130	COMP			↑		
131	.3287	11:36	+17:13	64	8m	
132	COMP			↑		
133	.3284	11:37	+17:08	64	7m	em
134	COMP			↑		
135	.3342	11:39	+16:58	64	7m	wk, wk em pix 2270
136	COMP			↑		
137	.3390	11:40	+16:43	64	8m	
138	COMP			↑		
139	.3526	11:42	+16:05	64	7m	em pix 2250
140	COMP			↑		
141	.2043	11:29	+18:23	64	4m	
142	COMP			↑		
143	.2105	11:29	+18:43	64	6m	em
144	COMP			↑		
145	.2173	11:32	+18:08	64	5m	
146	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Geller & Koronaj

Spectrograph: FAST

Grating: 300

Date: 2/28/98

Page: 6073

Number	Object	R. A.	Dec.	L/R	Exp	Comments
147, 149	α1367, 3968	11:55	+19:26	64	6m, 10m	x2 reduce 149; 147 took
148	COMP			↑		
150	.4039	12:00	+19:03	64	10m	em
151	COMP			↑		
152	.4097	12:00	+18:34	64	4m	obj. in slit to E
153	COMP			↑		
154	.4099	12:00	+18:34	64	4m	" W
155	COMP			↑		
156	.4171	11:57	+18:48	64	8m	em
157	COMP			↑		
158	.4184	11:55	+18:40	64	8m	em
159	COMP			↑		
160	.4191	11:59	+17:59	64	5m	em
161	COMP			↑		
162	.4266	11:54	+17:15	64	5m	
163	COMP			↑		
164	.4269	11:55	+17:14	64	5m	Finishes α1367 volume 2
165	COMP			↑		2
166	m4w4 -41	12:01	+01:11	35	6m	
167	COMP			↑		
168	-42	12:06	+01:28	35	10m	em deep
169	COMP			↑		
170	-43	12:01	+01:47	35	10m	
171	COMP			↑		
172	-44	12:02	+01:40	35	11m	
173	COMP			↑		
174	-45	12:03	+01:58	35	10m	
175	COMP			↑		
176	-46	12:07	+01:29	35	8m	
177	COMP			↑		

60 inch Telescope Log

Observer: PBPI: Kwargi / MahdaviSpectrograph: FASTGrating: 3000Page: 6074Date: 2/28/98

Number	Object	R. A.	Dec.	L/R	Exp	Comments
178	mkn4-47	12:03	+02:01	35	9m	* to W em
179	COMP			↑		face on spiral arm Sy1
180	-48	12:01	+01:32	35	10m	
181	COMP			↑		
182	-70	12:01	+01:53	35	9m	binby 2; bright gal to W
183	COMP			↑		same as
184	rght 17	11:59	+30:43	59	10m	pec!; blue abs orb bl/mer
185	COMP			↑		good one
186	048.19	12:01	+30:50	59	12m	LSB - the empir 2054
187	COMP			↑		etal
188	048.24	12:03	+29:42	59	15m	* to E
189	COMP			↑		wk empir 2055
190	049.02	11:59	+26:13	59	15m	faint
191	COMP			↑		
192	049.10	11:58	+27:31	59	6m	em+
193	COMP			↑		
194	049.11	11:58	+27:27	59	4m	was what as spiral em
195	COMP			↑		
196	049.12	11:59	+26:18	59	12m	LSB em
197	COMP			↑		
198	049.14	12:01	+28:59	59	9m	em
199	COMP			↑		
200	049.18	12:03	+29:25	59	8m	em
201	COMP			↑		
202	H211	13:21	+36:23	56	2m	112
203	COMP			↑		
204	SBS 1425606	14:25	+60:39	6	10m	
205	COMP			↑		
206	MRK 09	13:51	+69:33	6	3m	
207	COMP			↑		

60 inch Telescope Log

Observer: PB
 PI: Andi

Spectrograph: FAST

Grating: 3022

Page: 6075

Date: 2/28/58

Number	Object	R. A.	Dec.	L/R	Exp	Comments
208	NS548	14:15	+25:22	6	3m	
209	COMP			↑		
210	rg h085 BR.01	13:29	+34:26	59	5m	em
211	COMP			↑		
212	.02	13:30	+34:55	59	4m	em
213	COMP			↑		
214	.03	13:30	+34:49	59	10s	
215	COMP			↑		
216	.08	13:34	+34:41	59	110s	windy
217	COMP			↑		
218	.09	13:34	+34:46	59	110s	clear & dark!
219	COMP			↑		
220	.11	13:34	+34:02	59	2m	em
221	COMP			↑		
222	.15	13:35	+33:28	59	110s	
223	COMP			↑		
224-225	AGDa	16:01	+66:48	12	30s, 4s	⇒ 15, 30s
226	COMP			↑		
227-228	BIAS			0	0s	
229-230	FLAT			0	6s	
231-232	BIAS			0	0s	
233-234	FLAT			0	12s	