

60 inch Telescope Log  
 Observer: K. Rines  
 PI: All, Vachra  
 Spectrograph: FAST  
 Grating: 300L  
 Date: 2/17/99  
 Page: 6999

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	DARK				15m	bin by 4
11-20	BIAS				0s	mostly clear, hazy
21-30	FLAT				6s	
31-40	BIAS				0s	bin by 2
41-50	FLAT				12s	
51-60	FLAT				15s	tilt = 590
61-65	sky				2s	6:25
66	COMP				6s	
67	Feige 25	2 38	+5 28	5L	2m	bin by 4
68	COMP			↑		
69	Feige 25	2 38	+5 28	5L	2m	bin by 2
70	COMP			↑		
71	M31	0 42	41 16	57	60s	
72	COMP			↑		
73-75	CI Cam	4 19	55 59	107	2, 20, 70	
76	COMP			↑		
77	2m 014955.9p41	1 49	41 40	68	8m	obj to E
78	COMP			↑		
79	2m 015246.7p33	1 52	33 10	68	6m	
80	COMP			↑		
81	2m 015105.9p39	1 51	39 43	68	8m	
82	COMP			↑		
83	2m 015044.3p29	1 50	29 55	68	10m	
84	COMP			↑		
85	2m 014953.9p32	1 49	32 06	68	8m	cm
86	COMP			↑		
87	2m 014555.9p32	1 45	32 38	68	6m	obj to E
88	COMP			↑		
89	2m 014708.5p33	1 47	33 06	68	10m	
90	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>7000</u>	
Observer: <u>Rines</u>			Grating: <u>301</u>		Date: <u>2/17/99</u>	
PI: <u>Huchra, Keamy, Kirshner, Rines</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
91	Zm014811.9p41	1 48	41 41	68	10m	
92	COMP			↑		
93	Zm014940.4p41	1 49	41 55	68	8m	
94	COMP			↑		
95	Zm015005.8p41	1 50	41 55	68	10m	
96	COMP			↑		
97	obj-1062	2 51	42 13	35	20m	to W
98	COMP			↑		
99	obj-1063	2 57	41 53	35	20m	em
100	COMP			↑		
101	obj-1065	2 57	42 10	35	20m	obj to W, obj to E
102	COMP			↑		
105	SN1999ca	8 27	21 29	2	20m	till=590, bin by 2, $\lambda = -10$
106	COMP			↑		
107	Feige 3f	10 39	43 06	56	2m	$\lambda = 82$
108	COMP			↑		
109	p 448	8 41	19 16	82	10m	circus
110	COMP			↑		obj to W
111	Zm074419.5p21	7 49	21 49	68	6m	A to W
112	COMP			↑		clearing
113	Zm070428.7p18	7 04	18 35	68	4m	obj to E
114	COMP			↑		
115	Zm071455.7p05	7 14	5 33	68	8m	
116	COMP			↑		
117	Zm074551.4p18	7 45	18 05	68	8m	stars? M*
118	COMP			↑		
119	a1213-092	11 09	28 54	64	6m	
120	COMP			↑		
121	-081	11 14	27 14	64	6m	
122	COMP			↑		

103 obj-1068 2 57 41 55 35 20m  
 104 COMP ↑

101 - Only 2 objs on slit; obj to E is a star  
 (this is w/just nearest center of slit)

<p>60 inch Telescope Log</p> <p>Observer: <u>Rines</u></p> <p>PI: <u>Rines</u></p>	<p>Spectrograph: <u>FAST</u></p> <p>Grating: <u>300L</u></p> <p>Date: <u>2/17/99</u></p> <p style="text-align: right;">Page: <u>7001</u></p>
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Number	Object	R.A.	Dec.	L/R	Exp	Comments
123	a1213_083	11 19	31 14	64	4m	
124	COMP			↑		
125	084	11 02	29 34	64	5m	
126	COMP			↑		
127	069	11 12	31 22	64	6m	Hα e 6835 Å
128	COMP			↑		
129	072	11 24	28 45	64	7m	Underexposed
130	COMP			↑		
131	073	11 31	28 34	64	10m	Underexposed Em at pixel 2032
132	COMP			↑		
133	076	11 05	30 04	64	4m	
134	COMP			↑		
135	076NW	11 05	30 04	64	5m	
136	COMP			↑		
137	089	11 16	27 34	64	10m	obj. to W
138	COMP			↑		em
139	090	11 04	29 49	64	4m	
140	COMP			↑		
141	091	11 05	29 08	64	4m	
142	COMP			↑		
143	095	11 01	29 56	64	6m	
144	COMP			↑		
145	096	11 14	28 09	64	3m	
146	COMP			↑		
147	097	11 14	29 32	64	3m	
148	COMP			↑		
149	093	11 17	29 08	64	3m	
150	COMP			↑		
151	098	11 15	27 46	64	3m	
152	COMP			↑		

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>7002</u>		
Observer: <u>Rines</u>		Grating: <u>300R</u>		Date: <u>2/17/99</u>		
PI: <u>Rines</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
153	1213-100	11 11	27 39	64	3m	
154	COMP			↑		
155	099	11 20	27 17	64	3m	
156	COMP			↑		
157	103	11 17	27 21	64	3m	obj. to E
158	COMP			↑		
159	105	11 17	27 05	64	5m	big gal
160	COMP			↑		
161	101	11 17	29 18	64	3m	Sy!
162	COMP			↑		
163	102	11 12	27 28	64	3m	
164	COMP			↑		
165	104	11 08	31 10	64	4m	
166	COMP			↑		
167	106	11 08	29 48	64	10m	
168	COMP			↑		
169	107	11 09	30 59	64	3m	
170	COMP			↑		
171	108	11 10	28 28	64	4m	
172	COMP			↑		
173	109	11 11	28 40	64	3m	
174	COMP			↑		
175	110	11 26	28 20	64	3m	
176	COMP			↑		
177	094	11 31	29 40	64	3m	
178	COMP			↑		
179	111	11 02	29 15	64	3m	
180	COMP			↑		
181	111SW	11 02	29 15	64	6m	
182	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>EAST</u>		Page: <u>7003</u>	
Observer: <u>Rines</u>			Grating: <u>300L</u>		Date: <u>2/17/99</u>	
PI: <u>Rines</u>						
Number	Object	R. A.	Dec.	L/R	Exp	Comments
183	<u>11213-112</u>	<u>11 05</u>	<u>30 31</u>	<u>64</u>	<u>6m</u>	
184	<u>COMP</u>			<u>↑</u>		
185	<u>113E, 113W</u>	<u>11 17</u>	<u>28 05</u>	<u>64</u>	<u>8m</u>	<u>2 gals, bin by 2</u>
186	<u>COMP</u>			<u>↑</u>		<u>α = 95°</u>
187	<u>114E, 114W</u>	<u>11 19</u>	<u>27 51</u>	<u>64</u>	<u>8m</u>	<u>2 gals α = 71°</u>
188	<u>COMP</u>			<u>↑</u>		
189	<u>115E, 115W</u>	<u>11 27</u>	<u>27 37</u>	<u>64</u>	<u>8m</u>	<u>2 gals α = 90°, bin by 4</u>
190	<u>COMP</u>			<u>↑</u>		<u>3rd obj to W</u>
191	<u>116</u>	<u>4 31</u>	<u>27 14</u>	<u>64</u>	<u>3m</u>	
192	<u>COMP</u>			<u>↑</u>		
193	<u>118</u>	<u>11 17</u>	<u>27 57</u>	<u>64</u>	<u>3m</u>	
194	<u>COMP</u>			<u>↑</u>		
195	<u>119</u>	<u>11 18</u>	<u>27 12</u>	<u>64</u>	<u>10m</u>	
196	<u>COMP</u>			<u>↑</u>		
197	<u>117</u>	<u>11 02</u>	<u>28 14</u>	<u>64</u>	<u>6m</u>	
198	<u>COMP</u>			<u>↑</u>		
199	<u>120</u>	<u>11 02</u>	<u>31 23</u>	<u>64</u>	<u>6m</u>	
200	<u>COMP</u>			<u>↑</u>		
201	<u>121</u>	<u>11 15</u>	<u>29 04</u>	<u>64</u>	<u>3m</u>	
202	<u>COMP</u>			<u>↑</u>		
203	<u>122</u>	<u>11 08</u>	<u>28 32</u>	<u>64</u>	<u>6m</u>	<u>star?</u>
204	<u>COMP</u>			<u>↑</u>		
205	<u>123</u>	<u>11 10</u>	<u>29 34</u>	<u>64</u>	<u>3m</u>	
206	<u>COMP</u>			<u>↑</u>		
207	<u>124</u>	<u>11 25</u>	<u>27 31</u>	<u>64</u>	<u>4m</u>	
208	<u>COMP</u>			<u>↑</u>		
209	<u>125</u>	<u>11 10</u>	<u>30 42</u>	<u>64</u>	<u>3m</u>	
210	<u>COMP</u>			<u>↑</u>		
211	<u>126</u>	<u>11 19</u>	<u>30 23</u>	<u>64</u>	<u>5m</u>	
212	<u>COMP</u>			<u>↑</u>		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		
Observer: <u>Rines</u>				Grating: <u>300L</u>		Page: <u>7004</u>
PI: <u>Rines, Kwanji</u>				Date: <u>2/17/99</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
213	a1213-127	11 07	28 30	64	4m	
214	COMP			↑		
215	128	11 10	28 37	64	3m	
216	COMP			↑		
217	mkw12-i.009	14 01	10 07	35	6m	
218	COMP			↑		
219	010	14 07	9 40	35	5m	
220	COMP			↑		
221	011	14 05	8 54	35	15m	obj to E
222	COMP			↑		am
223	012	14 02	9 46	35	3m	
224	COMP			↑		
225	013	14 04	8 20	35	12m	am
226	COMP			↑		
227	015	14 00	9 17	35	8m	
228	COMP			↑		
229	017	14 06	9 21	35	3m	
230	COMP			↑		
231	020	14 05	8 59	35	3m	
232	COMP			↑		
233	021	14 06	10 20	35	4m	
234	COMP			↑		
235	022	14 07	10 13	35	6m	
236	COMP			↑		
237	N5548	14 17	25 08	6	3m	
238	COMP			↑		
239	N4051	12 03	44 31	6	2m	
240	COMP			↑		
241	MRK421	11 04	38 12	6	4m	
242	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>EAST</u>		Page: <u>7005</u>
Observer: <u>Rines</u>		Grating: <u>300L</u>		Date: <u>2/17/99</u>		
PI: <u>All</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
243	H244	13 23	38 12	56	2m	
244	COMP			↑		
245	H244	13 23	38 12	56	2m	bin by 2
246	COMP			↑		
247-29	BIAS				0s	
257-26	FLAT				12s	
267-27	BIAS				0s	bin by 4
277-28	FLAT				6s	
287-29	DARK				15m	bin by 2