

START OF FAST RUN


60 inch Telescope Log				Spectrograph: <u>FAST</u>		
Observer: <u>P Berlin</u>		Grating: <u>3002; 3' slit; bin by 4</u>		Page: <u>4725</u>		
PI: <u>Wilkes & Kirshner & Hudhra</u>		Date: <u>6/5/96</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	clear + hot
11-20	FLAT			0	6s	
21-22	DARK			0	10m	
23-27	sky			0	2s	7:39
28	COMP			↑	5s	
29-34	BIAS			2	0s	bin by 2
39-48	FLAT			2	12s	bin by 2
49-50	Ferz66	12:34	+25:20	0	15s	
51	COMP			↑		
52	N4151	12:08	+29:41	6	30s	
53	COMP			↑		
54	MPK279	13:51	+69:33	6	90s	
55	COMP			↑		
56	N5548	14:15	+25:22	6	2m	
57	COMP			↑		
58	N4051	12:00	+44:48	6	2m	
59	COMP			↑		
60	MPK21	11:01	+38:28	6	4m	
61	COMP			↑		
62	11037p5379	11:03	+53:39	1	7m	0
63	COMP			↑		
64	SN1962	09:36	-21:07	2	15m	extreme airmass; but specially
65	COMP			↑	8s	requested by the SN guys.
66	SN196K	13:18	-26:50	2	15m	SN obs bin by 2
67	COMP			↑	8s	
68	Ferz34	10:34	+43:21	0	90s	
69	COMP			↑		
70	U06202	11:06	+51:13	1	12m	em LSB
71	COMP			↑		
72	11071p5240	11:07:00	+52:40	1	10m	LSB em

60 inch Telescope Log

Observer: PB
 PI: Huchra

Spectrograph: FAST
 Grating: 300L
 Date: 6/5/96

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
73	COMP			↑		
74	11089 p5224	11:08	+52:24		5m	
75	COMP			↑		
76	11094 p5418	11:09	+54:18		8m	pec.  sup to orgal
77	COMP			↑		weak em or compact nucleus
78	11197 p5149	11:19	+51:49		5m	nice
79	COMP			↑		
80	11200 p5130	11:20	+51:30		4m	
81	COMP			↑		
82	11211 p5614	11:21	+56:14		4m	Southern wide pair
83	A11 213 p5616	11:21	+56:16		5m	Northern
84	COMP			↑		
85	11259 p5108 N	11:25	+51:08		3m	
86	11259 p5108 S	11:25	+51:08		5m	em
87	COMP			↑		
88	11270 p5132 W	11:27	+51:32		5m	SW Comp
89	11270 p5132 E	11:27	+51:32		4m	NE Comp
90	COMP			↑		
91	11278 p5145	11:27	+51:45		5m	nice spiral SA
92	COMP			↑		
93	12045 p5906 N	12:04	+59:06		4m	N em
94	12045 p5906 S	12:04	+59:06		5m	S em+
95	COMP			↑		
96	I 0852	13:05	+60:25		3m	
97	COMP			↑		
98	14231 p5555	14:23	+55:55		3m	
99	COMP			↑		
100	14276 p5253	14:27	+52:53		5m	em
101	COMP			↑		
102	I 1027	14:28	+54:12		4m	

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60 inch Telescope Log

Observer: PB

PI: Huchra & Geller

Spectrograph: FAST

Grating: 300L

Date: 6/5/92

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
103	COMP			↑		
104	13433p6130	13:43	+61:30	1	3m	
105	COMP			↑		
106	325.061489	14:24	+29:36	3	6m	redo from 5/1/95
107	COMP			↑		nice field
108	323.051760	13:44	+29:46	3	8m	
109	COMP			↑		
110	323.016330	13:23	+27:15	3	8m	
111	COMP			↑		
112	323.053063	13:33	+29:54	3	9m	bright sky
113	COMP			↑		
114	323.062618	13:43	+30:40	3	8m	
115	COMP			↑		
116	14112p7231	14:11	+72:08	1	3m	
117	COMP			↑		
118	14189p7246	14:19	+72:33	1	3m	
119	COMP			↑		
120	14190p8020	14:17	+80:07	1	4m	
121	COMP			↑		
122	14290p8031	14:25	+83:19	1	3m	
123	COMP			↑		
124	±4470	14:28	+78:54	1	3m	
125	COMP			↑		
126	14353p7811	14:54	+77:59	1	3m	
127	COMP			↑		
128	14398p7823	14:38	+78:11	1	5m	
129	COMP			↑		
130	14500p7958	14:46	+79:47	1	5m	
131	COMP			↑		
132	14527p7949	14:50	+79:38	1	4m	

60 inch Telescope Log

Observer: PB
 PI: Huchra & Geller

Spectrograph: FAST

Grating: 3002

Date: 6/5/96

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Number	Object	R.A.	Dec.	I/R	Exp	Comments
133	COMP			↑		
134	14550 p8245	14:52	+82:32	1	7m	em
135	COMP			↑		
136	14224 p7058	14:26	+69:56	1	3m	seeing ~ 2"
137	COMP			↑		
138	14371 p6633	14:37	+66:21	1	4m	
139	COMP			↑		
140	14523 p6353	14:53	+63:42	1	4m	
141	COMP			↑		
142	14526 p6448	14:53	+64:37	1	7m	em pec
143	COMP			↑		
144	329.116134	16:00	+70:24	3	7m	
145	COMP			↑		
146	329.110832	16:00	+30:13	3	7m	
147	COMP			↑		
148	329.101023	16:09	+30:00	3	10m	wake em
149	COMP			↑		
150	329.103652	16:18	+29:58	3	9m	
151	COMP			↑		
152	329.108925	16:13	+30:01	3	10m	
153	COMP			↑		
154	329.107311	16:20	+30:05	3	9m	em?
155	COMP			↑		
156	329.110213	16:07	+30:13	3	10m	
157	COMP			↑		
158	329.111258	16:10	+30:15	3	7m	
159	COMP			↑		
160	17027 p5948	17:02	+59:48	1	10m	em nuc + spiral arms
161	COMP			↑		
162	17134 p5852	17:13	+58:52	1	6m	* on slit em

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>300R</u>		Page: <u>4729</u>	
PI: <u>Huchra</u>			Date: <u>6/5/16</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
163	COMP			↑		
164	17194 p5242	17:19	+52:42	1	6m	OK seeing
165	COMP			↑		
166	17333 p5001	17:33	+50:01	1	2m	
167	COMP			↑		
168	17378 p6104	17:37	+61:04	1	6m	
169	COMP			↑		
170	NG466	17:48	+51:25	1	3m	
171	COMP			↑		
172	18221 p6805	18:22	+68:05	1	8m	em nuc + spiral arms
173	COMP			↑		pc
174	18256 p5107	18:25	+51:07	1	6m	
175	COMP			↑		
176	18259 p4653	18:25	+46:53	1	7m	* on slit em
177	COMP			↑		
178	18293 p4816	18:29	+48:16	1	4m	* on slit
179	COMP			↑		
180	18310 p7844	18:31	+78:44	1	5m	
181	COMP			↑		
182	3C390.3	18:45	+77:43	6	3m	4:05
183	COMP			↑		
184-186	UGC 99	19:50	+75:41	12	60, 20, 2s	
187	COMP			↑		
188-192	HD 142281	20:10	+40:07	0	5s	clear & down
193	COMP			↑		
194-196	HD 203064	21:18	+43	0	2s	
197				↑		
198-200	HD 199579	20:56	+44	0	2s	
201				↑		
202-204	HD 190429	20:03	+36	0	2s	

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60 inch Telescope Log

Observer: P. Bernini
PI: Wilkes, Kirshner & MuchraSpectrograph: FAST
Grating: 3000, 3" slit, bin by 4
Date: 6/6/96Page: 4731

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	clear + hot
11-20	FLAT			0	6s	
21-30	BIAS			2	0s	bin by 2
31-40	FLAT			2	12s	bin by 2
41-45	sky			0	2s	
46	COMP			↑	5s	
47-49	HD89025	10:16	+23:25	0	1s	
50	COMP			↑		
51-53	HD90537	10:27	+36:42	0	1s	
54	COMP			↑		
55-57	HD95735	11:03	+36:02	0	3s	is of corals
58	COMP			↑		
59-60	HD98262	11:18	38:05	0	1s	
61	COMP			↑		
62-63	Fergale	12:31	+25:20	0	45s	
64	COMP			↑		
65	N4151	12:04	+39	6	30s	
66	COMP			↑		
67	MRK271	13:51	+69:33	6	90s	
68	COMP			↑		
69	N5548	14:15	+25:22	6	2m	
70	COMP			↑		
71,72	N4486B	12:30	+12:29	0	4m	
73	COMP			↑		
74-75	N5866	15:05	+55:57	0	2m	dust lane
76	COMP			↑		
77	SN1996W	11:59:29	+19:15:22	2	20m	bin by 2 1:3 AM
78	COMP			↑		poor seeing down here
79	11495 p1410	11:52:13	+13:54:31	0	20m	H ₂ !!! pre 2022 +HP w OIII
80	COMP			↑		also obs 5/15/96

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>3002</u>		Page: <u>4732</u>	
PI: <u>Geller & Huchra</u>			Date: <u>6/6/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
81	Ferz34	10:32	+47:21	6	90s	for krahnert
82	COMP			↑		
83	318.003129	11:23	+26:25	3	7m	
84	COMP			↑		
85	318.004185	11:17	+26:31	3	7m	
86	COMP			↑		
87	318.011490	11:11	+27:15	3	7m	
88	COMP			↑		
89	318.007846	11:30	+26:55	3	6m	
90	COMP			↑		
91	318.016726	11:17	+27:50	3	7m	em
92	COMP			↑		
93	318.020174	11:18	+28:12	3	7m	
94	COMP			↑		
95	318.022411	11:26	+28:26	3	8m	
96	COMP			↑		
97	318.023331	11:32	+29:53	3	8m	
98	COMP			↑		
99	141254m1245EW	14:15	-12:59	1	12m	bin by 2 no emission
100	COMP			↑		
101	150421m1213	15:07	-12:25	1	15m	bin by 2
102	COMP			↑		
103	151952m1351	15:22	-14:01	1	6m	em
104	COMP			↑		
105	323.053815	13:44	+30:56	3	6m	
106	COMP			↑		seeing ~2"
107	323.055964	13:44	+30:06	3	7m	em
108	COMP			↑		
109	323.065362	13:26	+30:58	3	7m	
110	COMP			↑		

<p>60 inch Telescope Log</p> <p>Observer: <u>PS</u></p> <p>PI: <u>Geller & Huchra</u></p>	<p>Spectrograph: <u>FAST</u></p> <p>Grating: <u>300L</u></p> <p>Date: <u>6/6/96</u></p> <p style="text-align: right;">Page: <u>4733</u></p>
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Number	Object	R.A.	Dec.	L/R	Exp	Comments
111	323.066147	13:44	+30:57	3	7m	
112	COMP			↑		
113	323.066601	13:43	+31:40	3	8m	
114	COMP			↑		
115	323.003449	13:32	+26:14	3	7m	
116	COMP			↑		
117	323.01672L	13:44	+27:16	3	8m	em +
118	COMP			↑		
119	323.029059	13:42	+28:13	3	10m	in the halo of M3 gal.
120	COMP			↑		em
121	160225p164706	16:02	+16:47	25	7m	
122	COMP			↑		
123	160027p193707	16:00	+19:37	25	7m	em +
124	COMP			↑		clouds in the far south
125	160103p175708	16:01	+17:52	25	6m	
126	COMP			↑		
127	160322p163713	16:03	+16:34	25	10m	NW
128	COMP			↑		
129	160323p163348	16:03	+16:33	25	12m	SE
130	COMP			↑		variable seeing
131	160304p164720	16:03	+16:14	25	8m	
132	COMP			↑		
133	160325p163241	16:03	+16:32	25	8m	
134	COMP			↑		
135	160227p163928	16:02	+16:39	25	9m	em
136	COMP			↑		
137	160055p150152	16:00	+15:01	25	8m	* on slit to E
138	COMP			↑		
139	329.110872	16:13	+30:14	3	6m	bin by 2 all star
140	COMP			↑	8s	sup to on faint galaxy

*dim on
min 10
minutes*

60 inch Telescope Log

Observer: PBPI: Geller & HuchraSpectrograph: FASTGrating: 3002Date: 6/6/96Page: 4734

Number	Object	R.A.	Dec.	L/R	Exp	Comments
141	329.111081	16:14	+30:14	3	10m	em
142	COMP			↑		
143	329.062894	16:16	+28:37	3	15m	LSB weak em
144	COMP			↑		
145	329.115271	16:12	+30:23	3	15m	LSB weak em
146	COMP			↑		
147	329.116796	16:11	+30:27	3	15m	weak em
148	COMP			↑		
149	329.118304	16:15	+30:30	3	8m	clouds...
150	COMP			↑		
151	17090 p8640	17:09	+86:39	1	6m	
152	COMP			↑		
153	17239 p7425N	17:24	+74:28	1	5m	
154	17239 p7425SE	17:24	+74:25	1	10m	
155	COMP			↑		
156	17322 p7726	17:32	+77:26	1	10m	em
157	COMP			↑		
158	18389 p2302	18:38	+23:02	1	12m	6m by 2 sup * to W of mc
159	COMP			↑		em all over
160	MRK 509	20:41	-10:54	6	2m	
161	COMP			↑		
162-164	IC 3639	19:50	+35:41	12	1m, 2m, 2m	
165	COMP			↑		
166-168	HD 192281	20:10	+40:07	6	5s	
169	COMP			↑		
170-172	HD 186943	19:46	28:16	0	10s	
173	COMP			↑		light cirrus @ dawn
174-176	HD 187282	19:48	+18:12	0	10s	
177	COMP			↑		
178-180	HD 188001	19:52	+18:40	0	2s	

60 inch Telescope Log

Observer: P. BerlandPI: Wil Kosy Huchra & GellerSpectrograph: FASTGrating: 3000, 3" slitPage: 4736Date: 6/7/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	bin by 4
11-20	FLAT			0	6s	bin by 4
21-30	BIAS			0	0s	bin by 2
31-40	FLAT			0	12s	bin by 2
41-45	SKY	zenith		0	2s	
46	COMP			↑	5s	tons of clouds to the E
47-48	Felix 66	12:34	+25:20	0	45s	delay @ 48"
49	COMP			↑		
50	N4151	12:08	+39:41	6	30s	
51	COMP			↑		
52	N5548	14:15	+25:22	6	2m	
53	COMP			↑		
54	MRK 279	13:51	+19:33	6	90s	
55	COMP			↑		
56	N5545	12:03	+57:54	1	5m	em N4054
57	N5546	12:03	+57:54	1	5m	weakem
58	COMP			↑		
59	U5076	09:29	+52:05	1	20m	H _α @ fix 2016
60	COMP			↑		also do 5/15/96 - em 2016!
61	317.00040	10:51	+26:10	3	8m	
62	COMP			↑		
63	317.010733	10:46	+26:47	3	8m	em
64	COMP			↑		
65	317.069043	10:48	+31:50	3	8m	
66	COMP			↑		clouds in the N.
67	317.071639	10:56	+32:04	3	8m	
68	COMP			↑		
69	317.069443	11:10	+31:44	3	8m	
70	COMP			↑		
71	318.041948	11:11	+30:29	3	8m	

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>300L</u>		Page: <u>4737</u>	
PI: <u>Geller/Kirshner</u>			Date: <u>6/7/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
72	COMP			↑		increasing clouds (N+E)
73	318.04110	11:26	+30:25	3	8m	poor seeing
74	COMP			↑		
75	318.042192	11:27	+30:32	3	8m	em
76	COMP			↑		ok sky
77,79,81	SN1996ae	14:53	+83:31	2	20m	bin by 2 AM=1.16 x3
78,80,82	COMP			↑	8s	seeing ~2"
83	HZ44	13:21	+36:33	0	90s	
84	COMP			↑		
85	322.000789	12:57	+26:02	3	8m	
86	COMP			↑		
87	322.027134	12:58	+27:48	3	8m	rich field
88	COMP			↑		
89	322.031960	13:05	+28:06	3	10m	em
90	COMP			↑		
91	322.006736	13:12	+26:29	3	8m	broad em pec.
92	COMP			↑		
93	323.013683	13:23	+27:02	3	10m	em
94	COMP			↑		
95	323.027952	13:22	+28:09	3	10m	clouds
96	COMP			↑		seeing 2-3"
97	323.051812	13:43	+29:46	3	10m	Moon's up
98	COMP			↑		
99	323.052681	13:42	+29:51	3	12m	* on slit to W
100	COMP			↑		clouds all over
101	329.119084	16:09	+30:32	3	10m	
102	COMP			↑		
103	329.119683	16:19	+30:32	3	15m	
104	COMP			↑		
105	329.120201	16:00	+30:37	3	15m	

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To: Susan Tokarz
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Number	Object	R.A.	Dec.	L/R	Exp	Comments
60 inch Telescope Log						
Observer: <u>PBerland</u>						
PI: <u>Huchra & Wilkes & Greller</u>						
				ograph: <u>FAST</u>		
				filtering: <u>300R</u>		Page: <u>4739</u>
				Date: <u>6/12/96</u>		
1-10	BIAS			0	0s	totally cloudy
11-20	FLAT			0	6s	rain today
21	COMP			-	test	
22-24	10175p0757	10:20	+07:41	1	7m, 8m	heavy cloud, got it (*29)
23, 25	COMP			↑		* on slit to W
26	10175p0801	10:17	+08:01	1	12m	clouded out down here
27	COMP			↑		ok exp.
28	12030p5M8	12:03	+51:48	1	10m	stopped short - reds
29	COMP			↑		
30	N4151	12:08	+35:41	6	1m	
31	COMP			↑		
32	N5548	14:15	+25:22	6	5m	
33	COMP			↑		
34	H244	13:21	+36:23	0	120s	
35	COMP			↑		Whim - solid clouds
36	329.120793	15:59	+30:24	3	12m	cleaning later
37	COMP			↑		also obs 6/7/96
38	329.119044	18:09	+30:32	3	10m	stopped short but looks ok
39	COMP			↑		Weak H α
40	17284p7745	17:28	+77:45	1	20m	em
41	COMP			↑		
42	329.120818	16:13	+30:35	3	15m	em
43	COMP			↑		
44	329.121926	16:18	+30:35	3	12m	
45	COMP			↑		
46	329.122077	16:08	+30:38	3	15m	SE comp of triple system
47	COMP			↑		Stopped by clouds again
48-57	BIAS			0	0s	
58-67	FLAT			0	6s	

FAX
To: Susan Tokarz

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60 inch Telescope Log

Observer: P. Berland

PI: Kenyan & Huchra

Program: FAST

Ring: 3002

Page: 4740

Date: 6/13/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	clouds + rain sprinkles
11-20	FLAT			0	6s	
21-22	B0p332642	15:50	+32	0	1m	open @ midnight
23	COMP			↑		poor seeing!
24	16233m2436	16:23	-24:36	30	7m	pOph zone
25	COMP			↑		
26-28	rhoOph	16:25	-23:26	30	5s	
29	COMP			↑		
30	16233m2450	16:23	-24:50	30	8m	
31	COMP			↑		
32	16234m2444	16:23	-24:44	30	12m	
33	COMP			↑		
34	16234m2435	16:23	-24:35	30	15m	
35	COMP			↑		
36	16233m2453	16:23	-24:53	30	12m	
37	COMP			↑		
38-39	Ferje 98	14:36	+27:42	0	90c	
40	COMP			↑		
41	160242p165640	16:02	+16:56	25	11m	em
42	COMP			↑		
43	160204p164757	16:02	+16:47	25	9m	C790
44	COMP			↑		delay of cloud
45	17360p86475	17:36	+86:46	1	5m	Hk extended; nice spiral
46	17360p8647 N	17:36	+86:46	1	7m	
47	COMP			↑		
48	17360p8647 E	17:36	+86:46	1	7m	Stopped short-clouds; Hk!
49	COMP			↑		spiral arm of S Comp a beam slit
50	MRK 89	20:41	-10:51	6	2m	
51	COMP			↑		clouded out
52-55	Jup			0	1s	
56	COMP			↑		
57-66	BIAS			0	0s	
67-76	FLAT			0	6s	

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>47/48</u>	
Observer: <u>N. Grogan</u>			Grating: <u>300A</u>		Date: <u>6/14/96</u>	
PI: <u>Wilkes/Huchra/Grogan</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s.	2 Binby 4
11-20	Flat			0	6s.	cloudy, clearing
21-30	BIAS			0	0s.	2 Binby 2
31-40	Flat			0	12s.	
41-5	Sky			0	2, 3, 5, 6s.	binby 4
46-9	Sky			0	10, 15, 20, 25	binby 2
50	Comp			↑		binby 2
51	Comp			↑		binby 4
52	MRK 921	11:01	38:28	6	4m.	
53	Comp			↑		
54	N4151	12:08	39:41	6	30s.	
55	Comp			↑		
56	MRK 279	13:51	69:33	6	90s.	
57	Comp			↑		
58	09199 + 5502	9:19	55:02	1	7m.	
59	Comp.			↑		
60	09200 + 5349	9:20	53:49	1	8m.	
61	Comp			↑		
62	09557 + 5812W	9:55	58:12	1	8m.	
63	Comp.			↑		
64	10006 + 5830	10:00	58:30	1	6m.	
65	Comp			↑		
66	10136 + 0354	10:13	03:54	1	15m.	cm
67	Comp			↑		
68	10258 + 0401	10:25	04:01	1	15m.	
69	Comp			↑		
70	I 941	13:46	24:15	92	8m.	
71	Comp			↑		
72	2924 F1	13:48	28:24	92	12m.	
73	Comp			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>N. Grogan</u>			Grating: <u>300</u>		Page: <u>4742</u>	
PI: <u>Grogan/Kirshner/Geller/Kenyon</u>			Date: <u>6/14/96</u>			
Number	Object	R.A.	Dec.	I/R	Exp	Comments
74	14030+3102	14:03	31:02	42	20m.	LSB
75	Comp			↑		
76	SN 1496X	13:18	-26:50	2	7m	Cops-birby 4
77	"			2	20m	Birby 2
78	Comp.			↑		
79	BDp 332642	15:50	33:05	0	2m	birby 2; sp. sth
80	"			0	1m.	bin 2/4
81	Comp.			↑		
82	162329-245142	16:23	-24:51	30	20m.	p oph
83	Comp			↑		
84	162355-245332	16:23	-24:53	30	20m.	
85	Comp			↑		
86	329. 122231	16:06	30:38	3	20m.	
87	Comp			↑		
88	I4575	15:40	23:59	42	20m.	
89	Comp			↑		
90	I4576	15:40	23:50	42	10m.	
91	Comp.			↑		
92	I4577	15:40	23:57	42	18m.	
93	Comp			↑		
94	I4579	15:40	23:56	42	18m.	
95	Comp			↑		
96	N5991	15:43	24:47	42	13m.	In + out of clouds
97	Comp			↑		
98	15432 +2440	15:43	24:40	42	18m.	Heavy clouds. Poor SW - red
99	Comp			↑		
100	329. 170209	16:13	32:38	3	12m.	
101	Comp			↑		
102	329. 170120	16:13	32:33	3	13m.	
103	Comp			↑		

60 inch Telescope Log

Observer: N. GrayPI: Wilkes/Kirshner/Huchra/GraySpectrograph: FASTGrating: 3000Page: 4749Date: 6/15/96

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0		clouds around
11-20	FLAT			0		
21-5	sky			0		bin by 4/10 Still looking
26-30	sky			0		bin by 2) at flat lamp!!
31-35	sky			0		bin by 4: true sky
36	Comp			↑		
37	N5866	15:05	55:57	0	210 s	vel. std.
38	Comp.			↑		
39	BD _p 332640	15:50	33:05	0	60s.	sp. std.
40	Comp.			↑		
41	N4051	12:00	44:48	6	2m.	
42	Comp			↑		
43	N4151	12:08	39:41	6	30s.	
44	Comp			↑		
45-6	sn 1996W	11:59	-19:15	2	15m.	
47	Comp			↑		
48	10143 p 0400	10:14	04:00	1	20m.	
49	Comp			↑		
50	10224 p 0328	10:22	03:28	1	15m.	
51	Comp			↑		
52	MRX 279	13:51	69:33	6	90s.	
53	Comp			↑		
54	N5548	14:15	25:22	6	2m.	
55	Comp			↑		
56	14015 p 3348	14:01	33:48	42	20m.	
57	Comp			↑		
58	14065 p 2730	14:06	27:30	42	20m.	
59	Comp.			↑		
60	J4583	15:44	23:47	42	10m.	
61	Comp			↑		

really flats

60 inch Telescope Log

Observer: N. Gugin
 PI: Gugin/Geller/Kenyon.

Spectrograph: FAST

Grating: 300L

Page: 4745

Date: 6/15/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
62	J1138	15:46	26:21	42	10m.	clouds across field
63	Comp			↑		
64	15479 p 2457	15:49	24:57	42	13m.	
65	Comp			↑		
66	15488 + 2310	15:48	23:10	42	12m.	
67	Comp			↑		
68	322.024650	12:59	27:39	3	5m.	oops! no finding chart for this galaxy
69	Comp.			↑		
70	322.040112	13:04	28:37	3	10m.	em.
71	Comp			↑		
72	322.043676	13:08	28:50	3	12m.	
73	Comp			↑		
74	322.061875	13:14	30:00	3	10m.	
75	Comp			↑		
76	162654 m 241019	16:26	-24:10	30	15m.	p Oph galaxy
77	Comp			↑		
78	162738 m 245127	16:27	-24:51	30	20m.	cloud obscuration
79	Comp			↑		
80	162857 m 242805	16:28	-24:28	30	12m.	
81	162903 m 245214	16:29	-24:52	30	20m.	oops, forgot comp!
82	Comp			↑		
83	Comp	16:28	-24:28			moved back to earlier pos'n
84	329.123053	16:09	30:40	3	10m.	
85	Comp			↑		
86	329.124036	16:05	30:42	3	10m.	
87	Comp.			↑		
88	329.125867	16:17	30:46	3	12m.	
89	Comp			↑		
90	329.126059	16:15	30:47	3	11m.	heavy clouds in way
91	Comp			↑		

60 inch Telescope Log

Observer: N. GogginPI: Goggin/Kenyon/Wilkes/BartonSpectrograph: FASTGrating: 300 lPage: 4746Date: 6/15/96

Number	Object	R. A.	Dec.	L/R	Exp	Comments
92	16310+3727	16:31	37:27	42	12m.	2 objects
93	Comp			↑		
94-6	CICyg	19:50	35:41	12	2, 20, 60s.	
97	Comp			↑		
98	HD192281	20:16	40:07	0	5s.	SP. 5H.
99	Comp			↑		
100	N7 331	22:34	34:09	0	5m.	Intermittent cloud cover
101	Comp.			↑		vol. 5H.
102	gr 85-gal B	23:21	27:04	33	20m.	Cloudy. redo?
103	Comp			↑		
104	gr 85-gal 03	23:20	26:26	33	10m.	
105	Comp			↑		
106	gr 85-gal 04	23:21	26:29	33	9m.	
107	Comp.			↑		
108	MRK 509	20:41	-10:54	6	1m.	Break in the clouds
109	Comp			↑		
110	gr 85-gal 05	23:20	27:12	33	5m.	Brightening sky
111	Comp			↑		
112-6	BIAS			0		binby 4
117-26	BIAS			0		binby 2
127-37	FLAT			0	12s.	↓
138-47	FLAT			0	6s.	binby 4
148-52	BIAS			0		↓
153-7	sky			0	10, 10, 10, 8, 8s.	binby 2
158	Comp			↑		

60 inch Telescope Log

Observer: N. GroganPI: Wilkes/HuchraSpectrograph: FASTGrating: 300ADate: 6/16/96Page: 4747

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	Bias			0	0s.	binby 4
11-20	FLAT			0	6s.	
21-26	sky			0	2.5, 7, 7.8, 10s.	low clouds, windy
27	Comp			↑		
28	N58 66	15:05	55:57	0	5m	vel. std.
29	Comp			↑		
30	N55 48	14:15	28:22	6	2m.	
31	Comp			↑		
32	MRK 279	13:51	69:33	6	90s.	
33	Comp			↑		
34	M4151	12:08	39:41	6	30s	
35	Comp			↑		
36	Frig 66	12:34	25:20	0	1m.	sp. std.
37	Comp			↑		
38	10156 p 0641	10:15	06:41	1	6m.	
39	Comp			↑		
40	10157 p 0336	10:15	03:36	1	10m.	
41	Comp			↑		
42	10167 p 0501	10:16	05:01	1	12m.	
43	Comp			↑		
44	10203 p 0501	10:20	05:01	1	10m.	
45	Comp			↑		
46	10116 p 5633	10:11	56:33	1	5m.	
47	Comp			↑		
48	10120 p 5909	10:12	59:09	1	3m.	
49	Comp			↑		
50	10125 p 6610	10:12	66:10	1	5m.	
51	Comp			↑		
52	10020 p 4654	10:02	46:54	1	400 s.	
53	Comp			↑		

60 inch Telescope Log

Spectrograph: EASTObserver: N. GriginGrating: 300LPage: 4748PI: Huchra/Geller/GriginDate: 6/16/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
54	11429p 6447	11:42	64:47	1	5m.	
55	Comp			↑		
56	11381p 4649	11:38	46:49	1	5m.	
57	Comp			↑		
58	11418p 6149	11:41	61:49	1	4m.	
59	Comp			↑		
60	11421p 5810	11:42	58:10	1	10m.	
61	Comp			↑		
62	11422p 6600	11:42	66:00	1	10m.	
63	Comp			↑		
64	322.072191	13:08	30:44	3	12m.	
65	Comp			↑		
66	322.077012	13:07	31:04	3	12m.	
67	Comp			↑		
68	322.024650	12:59	27:39	3	15m.	reshooting from 6/15
69	Comp			↑		
70	322.025752	13:19	27:42	3	15m.	
71	Comp			↑		
72	322.033704	12:53	28:11	3	15m.	
73	Comp			↑		
74	322.074808	13:08	30:52	3	10m.	
75	Comp			↑		
76	3820 F1	14:21	38:03	42	20m.	
77	Comp			↑		
78	4510 F1	14:36	39:57	42	20m.	em. lin.
79	Comp			↑		
80	2543 F1	14:12	25:29	42	15m.	
81	Comp			↑		
82	2224 F1	14:48	22:02	42	12m.	
83	Comp			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>4749</u>	
Observer: <u>N. Goggin</u>				Grating: <u>300 l</u>			
PI: <u>Goggin / Geller / Kenyon / Koranyi / Barton</u>				Date: <u>6/16/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments	
84	2413 F1	14:57	34:5	42	10m.		
85	Comp.			↑			
86	3145 F1	14:56	31:29	42	10m.		
87	Comp.			↑			
88	329. 126497	16:13	30:18	3	15m.		
89	Comp.			↑			
90	329. 128398	16:13	30:53	3	10m.		
91	Comp.			↑			
92	329. 128868	16:13	30:54	3	8m.		
93	Comp.			↑			
94	329. 131177	16:14	30:59	3	8m.		
95	Comp.			↑			
96-8	CICug	19:50	35:41	12	2.0m. 200		
99	Comp.			↑			
100	HD 192281	20:10	40:07	0	5s.	sp. std.	
101	Comp.			↑			
102	avn5-10	16:58	27:19	35	20m.		
103	Comp.			↑			
104	avn5-12	16:56	27:54	35	20m.		
105	Comp.			↑			
106	gr85-gal06	23:25	27:00	33	5m.	short exp. - see 107	
107	Comp.			↑			
108	gr85-gal07	23:23	26:16	33	2m.	swamped by sky	
109	Comp.			↑			
110	N7331	27:34	39:09	0	5m.	vel. std.	
111	Comp.			↑			
112-21	BIAS			0	0s.		
122-3	FLAT			0	6s.		

60 inch Telescope Lqg

Observer: PberindPI: HuchraSpectrograph: FASTGrating: 3000, 3" slit, 6m by 4Page: 4750Date: 6/17/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	a few clouds around
11-20	FLAT			0	6s	
21-25	sky	zenith		0	2s	7-45
26	COMP			↑	5s	
27-30	HD 89025	10:16	+23	0	1s	
31	COMP			↑		
32-34	HD 90539	10:27	+36:42	0	1s	
35	COMP			↑		
36-38	HD 98262	11:78	+37:05	0	1s	
39	COMP			↑		
40-41	Forn 66	12:	+30	0	1m	
42	COMP			↑		
43	N 4151	12:06	+39:41	6	30s	
44	COMP			↑		check header - should be ok
45	N 5518	14:15	+25:22	6	2m	
46	COMP			↑		
47, 49	Arp 129W	09:36:28.1	+32:35	1	90s, 3m	star w/ fuzz; #49-Ha!
48	Arp 129E	09:36	+32:35	1	3m	emission all over
50	COMP			↑		SPECTRUM DOWN MIDDLE
51	N 2944 EW	09:36	+32:32	1	8m	6m by 2 EW Comps
52	COMP			↑	8s	poor resolution
53	Arp 129E	09:36	+32:35	1	4m	behave emission (Ha) E of gal
54	COMP			↑		
55	11318 pos 32	11:31	+03:32	1	6m	em
56	COMP			↑		
57	11314 pos 46	11:34	+03:46	1	6m	em pec
58	COMP			↑		poor seeing
59	11346 pos 22	11:34	+03:22	1	7m	em
60	COMP			↑		
61	11360 pos 14	11:36	+03:14	1	7m	em

50. COMP - NO GOOD - Spectrum down middle

60 inch Telescope Log
 Observer: PB
 PI: Huchra
 Spectrograph: FAST
 Grating: 300L
 Date: 6/17/96
 Page: 4751

Number	Object	R.A.	Dec.	L/R	Exp	Comments
62	COMP			↑		clear, windy
63	11361 p0404	11:36	+04:04	1	12m	LSB weak em
64	COMP			↑		
65	11383 p0305	11:38	+05:05	1	12m	em em
66	COMP			↑		
67	11473 p0657	11:47	+06:57	1	5m	
68	COMP			↑		
69	11479 p0458	11:47	+04:58	1	8m	
70	COMP			↑		
71	11486 p0702	11:48	+07:02	1	12m	weak H α
72	COMP			↑		
73	11491 p0659	11:49	+06:59	1	8m	H α
74	COMP			↑		
75	12406 p0351	12:40	+03:51	1	8m	
76	COMP			↑		
77	12406 p0744	12:40	+07:44	1	10m	em
78	COMP			↑		
79	12408 p0349	12:40	+03:49	1	7m	
80	COMP			↑		
81	12410 p0743	12:41	+07:43	1	7m	* on slit to W
82	COMP			↑		
83	12414 p0353	12:41	+03:53	1	10m	
84	COMP			↑		
85	12419 p0348NW	12:41	+03:48	1	7m	NW
86	12419 p0348SE	12:41	+03:48	1	10m	SE
87	COMP			↑		
88	13122 p0635	13:12	+06:35	1	15m	em
89	COMP			↑		
90	13125 p0317	13:12	+03:17	1	7m	
91	COMP			↑		

60 inch Telescope Log
 Observer: PB
 PI: Geller
 Spectrograph: FAST
 Grating: 3002
 Date: 6/17/96
 Page: 4752

Number	Object	R. A.	Dec.	L/R	Exp	Comments
92	13129.00220	13:12	+02:22		10m	poor seeing! wind
93	COMP			↑		
94	329.12609	16:15	+20:47	3	10m	red from 6/15/96
95	COMP			↑		
96	329.132632	16:12	+31:03	3	9m	
97	COMP			↑		
98	329.134379	16:14	+31:08	3	10m	
99	COMP			↑		
100	329.136672	15:59	+31:12	3	10m	em
101	COMP			↑		
102	329.142855	15:55	+31:29	3	10m	
103	COMP			↑		
104	329.144217	16:02	+31:33	3	10m	wk
105	COMP			↑		
106	329.142204	15:53	+31:24	3	10m	seeing ~3"
107	COMP			↑		
108	329.138047	15:50	+31:14	3	15m	
109	COMP			↑		
110	329.141809	16:15	+31:27	3	15m	
111	COMP			↑		
112	329.137047	16:19	+31:14	3	12m	
113	COMP			↑		
114	329.137582	16:13	+31:16	3	15m	
115	COMP			↑		
116	329.137617	16:13	+31:16	3	15m	
117	COMP			↑		
118	329.142439	16:14	+31:29	3	15m	less wind = better seeing = 700 +
119	COMP			↑		
120	329.142484	16:08	+31:30	3	10m	
121	COMP			↑		

60 inch Telescope Log

Observer: PB
 PI: Geller/Kwanji

Spectrograph: FAST
 Grating: 300L
 Date: 6/17/96

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
122	329.142884	16:06	+31:30	3	14m	
123	COMP			↑		
124	awms-13	16:57	+27:52	35	8m	
125	COMP			↑		
126	awms-14	16:57	+28:01	35	15m	great seeing finally at ast twilight
127	COMP			↑		
128	awms-46	16:56	+28:09	35	9m	em +
129	COMP			↑		
130-132	CICney	19:50	+35:41	12	1m/20s, 2s	
133	COMP			↑		
134-136	HD 192251	20:10	40:07	0	5s	
137	COMP			↑		
138-139	HD 177230S	19:03	-04:49	0	20s	bin by 2 center + E
140	COMP			↑		
141-142	Comet HB	19:10	-13:09	0	4s,	nuc=141; tail=142
143	COMP			↑		
144-146	HD 174325	18:50	-07:54	0	1s	
147	COMP			↑		clear at dawn
148-150	HD 184930	19:36	-06:17	0	1s	
151	COMP			↑		
152-154	HD 184915	19:36	-07:01	0	1s	
155	COMP			↑		
156-165	BIAS			0	0s	bin by 4
166-175	FLAT			0	6s	bin by 4
176-185	BIAS			0	0s	bin by 2
186-195	FLAT			0	12s	bin by 2
196-199	DARK					

60 inch Telescope Log

Observer: PBerndt

PI: Wilkes & Huchra

Spectrograph: FAST

Grating: 3002, 3° slit

Date: 6/18/96

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BSMS			0	0s	
11-20	FLAT			0	6s	mega-clouds to west
21-25	sky	zenith		0	2s	very blue ↑
26	COMP			↑	5s	
27-29	HD12264	12:54	+47:11	0	2s	Cirrus
30	COMP			↑		Cirrus
31-33	HD111872	12:51	+27:32	0	2s	Cirrus
34	COMP			↑		
35-37	HD112127	12:53	+26:46	0	2s	
38	COMP			↑		
39-41	HD112769	12:58	+17:24	0	2s	
42	COMP			↑		
43-44	Fery66	12:31	+25:20	0	45s	
45	COMP			↑		
46	NY151	12:08	+39:41	6	30s	
47	COMP			↑		
48	MRK279	13:51	+69:33	6	90s	
49	COMP			↑		
50	NY558	14:15	+25:22	6	2m	
51	COMP			↑		
52	NY261	12:00	+44:48	6	2m	
53	COMP			↑		
54	11495p0641	11:49	+06:41	1	4m	
55	COMP			↑		
56	11492p0216	11:51	+01:59	1	9m	em
57	COMP			↑		
58	11514p0637	11:51	+06:37	1	7m	em
59	COMP			↑		clouds - wgh
60	11497p0423	11:49	+04:23	1	9m	em
61	COMP			↑		

60 inch Telescope Log

Observer: PB
 PI: Huchra & Grogan

Spectrograph: FAST
 Grating: 300L
 Date: 6/18/86

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
62	N3976A	11:53	+06:57		2m	
63	COMP			↑		
64	11524p0636	11:52	+06:36		15m	em
65	COMP			↑		
66	11553p0724	11:57	+07:07		15m	em overkill wall, 2nd
67	COMP			↑		
68	11555p0611	11:55	+06:11		6m	
69	COMP			↑		
70	11567p0628	11:56	+06:28		7m	more clouds
71	COMP			↑		
72	12005p0527	12:00	+05:27		5m	
73	COMP			↑		
74	11576p0722	11:57	+07:22		12m	H _α
75	COMP			↑		
76	12014p0734	12:01	+07:34		9m	em
77	COMP			↑		
78	12024p0635	12:02	+06:35		12m	probable red
79	COMP			↑		increasing clouds
80	12404p0357	12:40	+03:57		12m	delay of cloud
81	COMP			↑		
82	12523p0406	12:52	+04:06		10m	clouded out down here
83	COMP			↑		
84	2555F1	13:47	+05:34	42	10m	Poor Sky Seyfert!
85	COMP			↑		
86-88	HD136711	15:19	+18:37	0	30s	RUSTO
89	COMP			↑		
90	N15412	13:57	+73:37		8m	
91	COMP			↑		
92	N15415	13:56	+70:47		8m	
93	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>300L</u>		Page: <u>4756</u>	
PI: <u>Huchra & Geller</u>			Date: <u>6/18/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
94	13580 p 6939	13:58	+69:39	1	8m	lots of clouds; poor seeing
95	COMP			↑		
96	14020 p 6725	14:02	+67:25	1	7m	
97	COMP			↑		
98	N5479	14:05	+65:42	1	4m	
99	COMP			↑		
100	14060 p 7208	14:06	+72:08	1	4m	en
101	COMP			↑		
102	14070 p 7610	14:07	+76:10	1	10m	clearing... wkcom
103	COMP			↑		Finally
104	14069 p 7716	14:07	+77:03	1	4m	
105	COMP			↑		
106	329.145480	16:05	+71:37	3	6m	
107	COMP			↑		
108	329.145504	16:09	+71:37	3	7m	wk
109	COMP			↑		
110	329.146568	16:14	+71:40	3	15m	
111	COMP			↑		
112	329.149240	16:15	+71:47	3	10m	
113	COMP			↑		
114	329.149619N	15:59	+71:45	3	7m	Wow decent sky
115	COMP			↑		
116	329.149619S	15:59	+71:46	3	9m	
117	COMP			↑		
118	329.151598	15:57	+71:51	3	10m	
119	COMP			↑		
120	329.151521	16:01	+71:52	3	10m	
121	COMP			↑		
122	329.150742	16:05	+71:50	3	15m	
123	COMP			↑		

60 Inch Telescope Log

Observer: PB

PI: Geller & Wilkes

Spectrograph: FAS

Grating: 300R

Date: 6/18/96

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
124	329.152986	15:56	+31:54	3	6m	114
125	COMP			↑		
126	329.155283	16:06	+32:02	3	6m	115 nice
127	COMP			↑		
128	329.152707	16:10	+31:56	3	8m	
129	COMP			↑		
130	329.150594	16:08	+31:50	3	15m	em
131	COMP			↑		
132	329.150108	16:15	+31:49	3	14m	
133	COMP			↑		
134	MRK509	20:44	-10:43	49	5m	see z = 1.35 transit
135	COMP			↑		
136	21219m1757	21:24	-17:44	49	15m	see z = 1.5
137	COMP			↑		
138-139	Fornell0	23:17	-05:26	0	90s	worse seeing down here
140	COMP			↑		see z = 1.45 for Wilkes
141	19269p5247	19:26	+52:47	1	6m	em
142	COMP			↑		
143-146	CIC 78	19:50	+35:41	12	1m 20s	2m
147	COMP			↑		
148-150	HD 192291	20:10	+40:07	0	5s	thin cirrus all over
151	COMP			↑		• dawn
152-154	HD 184778	19:34	+70:31	0	2s	
157	COMP			↑		
158-160	HD 177856	19:05	-05:59	0	30s	
161	COMP			↑		
162-164	HD 184713	19:33	+05:27	0	2s	
165	COMP			↑		
166-168	HD 184406	19:34	+07:22	0	1s	
169	COMP			↑		
170-179	BIAS			0	0s	
180-189	FLAT			0	6s	

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>P. Berlin</u>			Grating: <u>3002; 3" slit; bmbg 4</u>		Page: <u>4758</u>	
PI: <u>Huchra & Kirshner</u>			Date: <u>6/19/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	clear skies!!
11-20	FLAT			0	6s	
21-25	sky			0	2s	some cirrus to far west
26	COMP			↑		
27-29	HD 94707	10:56	+06:11	0	1s	
30	COMP			↑		
31-33	HD 102212	11:45	+06:31	0	2s	
34	COMP			↑		
35-37	HD 102870	11:50	01:46	0	2s	
38	COMP			↑		
39-41	HD 12142	12:54	-09:02	0	2s	
42	COMP			↑		
43-44	Forn 66	12:34	+25:20	0	45s	
45	COMP			↑		
46	N4151	12:08	+79:41	6	30s	
47	COMP			↑		
48	MRK 279	13:51	+69:37	6	90s	
49	COMP			↑		
50	N5543	14:15	+25:22	6	2m	
51	COMP			↑		
52	1208 Sp015	12:08	+01:15	1	3m	green
53	COMP			↑		
54	12248 p0334	12:21	+03:34	1	6m	em
55	COMP			↑		
56	12186 p0051	12:21	+00:34	1	10m	em
57	COMP			↑		
58	SN 196aj	13:10	+37:03	2	10m	bm by 2
59	COMP			↑	4s	
60	H244	13:21	+36:23	0	90s	
61	COMP			↑		

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60 inch Telescope Log

Observer: PB
 PI: Huchra

Spectrograph: FAST

Grating: 3002

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Date: 6/19/96

Number	Object	R. A.	Dec.	L/R	Exp	Comments
62	11535p0657	11:53	+06:57		8m	aka N3976 "A" or "B"
63	COMP			↑		↳ weak + weak; red
64	12048p0058	12:07	-00:08		12m	em
65	COMP			↑		
66	11535p0657	11:53	+06:57		15m	peculiar
67	COMP			↑		
68	12055p0059	12:05	+00:59		10m	em
69	COMP			↑		
70	12058p0023	12:05	+00:23		10m	em
71	COMP			↑		
72	12064p0528	12:06	+05:28		12m	
73	COMP			↑		
74	12071p0532	12:07	+05:32		10m	weakem
75	COMP			↑		
76	12080p0006	12:08	+00:06		9m	
77	COMP			↑		
78	12223p0702	12:22	+07:02		15m	
79	COMP			↑		
80	12248p0534	12:24	+05:34		10m	
81	COMP			↑		
82	N4493NW	12:28	+00:52		4m	
83	N4493SE	12:28	+00:52		8m	
84	COMP			↑		
85	13126p0718	13:12	+07:18		15m	weak
86	COMP			↑		
87	13133p0818	13:13	+08:18		10m	em+
88	COMP			↑		
89	13134p0735	13:13	+07:35		12m	
90	COMP			↑		
91	13138p0719	13:13	+07:19		8m	

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>300L</u>		Page: <u>4760</u>	
PI: <u>Huchra/Geller/Falco/Schlegel</u>			Date: <u>6/19/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
92	COMP			↑		
93	NS059	13:46	+67:50	↑	12m	
94	COMP			↑		
95	13297p0625	13:29	+66:25	↑	12m	em
96	COMP			↑		
97	329.170960	15:51	+32:46	3	8m	
98	COMP			↑		
99	329.170758	16:05	+32:39	3	8m	em
100	COMP			↑		
101	329.166229	15:58	+32:27	3	7m	em
102	COMP			↑		
103	329.165407	16:09	+32:27	3	7m	
104	COMP			↑		
105	329.149973	16:14	+31:48	3	7m	
106	COMP			↑		rogue cloud!
107	329.033640	16:20	+27:37	3	6m	
108	COMP			↑		QSO + star W=QSO
109	MGB1835p2506	18:35:58	+25:06:45	41	15m	slit rot=80°; bin by 2
110	COMP			↑	8s	3 obsids on slit ↓
111	Cand 1.416	19:00	+67:48	50	20m	Schlegel: Candidates
112	COMP			↑	8s	1.4=56=K _c 1.1=80=? 1.6=97=QSO! >
113	Cand 1.32	19:00	+67:48	50	20m	1.3=89=K _c 1.2=25=K _c (?)
114	COMP			↑	8s	
115	Cand 2.43	19:07	+68:25	50	20m	2.4=82=K _c 2.3=69=K _c (?)
116	COMP			↑	8s	
117	Cand 2.21	19:07	+68:25	50	20m	2.2=89=? 2.1=90=gel
118	COMP			↑	8s	
119	PG2130p049	21:52	+10:08	49	20m	sec z = 1.06 bin by 4
120	COMP			↑		
121-122	BDp284211	21:48	+28:37	0	1m	

60 inch Telescope Log

Observer: PB
 PI: Kenyon

Spectrograph: FAST
 Grating: 700R
 Date: 6/19/96

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
123	COMP			T		
124-125	Z And	23:53	+48:49	12	25, 30s	
126	COMP			T		
127-128	AG Aps	21:51	+76:51	12	15, 15s	
129	COMP			T		
130-131	V407 Cyg	21:02	+45:46	12	30s, 3m	
132	COMP			T		
133-135	CICygs	19:50	+35:41	12	2m 20s, 2s	
136	COMP			T		
137-140	HD 192281	20:10	+40:07	0	5s	File #140 is corrupted - junk
141	COMP			T		
142-144	HD 186776	19:44	+40:43	0	1s	
145	COMP			T		
146-148	HD 181276	19:57	+53:22	0	1s	
149	COMP			T		clouds around 2m
150-152	HD 183439	19:28	+24:79	0	1s	
153	COMP			T		
154-156	HD 186958	19:41	+17:28	0	1s	
157	COMP			T		
158-167	BIAS			0	0s	bin by 4
168-177	FLAT			0	6s	bin by 4
178-187	BIAS			0	0s	bin by 2
188-197	FLAT			0	12s	bin by 2
198-200	DARK			0	15m	

only one dark or dirt, file 198

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PBarlind</u>			Grating: <u>300; 3" slit; baby 7</u>		Page: <u>4762</u>	
PI: <u>Wilkes/Kenyon</u>			Date: <u>6/20/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BLAS			0	05	rain clouds 145+14
11-20	FLAT			0	65	
21-25	sky			0	25	7:46
26	COMP			↑	55	
27-32	HD 131156 N+S	14:51	+15:06	0	15	
33	COMP			↑		
34-36	HD 13324	15:02	+25:00	0	15	
37	COMP			↑		
38-40	HD 134083	15:07	+24:52	0	25	
41	COMP			↑		
42-44	HD 155722	15:15	+33:18	0	15	
45	COMP			↑		
46-47	F03e66	12:34	+25:20	0	45	-8:20
48	COMP			↑		
49	N4151	12:08	+79	6	30s	
50	COMP			↑		
51	MRK271	13:51	+69:35	6	90s	
52	COMP			↑		
53	N5548	14:45	+25:22	6	2m	
54	COMP			↑		
55-56	N5866	15:05	+55:57	0	4m	x2
57	COMP			↑		
58	MRK421	11:01	+38:28	6	4m	
59	COMP			↑		
60	TXCVn	12:44	+36:45	12	30s	
61	COMP			↑		
62-64	RAgr	13:34	-25:22	12	10s, 15s, 20s	
65	COMP			↑		
66-67	BDM21+28973	14:16	-21:45	12	90s, 60s	
68	COMP			↑		

60 inch Telescope Log

Observer: PSPI: Huchra & KirshnerSpectrograph: FASTGrating: 3002, 3"Page: 4763Date: 6/20/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
69	12419 p0348AD	12:41	+03:48	1	15m	read from 6/17
70	COMP			↑		
71	A1217 p1750E	12:17	+17:50	1	12m	W is very faint + diffuse
72	COMP			↑		
73	12320 p0117	12:32	+06:40	1	15m	em
74	COMP			↑		
75	12266 p0052	12:26	+00:52	1	15m	em
76	COMP			↑		
77	SN 1996ai	13:10:58	+37:03:35	2	15m	6m by 2
78	COMP			↑		
79	H211	13:21	+36:23	0	90s	6m by 4
80	COMP			↑		
81	12461 p0106	12:46	+01:06	1	15m	bright super em ^{slit} Ha
82	COMP			↑		
83	12490 p0818	12:49	+06:18	1	15m	em ++++
84	COMP			↑		
85	12495 p0649	12:49	+06:49	1	7m	
86	COMP			↑		
87	12505 p0557	12:50	+07:57	1	20m	VLSB weak features
88	COMP			↑		
89	12538 p0143	12:53	+07:43	1	8m	
90	COMP			↑		
91	12544 p0225	12:54	+08:25	1	20m	12m stopped by clouds ^{needed} _{more}
92	COMP			↑		→ reduced counts
93	1314 p0713E	13:11	+07:13	1	6m	
94	COMP			↑		
95	13145 p0555	13:14	+05:55	1	6m	
96	COMP			↑		
97	329.165351	18:09	+32:29	3	10m	Ha
98	COMP			↑		close due to clouds + rain drops @ MMT

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4765</u>	
Observer: <u>W. Huggins</u>			Grating: <u>300R</u>		Date: <u>6/2/96</u>	
PI: <u>W. Huggins</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1	comp			↓		
2-5	Sky			0	25	
6	HENSEN			↑	100s	saturated
7-16	BCAS			0		
17-26	FAST			0	6s	
23	comp			↑		
23	comp			↓		
29	N4151			6	30s	
30	comp			↓		
31	MK279			6	90s	
32	comp			↑		
33	N5548			6	120	
34	comp			↑		
35	Page 34	10 36 51	+43 21 50	0	100	9th Star
36	" "			0	60	
37	comp			↑		
38	N4486 B	12 28 00	+12 45 54	0	300	Template
39	comp			↑		
40	N4486 B	"	"	0	240	"
41	comp			↑		
42	12325 p0609	12 32 30	+06 09 00	1	720	H α of 6825
43	comp			↑		
44	12361 p0144	12 36 00	+01 44 00	1	480	mic spines than clouds
45	comp			↑		
46	12342 p 0423 SE	12 34 12	+04 23	1	720	SE comp - This is it. Transon cloudy! Redo? H α of 6900? done.
47	comp			↑		
48	12371 p0101	12 37 00	+01 01	1	600] H α ? low 2 H α of 6720
49	comp			↑		
50	12371 p0101	"	"	1	480	
51	comp			↑		

noise 9.17
gain 1.164

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>Hughes & Holden</u>			Grating: <u>3002</u>		Page: <u>4766b</u>	
PI: <u>Hughes & Holden</u>			Date: <u>6/21/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
52	12 561 p0829	12 ^h 56 06	+68 29	1	360	cloudy
53	comp			↑		
54	12572 p0333	12 57 12	+03 33	1	360	HR, nice
55	comp			↑		
56	12574 p0519	12 57 24	+05 19	1	420	clouds. - Needs reder
57	comp			↑		
58-60	TCrB	15 59.5	25 55	12	5s x 3	
61	comp			↑		
62-63	TCrB	"	"	12	2x30s	
64	comp			↑		cloudy
65	RS Oph	17 ^h 50 13	-06 42 23	12	100s	
66	comp			↑		
67	RS Oph			12	60s	lots of clouds
68	comp			↑		
69-71	RS Oph			12	5s x 3	
72	comp			↑		
73	YY Her			12	100s	
74-76	YY Her			12	2x5s	cloudy
77	comp			↑		
78-80	YY Her			12	10s x 3	
81	comp			↑		
82	As 296	18 15 07	-00 18 53	12	100s	
83	comp			↑		
84-86	As 296			12	10 x 3	
87	comp			↑		
88-90	V433 Her	18 22 07	+23 27 15	12	3s x 3	cloudy
91	comp			↑		
92	V433 Her			12	100s	
93	comp			↑		
94-96	CE Cyg	19 50 12	+35 41 00	12	3 x 25	

files 75, 76, 89, 90, 94, 95, 96, 103 had nothing (or close to nothing on this) so they were not extracted (NOTHING TO EXTRACT!)

60 inch Telescope Log		Spectrograph: <u>FAST</u>				Page: <u>4768</u>
Observer: <u>Huchra / Haberman</u>		Grating: <u>300L</u>				
PI: <u>W.M.63 / Huchra</u>		Date: <u>6/22/96</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	B.A.S			0	-	
11	COMP			0		
12-21	FLAT			0	60	
22-24	DARK			0	900s	
25-34	B.A.S			0	-	
35	COMP			↓		
36-40	Sky			0	35	
41	COMP			↑		
42	Fuse 34	20 36 41.6	+43 21 50	0	100s	STD 8277
43	COMP			↑		
44	MAN 421	11 01 40	+38 28 43	6	240s	
45	COMP			↑		
46	N4051	12 00 06	+44 48 35	6	120s	
47	COMP			↑		
48	N4151	12 08 01	+39 41 01	6	30s	
49	COMP			↑		
50	MAN 279	13 51 53	+67 33 13	6	90s	
51	COMP			↑		
52	Fuse 98	14 36 04	27 42 28	0	30s	STD 567
53	COMP			↑		
54	N5548	14 15 43	+25 22 01	6	120s	
55	COMP			↑		
56	12542 p 0804	12 54 12	+08 04	1	720s	low Sb H α ? ~6000
57	COMP			↑		H α at 6889 yes!
58	12544 p 0420	12 54 24	+04 20	1	780s	H α at 6730
59	COMP			↑		
60	12574 p 0519	12 57 24	+05 19	1	480	also
61	COMP			↑		
62	12593 p 0516	12 57 18	+05 16	1	360	H α at 6808, Mg II
63	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>Huchra / Hoblin's</u>			Grating: <u>300L</u>		Page: <u>4769</u>	
PI: <u>Huchra / Kuchner / Green</u>			Date: <u>6/22/90</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
64	12595 +0520	12 59 30	+05 20	1	300	
65	COMP			↑		
66	12595 p0633	12 59 30	+06 33	1	240	
67	COMP			↑		
68	12596 p0322	12 59 36	+03 22	1	240	
69	COMP			↑		
70	13073 p0643	13 07 18	+06 43	1	240	
71	COMP			↑		
72	13108 p0702	13 10 48	+07 12	1	240	
73	COMP			↑		
74	13112 p0707 SW	13 11 12	+07 07	1	420	
75	COMP			↑		
76	13112 p0707 NE	13 11 12	+07 07	1	720	cur sb H ₂ at 6860
77	COMP			↑		
78	13174 p0604	13 17 24	+06 04	1	240	
79	COMP			↑		
x2 80	SN 1996 ai	13 10 58	+37 03 55	2	600s	bin by 2
81	COMP			↑	12s	↓
82	H2 44	13 21 19	+36 23 39	0		
83	COMP			—	6s	GRAB to 860
84	H2 44	"	"	0	32s	
85	COMP			↑		
86	SN 1996 ai	13 10 58	+37 03 35	2	600s	
87-88	COMP			↑	6x2	
89-94	FLAT			0	5s	
x4 95	COMP			0		Grating to 607 bin x4
96	CCCS 3635	15 43 14	+47 28 16	32	25s	
97	COMP			↑		
98	12274 p5706	12 27 24	+58 06	1	240s	
99	COMP			↑		

27
22517
231

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>Hushra / Hobkins</u>			Grating: <u>300R</u>		Page: <u>4770</u>	
PI: <u>Hushra / Keenan / Scruby / Geller</u>			Date: <u>6/22/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
100	N4108 A	12.03 21	+67 31 58	0	600	em. check count in file
101	comp			↑		CR on H ₂ , n.h.
102	14263 +1342	14 ^h 26 18	+13 42 00	1	240	ahn 14264 + 1342
103	comp			↑		H ₂ ahn 14266 + 1340
104	14580 p 0639	14 58 00	+06 39	1	480	
105	comp			↑		
106	162903 m 245214	16 29 03.4	-24 52 14	30	420	Bad file jim file reconstructed
107	comp			↑		
108	162903 m 245214	"	"	30	300	
109	162857 m 242805	16 28 57.9	-24 28 05	30	300	
110	comp			↑		
111	162927 m 242057	16 29 27.7	-24 20 58	30	300	
112	comp			↑		
113	162932 m 242101	16 29 32	-24 21 01	30	480	
114	comp			↑		
115	N5344	13 49 12	+74 12 00	1	1805	
116	comp			↑		
117	13536 p 7131	13 53 36	+71 31 00	2	1805	
118	comp			↑		
119	H18	15 58 18	+16 26 18	48	420	Here.
120	comp			↑		
121	H19	15 59 34	+17 58 11	48	420	H ₂
122	comp			↑		
123	H22	16 00 06	+15 01 10	48	480	H ₂
124	comp			↑		
125	H27	16 05 36	+16 31 33	48	360	Superficially, scattered off.
126	comp			↑		
127	H28	16 03 41	+16 28 30	48	300	
128	comp			↑		
129	329.55825	16 12 24	+32 04 14	3	240	

60 inch Telescope Log				Spectrograph: <u>PA57</u>		Page: <u>4771</u>	
Observer: <u>Huchra/Hobbs</u>				Grating: <u>300</u>			
PI: <u>Geller/Huchra/Scovron</u>				Date: <u>6/22/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments	
130	Comp			↑			
131	329.1568 41	16 09 59	+32 07 01	3	600		
132	Comp			↑			
133	329.1569 25	16 17 53	+32 06 21	3	240		
134	Comp			↑			
135	329.158 325	16 14 21.3	+32 10 32	3	420	H _α	
136	Comp			↑			
137	329.1629 50	16 10 39	+32 22 23	3	360		
138	Comp			↑			
139	329.1629 21	16 17 49	+32 21 42	3	480	low SB H _α at 6780 Å	
140	Comp			↑			
141	NEP 4160 A	18 06 20	+65 24 18	1	600s	K star	
142	Comp			↑			
143	NEP 2960 A	17 48 52	+63 50 34	1	200s		
144	Comp			↑			
145	NEP 4870 A	18 15 07	+62 44 24	1	30s		
146	NEP 4870 B	"	"	1	3s		
147	Comp			↑			
148	NEP 4980 A	18 17 00	+64 49 25	1	12s	A star	
149	Comp			↑			
150	NEP 5000 A	18 17 16	+62 56 45	1	420s	G star	
151	Comp			↑			
152-4	CI C49	19 50 12	+35 41 00	12	2s x 3		
155	Comp			↑			
156-7	CI C49	"	"	12	2 x 20s		
158	CI C49	"	"	12	60s		
159	Comp			↑			
160	AS 338	19 03 47	+16 26 14	12	60s		
161	Comp			↑			
162	AS 338	"	"	12	10s		

60 inch Telescope Log			Spectrograph: <u>F45J</u>		Page: <u>4772</u>	
Observer: <u>Huchra/Hobbs</u>			Grating: <u>300</u>			
PI: <u>Kempner/W. Iker/Shapiro</u>			Date: <u>6/22/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
163	comp			↑		
164-66	BF CG	19 23 53	+29 40 24	12	3s x 3	
167	BF CG			12	2m	
168	comp			↑		
169-172	CH CG	19 24 33	+50 14 27	12	15x4	
173-175	"			12	5s x 3	
176	comp			↑		
177	30390.3	18 45 37	+79 43 07	6	120s	AGN
178	comp			↑		
179-80	B0+284211	21 48 57	+28 37 48	0	10s x 2	S7D S79A
181	comp			↑		
182	M9509	20 41 20	-10 54 18	6	60s	
183	comp			↑		
184-7	HM Sgc	19 41 57	+16 44 35	12	25x4	
188	comp			↑		
189-191	A5 360	19 45 45	+13 36 40	12	2x3	
192-3	A5 360	"	"	12	15s x 2	
194	comp			↑		
195-7	PK Val	20 21 13	+21 24 21	12	30x3	
198	PK Val	"	"	12	120s	
199	comp			↑		moved telescope
200-201	He2m 467	20 35 57	+20 11 29	12	10s x 2	
202	"	"	"	12	120s	
203	comp			↑		
204-208	H0 198858	20 42 50	+47 31 07	0	25x5	Template H52, de frame
209	comp			↑		
210-213	H0 198858	"	"	0	4s x 4	" 213. pix file froshul
214	comp			↑		
215-218	H2 8703	22 53 02	+16 50 28	99	75x4	shp/w
219	comp			↑		

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			-	-	
11-13	PATH			-	90s	cls ~ 4 above bias
14-23	BIAS			-	-	
24	COMP			-	10s	
25-34	FLAT			-	6s	
35-39	SHy			0	3s x5	Template.
40	COMP			↑		
41-43	HD 136711	15 19.4	+48 37	0	5s x3	template out of focus
44	COMP			↑		
45-47	HD 136711	"	"	0	5s x3	" " "
48	COMP			↑		
49-52	ADR 2 p24	17 01 06	+24 35 05	0	10s x3	" out of focus
53	COMP			↑		
54	Feyr 34	10 36 41.1	+43 21 50	0	100s	520 520L
55	COMP			↑		
56-57	N 4151	12 08 01	+39 41 01	6	30s x2	
58	COMP			↑		
59	MRK 279	13 51 53	+69 33 13	6	90s	
60	COMP			↑		
61	NGC 5548	14 15 44	+25 22 01	6	120s	
62	COMP			↑		
63	H 2 44	13 21 19	+36 23 39	0	90s	
64	COMP			↑		
65-67	HR 5110	13 34 42.7	+37 10 57	99	2s x3	out of focus
68	COMP			↑		
69-71	HR 5110W	"	"	99	4s x3	
72	COMP			↑		Moon!
73	09203 p 6214	09 20 18	+02 14 00	1	360	try to fix
74	COMP			↑		part at 0600h
75	09205 p 6244	"	"	1	600	fix at 0595

noise 8.65
gain 1.11

60 inch Telescope Log		Spectrograph: <u>FMS7</u>		Page: <u>475</u>		
Observer: <u>Huchra/Hobbins</u>		Grating: <u>700 L</u>		Date: <u>6/23/96</u>		
PI: <u>Huchra</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
70	Comp			↑		
77	09436 p5432	09 ^h 43 36	+54 32	1	600	H _α ~ 6850
78	Comp			↑		
79	10040 p6836	10 04 00	+68 36	1	300	
80	Comp			1		
81	10 055 p7732	10 05 30	+77 32	1	480	H _α 7 m H
82	Comp			↑		
83	10055 p7732	"	"	1	480	pos H _α + 6740?
84	Comp			↑		
85	10131 p5444	10 13 06	+54 44	1	300	
86	Comp			↑		
87	10202 p5815	10 20 42	+58 15	1	360	H _α at 6657.
88	Comp			↑		also H _β , H _γ , strong SII
89	10230 p5733	10 23 00	+57 33	1	240	
90	Comp			↑		
91	10295 p5907	10 29 30	+59 07	1	240	
92	Comp			↑		
93	10403 p7001	10 40 18	+70 01	1	180	
94	Comp			↑		
95	10403 p7038	10 40 18	+70 38	1	300	
96	Comp			↑		
97	10420 p7500	10 42 00	+75 00	1	300	
98	Comp			↑		
99	10446 p5940	10 44 36	+59 40	1	240	
100	Comp			↑		
101	10466 p5654	10 46 36	+56 54	1	240	
102	Comp			↑		
103	10580 p5804	10 58 00	+58 04	1	270	
104	Comp			↑		
105	10571 p5743	10 57 06	+57 43	1	270	

60 inch Telescope Log

Observer: Huffman, H46hrs

PI: Huffman/Kemper

Spectrograph: FAST

Grating: 300L

Page: 4776

Date: 6/23/76

Number	Object	R.A.	Dec.	L/R	Exp	Comments	
106	comp			↑		moved telescope during exp?	
107	U175 p 6008	11 17 30	+60 08	↓	300		
108	comp			↑			
109	11326 p 6325	11 32 36	+63 25	↓	420	clouds	
110	comp			↑		Went to ~ 6840	
111	12236 p 6243	12 23 36	+62 43	↓	300	clouds, header file trashed	
112	comp			↑			
113	12236 p 6243	"	"	↓	300	clouds, H ₂	
114	comp			↑			
115	N4572	12 33 47.7	+74 31 27	↓	230	clouds! H ₂ at 6600	
116	comp			↑			
117-119	AG DRA	16 01 40	+66 48	12	3x3		
120	comp			↑			
121-123	AG DRA	"	"	12	30x2	clouds	
124	comp			↑			
125	AG DRA	"	"	12	30	"	
126	comp	WHY BOITER!					MOVED TELESCOPE
127	Draco CM1	17 19 57	+57 50 03	12	5005	clouds, not very good	
128	comp			↑		going south	
129	U1 Ser	17 42 38	+56 45	12	1803	not much here	
130	comp			↑			
131-134	CE Cyg	19 50	+35 41	12	3x23		
135	comp			↑			
136-138	CE Cyg	"	"	12	20x3	clouds!	
139	comp			↑			
140	CE Cyg	"	"	12	605	"	
141	comp			↑			
142	A5289	18 12 22	-11 40 13	12	1005		
143	comp			↑			
144	V1016 Cyg	19 57 05	+35 49 33	12	1805		

60 inch Telescope Log
 Observer: Huchra (Hebbins)
 PI: W. Huchra
 Spectrograph: FAST
 Grating: 300L
 Date: 6/24/86
 Page: 4778

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	B.A.S			0		
11-20	FLAT			0	6s	
21	Comp			0	10s	
22-26	B.A.S			0		
27-28	DARK			0	900s	
29-33	Sky			0	3s	
34	comp			↑		
35-36	Fuse 66	12 34 54	+25 20 31	0	450s	Twilight! SPO +
37	comp			↑		
38	MR 421	11 01 40	+38 28 48	6	240s	
39	Comp			↑		
40	NGC 4051	12 00 36	+44 48 35	6	120s	
41	Comp			↑		
42	NGC 4151	12 08 01	+29 31 01	6	30s	
43	Comp			↑		
44	Mrk 279	12 57 53	+61 33 13	6	90s	
45	Comp			↑		
46	NGC 5548	14 15 43	+25 22 01	6	120s	
47	Comp			↑		
48	H244	13 21 19	+36 23 29	0	90s	std. +
49	Comp			↑		
50-54	H0 136711	15 19 24	+18 37 03	0	5x25	Template
55-56	Comp			↑		moon!
56	10024 p5841	10 02.24	+58 41 00	2	260	
57	Comp			↑		
58	10020 p4654	10 02 00	+46 54 00	2	480	low st
59	Comp			↑		H ₂ at 0725 under CR!
60	10023 p5738	10 02 18	+57 38 00	2	300	needs mo
61	Comp			↑		clouds
62	10160 p5845	10 16 00	+58 45 00	2	200 260	cloudy

noise 9.17
 gain 1.164

60 inch Telescope Log

Observer: Holmes (Hobbs)

Spectrograph: FA57

Grating: 300R

Page: 4779

FI: Holmes / Hobbs / Kennedy

Date: 6/24/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
63	comp			↑		Clouds!
64	10160 p 5845	"	"	↓	180	"
65	comp			↑		
66	10160 p 5845	"	"	↓	200	" on
67	comp			↑		
68	10293 p 5658	10 29 18	+56 58	↓	310	H ₂ at 6840
69	comp			↑		
70	10462 p 5837	10 46 12	+58 37	↓	360	
71	comp			↑		
72	10488 p 6858	10 41 48	+68 58	↓	270	H ₂ ~6710
73	comp			↑		
74	11091 p 7245	11 09 06	+72 45	↓	180	
75	comp			↑		
76	11093 p 5721	11 09 18	+57 21	↓	360	
77	comp			↑		
78	11117 p 5800	11 11 42	+58 00	↓	240	Clouds again
79	comp			↑		
80	11180 p 5714 N	11 18 00	+5714	↓	180	North
81	comp			↑		
82	11180 p 5714 S	"	"	↓	300	South look for V. like star
83	comp			↑		
84	11329 p 5836	11 32 54.0	+58 36	↓	360	Be sure supported
85	comp			↑		
86	SN 1976 ai	15 10 58	+57 03 35	↓	900	
87	comp			↑		
88-89	AS210	16 51 20	-26 43 33	↓	30x2	
90	comp			↑		
91-92	AS210			↓	25x2	
93	comp			↑		
94-95	HCN 1341	17 08 37	+72 36	↓	25x2	

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4280</u>	
Observer: <u>Hudon</u>			Grating: <u>300</u>			
PI: <u>Kempson/Guller/Hudon</u>			Date: <u>6/24/96</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
96	Comp			↑		
97	Hen 1341	"	"	12	60s	
98	Comp			↑		
99/100	M1 m21	17 34 17	-19 09 27	12	30x2	
101	Comp			↑		
102	M1 m21	"	"	12	180s	
103	Comp			↑		
104	RT Ser	17 39 52	-11 56 43	12	30s	
105	Comp			↑		
106	R7562	"	"	12	180s	
107	Comp			↑		
108	As 270	18 05 34	-20 20 40	12	30s	
109	As 270	"	"	12	90s	
110	Comp			↑		
111	329 .163949	16 14 23	+32 24 29	3	600	
112	Comp			↑		
113	329 .163949	"	"	3	600	
114	Comp			↑		
115	16 03 16 p 19 32 38	16 03 16	+19 32 38	25	360	
116	Comp			↑		
117	16 03 04 p 16 06 42	16 03 04	+16 06 42	25	240	do not add to 119
118	Comp			↑		
119	16 03 04 p 16 06 42	16 03 04	+16 06 42	25	600	
120d	Comp			↑		
122	16 01 59 p 16 35 47	16 01 59.5	+16 35 47	25	600	
123	Comp			↑		
124	16 02 14 p 20 08 41	16 ^h 02 14	+20 08 41	25	600	H ₂ at 6780?
125	Comp			↑		
126	16 03 26 p 18 14 30	16 03 26	+18 14 30	25	480	
127	Comp			↑		

60 inch Telescope Log

Observer: Hudson / Hubbeis

PI: Hudson / Kinpan / Bumbly / Korany

Spectrograph: F457

Grating: 300

Page: 4781

Date: 6/24/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
128	160027 p 193727	16 ^h 00 27	+19 37 27	25	300	H ₂ !
129	comp			↑		
130	15416 p 0456	15 41 3v	+04 56	1	420	H ₂ at 6830.
131	comp			↑		
132	160159 p 161351	16 01 59	+16 13 51	25	420	H ₂ at 6860
133	comp			↑		
134	160018 p 200944	16 03 18	+20 09 44	25	240	
135	comp			↑		
136	160225 p 163848	16 02 25	+16 38 48	25	300	H ₂ at 6860, weak H ₂ !
137	comp			↑		
138	160041 p 191203	16 00 41	+19 12 03	25	480	}
139	comp			↑		
140	160041 p 191203	"	"	25	600	
141	comp			↑		
142-3	AS316	18 42 32	-21 17 53	12	60s x 2	Pair Serris
144	comp			↑		
145-6	MWC 900	18 47 55	-20 05 57	12	5s x 2	
147	MWC 900	"	"	12	120s	
148	comp			↑		
149-51	AS327	18 53 16	-24 23 04	12	5s x 3	
152	AS287	"	"	12	240	
153	comp			↑		
154-5	FN Sgr	18 53 54	-18 59 48	12	10s x 2	
156	FN Sgr			12	120s	
157	comp			↑		
158	160009 + 163705	16 ^h 00 19	+16 37 05	25	300	
159	comp			↑		
160	H25	16 02 09	+15 53 16	48	300	
161	comp			↑		
162	AVM 5-15	16 58 09	+21 39 05	35	600	

60 inch Telescope Log

Observer: Hobbs/Hobbs

PI: Nancy/Hobbs/Wick

Spectrograph: FAST

Grating: 300 L

Page: 4782

Date: 6/24/96

Number	Object	R.A.	Dec.	L/R	Exp	Comments
163	Comp			↑		
164	1641M5-50	16 57 35	+27 48 27	35	600	
165	Comp			↑		
166	16011 p 6824	16 01 06	+08 24	1	240	
167	Comp			↑		
168	16675 p 5110	16 51 30	+51 10	1	420	Ha at 6760 Å
169	Comp			↑		
170	NEP 2920B	17 48 28	+06 35 37	1	480	
171	Comp			↑		
172	NEP 5140B	18 19 43	+62 10 51	1	1000	early y star
173	Comp			↑		
174	19330 p 8357	19 33 00	+83 57 00	1	360	Ha
175	Comp			↑		
176	18410 p 8652	18 41 00	+86 52	1	300	
177	Comp			↑		
178	18090 +8740	18 09 00	+87 40	1	240	
179	Comp			↑		
180	3C390.3	18 45 37	+79 43 07	6	120	
181	Comp			↑		
182-3	CE Cyg	19 50 08	+55 42 41	12	20x2	
184	CE Cyg	"	"	12	20s	
185	CE Cyg	"	"	12	60s	
186	Comp			↑		
187-9	BD p 28421	21 48	+28 37	0	10s x 3	
190	Comp			↑		
191-200	FLAT			0	6s	
201-210	BIAS			0	-	
211-213	DARK			0	900s	