

51-60 FLAT 15s flat = 590

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>K Rines</u>			Grating: <u>300l</u>		Page: <u>6994</u>	
PI: <u>All</u>			Date: <u>2/16/99</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	
<del>51-60 FLAT</del>						
61	sky				5s	
62-65	sky				15s	6:26
67-71	sky				15s	
72	COMP					circus!
73	HZ14	4 41	10 59	SE	390s	<del>X</del>
74	COMP			↑		
75	HZ14	4 41	10 59	SE	5m	take two... 7:05
76	COMP			↑		
77	Zm015248.2p40	1 52	40 20	68	10m	bin by 4 underpruned
78	COMP			↑		
79	Zm014725.4p30	1 47	30 01	68	15m	
80	COMP			↑		
81	Zm014833.1p32	1 48	32 12	68	12m	
82	COMP			↑		
83	Zm014832.7p33	1 48	33 03	68	12m	
84	COMP			↑		
85	scj b 149.152	2 43	+1 45	59	8m	em
86	COMP			↑		
87	143	2 41	+2 15	59	12m	em
88	COMP			↑		
89	145	2 41	+1 14	59	8m	
90	COMP			↑		
91	144	2 41	+1 38	59	6m	* to E
92	COMP			↑		

60 inch Telescope Log		Spectrograph: <u>FAST</u>				Page: <u>6995</u>
Observer: <u>Rias</u>		Grating: <u>300L</u>				Date: <u>2/16/99</u>
PI: <u>Mahdavi, Koranyi, Krasner</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
93	src 6149.147	2 42	+2 25	59	8m	
94	COMP			↑		
95	obj-1047	2 51	42 09	35	20m	
96	COMP			↑		
97	obj-1055	2 52	41 01	35	20m	obj. to W cm lines don't line up
98	COMP			↑		
99	obj-1070	2 51	42 11	35	20m	2 obj's to W
100	COMP			↑		
101-103	CICam	4 19	55 59	100	2.29%	
104	COMP			↑		
105	α 539.05142, 04	5 14	+4 47	64	15m	obj. to E, star to SW
106	COMP			↑		
107	BGGem	6 03	+27 41	107	5m	bin by 2
108	COMP			↑		
109	SN1999aa	8 27	21 29	2	20m	tilt = 590, $\alpha = -32 \rightarrow -1$
110	COMP			↑		
111	HFrige 39	10 39	43 06	56	2m	$\alpha = 82$
112	COMP			↑		
113	src 038.189	9 23	22 07	59	15m	bin by 4, tilt = 610, bin by 4
114	COMP			↑		obj. to W
115	211	9 24	22 08	59	12m	
116	COMP			↑		
117	222	9 24	22 17	59	9m	
118	COMP			↑		
119	src 076.276	10 06	14 04	59	9m	
120	COMP			↑		
121	287	10 07	14 58	59	12m	
122	COMP			↑		
123	299	10 09	15 00	59	5m	
124	COMP			↑		

105 superposed star??  
~~star~~ - ~~could~~ not trace; may have emission  
 97 - emission lines don't match up with each other

113 VERY POOR MEASUREMENT; <sup>but</sup> it has H $\alpha$

60 inch Telescope Log				Spectrograph: <u>EA37</u>		Page: <u>6996</u>
Observer: <u>Rines</u>				Grating: <u>300L</u>		
PI: <u>Rines</u>				Date: <u>2/16/99</u>		
Number	Object	R. A.	Dec.	L/R	Exp	Comments
125	a1213_061	11 17	27 40	64	10m	X Throw out cloudy all sky
126	COMP			↑		
127	IGNORE					ignore - test
128	a1213_061	11 17	27 40	64	8m	take two & clearer
129	COMP			↑		
130	064	11 15	27 24	64	6m	
131	COMP			↑		
132	063	11 11	28 16	64	3m	
133	COMP			↑		
134	067	11 10	28 17	64	6m	
135	COMP			↑		
136	066	11 11	27 11	64	4m	
137	COMP			↑		
138	<del>065</del>	11 12	27 37	64	8m	E obj is 065, W is 065W
139	COMP			↑		
140	184	11 12	27 37	64	5m	
141	COMP			↑		
142	185	11 12	27 40	64	7m	
143	COMP			↑		
144	062	11 05	31 23	64	4m	
145	COMP			↑		
146	070	11 09	28 37	64	5m	} may need to combine these summed
147	COMP			↑		
148	070			↑	7m	
149	071	11 18	28 31	64	5m	power switched to generator
150	COMP			↑		
151	074	11 13	27 52	64	7m	
152	COMP			↑		
153	077	11 10	27 05	64	6m	all one object - drifted during exposure.
154	COMP			↑		

1 065, 065W

60 inch Telescope Log				Spectrograph: <u>FAST</u>		
Observer: <u>Rines</u>				Grating: <u>300L</u>		Page: <u>6997</u>
PI: <u>Rines, Tustin, Koranyi</u>				Date: <u>2/16/99</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
155	079	11 13	29 48	64	6m	
156	COMP			↑		
157	080	11 10	29 20	64	8m	
158	COMP			↑		
159	082	11 29	27 33	64	5m	
160	COMP			↑		
161	085	11 08	28 31	64	3m	
162	COMP			↑		
163	086	11 11	28 15	64	5m	
164	COMP			↑		
165	087	11 15	28 33	64	3m	
166	COMP			↑		
167	088	11 12	28 01	64	3m	
168	COMP			↑		
169	289	11 12	28 02	64	8m	
170	COMP			↑		
171	MRK421	11 01	38 28	6	4m	I think this is correct, but it doesn't look like an AGN
172	COMP			↑		
173	A1644DS017	12 55	-17 35	81	12m	
174	COMP			↑		
175	020	12 55	-17 31	81	12m	
176	COMP			↑		
177	023	12 54	-17 25	81	12m	
178	COMP			↑		
179	mkw12-i.027	14 07	+9 38	35	10m	
180	COMP			↑		
181	awm3-i.019	14 27	26 29	35	6m	
182	COMP			↑		
183	020	14 32	26 00	35	7m	
184	COMP			↑		

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>6998</u>		
Observer: <u>Rines</u>		Grating: <u>300R</u>		Date: <u>2/16/99</u>		
PI: <u>Koronyl, Rines, Wilkes</u>						
Number	Object	R. A.	Dec.	L/R	Exp	Comments
185	awm3-i.021	14 32	26 03	35	6m	
186	COMP			↑		
187	022	14 33	24 47	35	6m	obj. to E
188	COMP			↑		
189	a2194649	16 25	35 58	64	8m	
190	COMP			↑		
191	a219452	16 27	42 40	64	8m	
192	COMP			↑		
193	a21946.51	16 27	43 28	64	9m	
194	COMP			↑		
195	53	16 27	42 38	64	5m	
196	COMP			↑		
197	54	16 28	42 16	64	5m	
198	COMP			↑		
199	55	16 30	36 13	64	8m	
200	COMP			↑		
201	N5548	14 17	25 08	6	3m	
202	COMP			↑		
203	MRK279	13 52	69 18	6	3m	
204	COMP			↑		
205	N4151	12 08	39 41	6	30s	
206	COMP			↑		
207	H244	13 23	36 08	56	2m	
208	COMP			↑		
209	H244	13 23	36 08	56	2m	bin by 2
210	COMP			↑		
211-220	BIAS				0s	
221-230	FLAT				12s	
231-240	BIAS				0s	bin by 4
241-250	FLAT				6s	
251-260	DARK				15m	bin by 2