

60 inch Telescope Log

Observer: D. KORANCI

PI: GJLLR/KEMW/LINKES

Spectrograph: FAST

Grating: 300L

Page: 5549

Date: 7/1/97

Number	Object	R. A.	Dec.	L/R	Exp	Comments
85	COMP				↑	
86	N7521F1	23:13:46	-01:43:50	60	10m	
87	COMP				↑	
88	Z3141P1556F1	23:20:19	16:13:36	60	15m	star in gap 0.5" OFFER FILTERS ON SLIT (W)
89	COMP				↑	
90	N7641F1	23:22:14	11:57:25	60	12m	
91	COMP				↑	
92	Z1483F2	23:22:39	11:23:04	60	10m	
93	COMP				↑	
94	Z1483F3	23:22:45	11:21:04	60	15m	
95	COMP				↑	
96	Z1483F4	23:22:48	11:22:22	60	8m	first did not take!
97	COMP				↑	
98	N7661F1	23:24:20	17:14:43	60	15m	
99	COMP				↑	
100	Z3421P1125F1	23:49:29	11:40:42	60	8m	star to W, very close
101	COMP				↑	
102-104	CIC3	19:50:12	35:41:04	12	270, 800	
105	COMP				↑	
106-108	H9192261	20:10	40:07	56	55	
109	COMP				↑	
110-111	N7331	22:22	34:09	57	4m	
112	COMP				↑	
113	MRK 335	00:03	19:55	6	2m	
114	COMP				↑	
115	N7469	03:03	08:52	6	2m	STAR ON SLIT, TO EAST
116	COMP				↑	
117	FELIX 110	23:17	-05:26	56	2m	
118	COMP				↑	
119-128	BIAS				05	
129-138	FLAT				65	

60 inch Telescope Log

Observer: J. Peters

PI: eT al.

Spectrograph: Fast

Grating: 300

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Date: 7/2/97

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1	Comp	Test				
2-11	Bias	Bin By	4			
12-21	FLAT	Bin By	4		6 <sup>s</sup>	
22-31	Bias	Bin By	2			
32-41	FLAT	Bin By	2		18 <sup>s</sup>	Was open just long
42-46	SKY				2 <sup>s</sup>	enough to get sky.
47	Comp			↑	7 <sup>s</sup>	Wind at least 40+
48	N5548	14 15 43	25 28 01	6	3 <sup>m</sup>	seeing all over the
49	Comp					place
50	MRK501	16 53 52	39 45 36	6	5 <sup>m</sup>	Wind UP and down
51	Comp					Clouds To W+SW
52	N5866	15 05 07	55 57 18	5 <sup>m</sup>	5 <sup>m</sup>	+SE
53	Comp			↑		Had to stop wind
54	Dark				15 <sup>m</sup>	bouncing T.L around
55	Dark				15 <sup>m</sup>	
56	Dark				15 <sup>m</sup>	
57	Dark				15 <sup>m</sup>	Wind T.L Runne
58-67	Bias					some clouds passed
68-77	FLAT				6 <sup>s</sup>	by, had seeing Frogs + Toads

60 inch Telescope Log  
 Observer: J. Peters  
 PI: ET-AL

Spectrograph: FAST  
 Grating: 300  
 Date: 7/3/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	Bias	B.W. By	4			
11-20	FLAT	B.W. By	4		6 <sup>s</sup>	
21-30	Bias	B.W. By	2			
31-40	FLAT	B.W. By	2		12 <sup>s</sup>	
41-45	SKY				3 <sup>s</sup>	
46	Comp			↑		Wind 20 to gust 40?
47	N4151	12 09 01	39 41 01	6	30 <sup>s</sup>	Clouds To South
48	Comp			↑		Dust in Air
49	N4258	12 16 29	47 34 51	6	2 <sup>m</sup>	Seeing ± 2-5 up-down
50	Comp			↑		
51	MRK 279	13 51 53	69 32 13	6	2 <sup>m</sup>	
52	Comp			↑		
53	N5548	14 15 43	23 22 01	6	3 <sup>m</sup>	
54	Comp			↑		
55	Felg98	14 36 04	27 42 28	56	2 <sup>m</sup>	
56	Comp			↑		
57	N5866	15 05 07	55 57 12	57	5 <sup>m</sup>	
58	Comp					
59	in fall. c. 14	13 08 26	24 43 45	64	20 <sup>m</sup>	
60	Comp			↑		
61	in fall. c. 17	13 08 57	25 01 11	64	20 <sup>m</sup>	Wol
62	Comp			↑		
63	in fall. c. 7	13 06 06	23 48 13	64	24 <sup>m</sup>	T.L. Burred to wind.
64	Comp			↑		
65	160357P153255	16 03 57	15 32 55	25	10 <sup>m</sup>	
66	Comp					
67	160044P160030	16 00 44	16 30 38	25	20 <sup>m</sup>	
68	Comp			↑		
69	160046P1602547	16 00 46	20 25 47	25	20 <sup>m</sup>	
70	Comp			↑		

60 inch Telescope Log

Observer: J. Peters

PI: et.al

Spectrograph: Fast

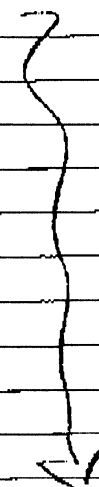
Grating: 300

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Date: 7/3/97

Number	Object	R.A.	Dec.	L/R	Exp	Comments
71	160045P161013	16 00 45	16 10 13	25	20 <sup>m</sup>	
72	Comp P			↑		
73	160130P180322	16 01 30	18 03 23	25	20 <sup>m</sup>	
74	Comp P			↑		
75	160025P164132	16 00 25	16 41 32	25	20 <sup>m</sup>	
76	Comp P			↑		
77	160258P154925	16 02 58	15 49 25	25	20 <sup>m</sup>	
78	Comp P			↑		
79	160325P155655	16 03 25	15 56 55	25	20 <sup>m</sup>	
80	Comp P			↑		
81	3C 390.3	18 45 37	79 43 07	6	6 <sup>m</sup>	
82	Comp P			↑		
83	MRK 509	20 41 26	-10 54 18	6	2 <sup>m</sup>	
84	Comp P			↑		
85	HD 192281	20 10 46	40 07 01	56	5 <sup>s</sup>	
86	Comp P			↑		
87	CICy9	19 50 12	35 41 04	12	2	
88	CICy6	↓	↓	12	20	
89	CICy9	↓	↓	12	90	
90	Comp P			↑		
91	17497P5949	17 49 42	59 49 00	43	10 <sup>m</sup>	
92	Comp P			↑		
93	17506P6250SW	17 50 36	62 50 00	43	10 <sup>m</sup>	SW obj SE IN SLIT TO
94	17506P6250SE	↓	↓	43	10 <sup>m</sup>	SE obj SW IN SLIT TO
95	17506P6250N	↓	↓	43	10 <sup>m</sup>	
96	Comp P			↑		
97	17514P6228	17 51 24	62 28 00	43	10 <sup>m</sup>	
98	Comp P			↑		
99	17515P6037	17 51 30	60 37 00	43	15 <sup>m</sup>	
100	Comp P			↑		

Clouds To North



SW obj SE IN SLIT TO  
SE obj SW IN SLIT TO



60 inch Telescope Log		Spectrograph: <u>FAST</u>					
Observer: <u>J. Peters</u>		Grating: <u>300</u>		Page: <u>5554</u>			
PI: <u>et.al</u>		Date: <u>7/4/97</u>					
Number	Object	R.A.	Dec.	I/R	Exp	Comments	
1-10	Bias	Bin By	4				
11-20	Flat	Bin By	4		6 <sup>s</sup>		
21-30	Flat	Bin By	2		12 <sup>s</sup>	Thin clouds around	
31-40	Bias	Bin By	2			Wind ~ 20mph	
41-45	Sky				2 <sup>s</sup>		
46	Comp			↑			
47	MRK 279	13 51 53	69 33 13	6	2 <sup>m</sup>		
48	Comp			↑			
49	Feige 99	14 36 04	27 42 28	56	2 <sup>m</sup>		
50	Comp			↑			
51	NG 548	14 15 43	25 22 01	6	3 <sup>m</sup>		
52	Comp			↑			
53	NG 866	15 05 07	55 57 18	57	5 <sup>m</sup>		
54	Comp			↑			
55	NGC 1631	13 32 17	10 26 49	60	20 <sup>m</sup>		
56	Comp			↑			
57	A000682W	13 33 34	05 28 59	60	20 <sup>m</sup>	West Obj	
58	Comp	↓	↓	↓			
59	A000682E	↓	↓	60	15 <sup>m</sup>	East Obj	
60	Comp			↑			
61	Z008269	13 35 14	10 41 10	60	6 <sup>m</sup>		
62	Comp			↑			
63	Z005252	13 35 14	10 41 31	60	5 <sup>m</sup>		
64	Comp			↑			
65	Z011005N	13 36 52	01 11 16	60	15 <sup>m</sup>	North Obj	
66	Comp	↓	↓	↑			
67	Z011005S	↓	↓	60	15 <sup>m</sup>	South Obj	
68	Comp			↑			
69	Z001289E	13 39 57	00 49 55	60	10 <sup>m</sup>	East Obj	
70	Comp			↑			

60 inch Telescope Log  
 Observer: J. Peters  
 PI: e.T.a.L  
 Spectrograph: Fast  
 Grating: 300  
 Date: 7/4/97  
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Number	Object	R.A.	Dec.	L/R	Exp	Comments
71	2001289 W	13 39 57	00 49 55		10 <sup>m</sup>	West Obj
72	Comp			↑		
73	2014046.1	16 28 41	41 08 13	60	7 <sup>m</sup>	Obj #1
74	Comp			↑		
75	2014046.2			60 <sup>m</sup>	5 <sup>m</sup>	Obj #2
76	Comp			↑		
77	2014046.3	↓	↓	60 <sup>m</sup>	5 <sup>m</sup>	Obj #3
78	Comp			↑		
79	2014046.4	↓	↓	60 <sup>m</sup>	5 <sup>m</sup>	Obj #4
80	Comp			↑		
81	2014046.5	↓	↓	60 <sup>m</sup>	5 <sup>m</sup>	Obj #5
82	Comp			↑		
83	2011944.1	16 28 44	39 28 25	60	10 <sup>m</sup>	Obj #1
84	Comp			↑		
85	2011944.2	↓	↓	60	5 <sup>m</sup>	Obj #2
86	Comp			↑		
87	2011944.3	↓	↓	60	7 <sup>m</sup>	Obj #3
88	Comp			↑		
89	2011944.4	↓	↓	60	5 <sup>m</sup>	Obj #4
90	Comp			↑		
91	N002346	16 00 10	46 44 39	60	20 <sup>m</sup>	
92	Comp			↑		
93	17543P7134	17 54 12	71 34 00	43	20 <sup>m</sup>	
94	Comp			↑		
95	17546P6425	17 54 36	64 25 00	43	6 <sup>m</sup>	
96	Comp			↑		
97	17554P6633	17 55 24	66 33 00	43	15 <sup>m</sup>	
98	Comp			↑		
99	17557P6221	17 55 42	62 21 00	43	10 <sup>m</sup>	
100	Comp			↑		

60 inch Telescope Log

Observer: J. PETERS

PI: et. al

Spectrograph: FAST

Grating: 300

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Date: 7/4/97

Number	Object	R. A.	Dec	L/R	Exp	Comments
101	17560P6439	17 56 00	64 39 00	43	15 <sup>m</sup>	
102	Comp P			↑		
103	17564P6207	17 56 24	62 07 00	43	5 <sup>m</sup>	
104	Comp P			↑		
105	17565P6235	17 56 30	62 35 00	43	5 <sup>m</sup>	
106	Comp P			↑		
107	17587P6938SW	17 58 42	69 38 00	43	6 <sup>m</sup>	
108	Comp P	↓	↓	↑		
109	17587P6938NE	↓	↓	43	6 <sup>m</sup>	
110	Comp P			↑		
111	17588P7040 N	17 58 48	70 40 00	43	7 <sup>m</sup>	
112	Comp P	↓	↓	↑		
113	17588P7040 S	↓	↓	43	7 <sup>m</sup>	
114	Comp P			↑		
115	17593P6246	17 59 18	62 46 00	43	6 <sup>m</sup>	
116	Comp P			↑		
117	18009P6301	18 00 54	63 01 00	43	20 <sup>m</sup>	
118	Comp P			↑		
119	CICyg	19 50 12	35 41 04	12	2	
120	CICyg	↓	↓	12	20	
121	CICyg	↓	↓	12	90	
122	Comp P			↑		
123	110277086	22 54 49	62 27 35	56	5 <sup>s</sup>	
124	Comp P					
125	N7469	23 03 15	08 52 25	6	2 <sup>m</sup>	
126	Comp P			↑		
127-136	Bias					
137-146	FLAT				6 <sup>s</sup>	



*FAST  
to Susan Tokarz  
pg 1 of 4*

60 inch Telescope log

Observer: P. Berlind

PI: Wilkes/Geller

Spectrograph: FAST

Grating: 300L; 3° slit; bndy 1

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Date: 7/5/97

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-11	BIAS			0	0s	
12-21	FLAT			0	6s	
22-31	BIAS			0	0s	very hazy
32-41	FLAT			0	12s	
42-46	sky	zenith		57	2s	46
47	COMP			↑		
48-49	Feige 66	12:31	+25:20	56	45s	clouds dispersing
50	COMP			↑		
51	N4151	12:08	+31:41	6	30s	
52	COMP			↑		
53	N4051	12:00	+44:48	6	2m	
54	COMP			↑		poor seeing
55	N4258	12:16	+47:34	6	2m	
56	COMP			↑		
57	H244	13:21	+76:23	56	2m	
58	COMP			↑		
59	MRK 279	13:51	+69:33	6	3m	
60	COMP			↑		
61	N5548	14:15	+25:22	6	3m	
62	COMP			↑		
63	ZW08493S	13:40	+25:53	60	4m	
64	ZW08193N	13:40	+25:53	60	8m	em
65	COMP			↑		
66	Z011713S	13:42	+29:49	60	6m	brn by 2; close comp - W
67	Z011713N	13:42	+29:49	60	5m	W comp - faint but good emiss
68	COMP			↑	12s	
69	Z013409S	13:43	+18:01	60	5m	
70	COMP			↑		
71	Z2544p082S	12:54	+18:25	7	20m	em also ds 6/2/96
72	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>5558</u>	
Observer: <u>PIS</u>			Grating: <u>300R</u>			
PI: <u>Geller</u>			Date: <u>7/5/97</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
73	1311300713W	13:11	+07:13	↑	15m	W=A em
74	COMP			↑		wk
75	1312000318	13:12	+07:18	↑	20m	all em
76	COMP			↑		
77	Z0008035	13:41	+01:46	60	5m	emitt
78	COMP			↑		
79	Z012897E	13:41	+02:04	60	5m	
80	Z012817W	13:41	+02:04	60	5m	* to E
81	COMP			↑		
82	Z003888N	14:03	+04:25	60	5m	em
83	Z003888S	14:03	+04:28	60	5m	em
84	COMP			↑		
85	A000200S	14:03	+04:34	60	3m	
86	A000200N	14:03	+04:34	60	3m	
87	Z007168	14:03	+04:31	60		
88	COMP			↑		
89	Z007167N	14:03	+11:23	60	6m	em
90	Z007167S	14:03	+11:23	60	6m	wk
91	COMP			↑		
92	Z000997	15:07	+19:34	60	3m	SE
93	Z001065	15:07	+19:35	60	3m	NW
94	COMP			↑		
95	Z013603	15:06	+20:29	60	8m	bm by 2
96	COMP			↑		
97	Z007083E	15:06	+03:46	60	6m	em
98	Z007083W	15:06	+03:46	60	4m	
99	COMP			↑		
100	Z000989	15:05	+03:05	60	8m	E+W; extended emission between objects
101	COMP			↑		
102	N00182	15:05	+05:50	60	6m	em

100. I believe Western object is a star!

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>5559</u>	
Observer: <u>PB</u>			Grating: <u>3002</u>		Date: <u>7/5/97</u>	
PI: <u>Geller/Huchra</u>						
Number	Object	R.A	Dec	L/R	Exp	Comments
103	COMP			↑		
104	Z008306N	15:05	+12:44	60	3m	
105	Z008306S	15:05	+12:44	60	3m	
106	COMP			↑		
107	Z 011731	15:02	+32:07	60	5m	
108	COMP			↑		
109	160136 p155534	16:01	+19:55	25	20m	Beautiful!
110	COMP			↑		
111	160355 p184706	16:03	+18:47	25	20m	
112	COMP			↑		
113	160307 p180616	16:03	+18:06	25	17m	
114	COMP			↑		
115	160203 p184419	16:02	+18:44	25	20m	
116	COMP			↑		
117	160038 p190445	16:00	+19:04	25	17m	
118	COMP			↑		
119	17448 p6631A	17:44	+66:34	43	4m	
120	17448 p6631B	17:44	+66:34	43	8m	
121	COMP			↑		
122	17448 p6634C	17:44	+66:34	43	8m	* to W em
123	17448 p6634D	17:44	+66:34	43	15m	em
124	COMP			↑		
125	NG488	17:48	+62:14	43	4m	
126	COMP			↑		
127	17504 p 7214	17:50	+72:14	43	4m	
128	COMP			↑		
129	17509 p 7150	17:50	+71:50	43	4m	
130	COMP			↑		
131	18026 p6911	18:02	+69:11	43	5m	
132	COMP			↑		

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>SS60</u>	
Observer: <u>PB</u>			Grating: <u>3002</u>			
PI: <u>Brandt &amp; Wilkes</u>			Date: <u>7/5/97</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
133,135	2304p0402	23:04	+04:02	66	14m	sec 2 = 1.18 2" slit ↓
134,136	COMP			↑		clear
137	0003p199	00:06	+20:12	66	11m	1.14 2"
138	COMP			↑		
139	0003p199	00:06	+20:12	66	3m	5" slit ↓
140	COMP			↑		
141	2304p0402	23:04	+04:02	66	5m	5"
142	COMP			↑		
143	Fergello	23:17	08:26	56	2m	5"
144	COMP			↑		
145-146	BDP284211	21:48	+28:37	56	1m	1.02 5"
147	COMP			↑		
148-150	HD217086	22:54	+22:27	56	5s	5"
151	COMP			↑		
152	MRK335	00:03	+19:55	6	3m	3" slit ↓
153	COMP			↑		
154	NTM69	23:03	+08:52	6	2m	
155	COMP			↑		
156-158	CXUcy	19:50	+35:11	12	90, 20, 25	
159	COMP			↑		
160-162	HD172281	20:10	+10:07	56	5s	1.2
163	COMP			↑		
164-173	BT15			0	0s	
174-183	FLAT			0	6s	
184-193	BT15			0	0s	bmbg 2
194-203	FLAT			0	12s	bmbg 2
204-203	FLAT5			66	3s	bmbg 4 ; 5" slit
204-243	FLAT2			66	8s	bmbg 4 ; 2" slit
244-249	DARK					

FAX: to Susan Tokare  
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60 inch Telescope Log

Observer: P. Berlin

PI: Wilkes

Spectrograph: FAST

Grating: 3002

Date: 7/6/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	focus = 840
11-20	FLATB			98	5s	5" slit; tilt = 600.0; WG 360 filter
21-30	FLATR			98	5s	5"; tilt = 827.0; GG 495; focus 860
31-40	FLAT	(regular setup)		0	6s	3"; tilt = 607.0; none; 960
41-50	BIAS			0	0s	bmbg 2
51-60	FLAT			0	12s	bmbg 2
61-65	sky			57	2s	
66	COMP			↑	7s	scattered clouds fading...
67-68	For 66	12:34	+75:20	56	1m	
69	COMP			↑		
70	N4851	12:08	+39:41	6	30s	
71	COMP			↑		
72	MRK 279	13:51	+67:33	6	3m	
73	COMP			↑		
74	N5518	14:15	+25:22	6	3m	
75	COMP			↑		
76	N4466B	12:30	+12:29	57	4m	
77	COMP			↑		
78	N4853	12:58	+27:35	57	4m	
79	COMP			↑		
80-81	BDp 332642	15:51	+72:56	98	90s	5" slit; WG 360 filter in ↓
82	COMP			↑	5s	sec 2 = 1.00 tilt = 600.0
83-84	H244	13:21	+36:23	98	3m	PA = 90! sec 2 = 1.13
85	COMP			↑		
86-90	HR 510	13:34	+37:10	98	1s	PA = 88
91	COMP			↑		
92-97	HR 510R	13:34	+37:10	98	1s, 4s	GG 495 filter; tilt = 827.0 ↓
98	COMP			↑		
99-100	H244R	13:21	+36:23	98	4m	PA = 86°
101	COMP			↑		

60 inch Telescope Log

Observer: PB  
 PI: Geller

Spectrograph: FAST

Grating: 30R

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Date: 7/6/97

Number	Object	R. A.	Dec.	L/R	Exp	Comments
102-106	FLATR	13:21	+76:23	98	55	3:50 - 04:10
107-108	BDP332642R	15:50	+33:05	98	3m	PA=52
109	COMP			↑		
110	Z007063E	14:06	+02:19	60	4m	3" slit; tilt=60°; no filter
111	Z007063W	14:06	+02:19	60	10m	em focus=960
112	COMP			↑		
113	N002821N	14:11	+14:11	60	6m	em
114	N002821S	14:11	+14:11	60	8m	wkem
115	COMP			↑		
116	Z006071N	14:17	+08:37	60	6m	em
117	COMP			↑		
118	N002967S	14:09	+29:10	60	10m	redo
119	COMP			↑		
120	A000949 E	15:01	+28:30	60	5m	storms to S+E
121	A000949 M	15:01	+28:30	60	5m	
122	A000949 W	15:01	+28:30	60	5m	
123	COMP			↑		
124	Z011930N	15:00	+13:17	60	5m	
125	COMP			↑		
126	Z013284	15:09	+05:02	60	5m	agn
127	COMP			↑		
128	Z008476N	15:07	+14:37	60	5m	
129	Z008476S	15:07	+14:37	60	4m	em; close N/S pair
130	COMP			↑		
131	Z006003S	15:10	+07:42	60	5m	
132	Z006003N	15:10	+07:42	60	5m	
133	COMP			↑		
134	Z013086W	15:11	+06:20	60	5m	wkem yes, but not very good; should have been longer
135	Z013086E	15:11	+06:20	60		
136	COMP			↑		

60 inch Telescope Log

Observer: PBS  
 PI: Geller & Huchra

Spectrograph: FAST

Grating: X02

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Date: 7/6/97

Number	Object	R. A.	Dec.	L/R	Exp	Comments
137	ZW09572	15:11	+05:12	60	7m	em
138	COMP			↑		
139	Z013085	15:16	+06:47	60	5m	
140	COMP			↑		
141	Z013099	15:17	+07:09	60	5m	
142	COMP			↑		
143	Z013260E	15:22	+08:45	60	5m	
144	Z013260W	15:22	+08:45	60	5m	
145	COMP			↑		
146	A000867N	15:23	+08:36	60	5m	
147	A000867S	15:23	+08:36	60	5m	wk
148	COMP			↑		
149	A000900W	15:21	+20:39	60	5m	humidity ↑↑
150	A000900E	15:21	+20:39	60	5m	seeing worse
151	COMP			↑		
152	Z015305	15:10	+43:17	60	5m	
153	COMP			↑		
154	160128 p160636	16:01	+16:06	25	20m	
155	COMP			↑		
156	160356 p170159	16:03	+17:01	25	20m	
157	COMP			↑		
158	160251 p193111	16:02	+19:31	25	17m	
159	COMP			↑		
160	18014 p16521E	18:01	+65:21	43	4m	
161	18014 p16521W	18:01	+65:21	43	5m	wk
162	COMP			↑		clouds
163	18040 p16013	18:04	+60:13	43	20m	
164	COMP			↑		
165	18048 p16042	18:04	+60:42	43	6m	em
166	COMP			↑		

60 inch Telescope Log

Observer: PB  
 PI: Huchra & Geller

Spectrograph: FAST  
 Grating: 700R  
 Date: 7/6/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
167	1805 Sp 6819	18:05	+68:19	43	5m	em
168	COMP			↑		
169	18080 p 7015	18:06	+70:15	43	8m	em
170	COMP			↑		
171	18102 p 6402	18:10	+64:02	43	5m	em to to W
172	COMP			↑		
173	18106 p 6917	18:10	+69:17	43	15m	em
174	COMP			↑		
175	18115 p 6842	18:11	+68:42	43	7m	em
176	COMP			↑		
177	N6587	18:10	+61:10	43	6m	poor seeing humid!
178	COMP			↑		
179	N6601	18:11	+61:26	43	5m	
180	COMP			↑		
181	N6608	18:11	+61:19	43	11m	em
182	COMP			↑		
183	MRK509	20:41	-10:54	6	3m	
184	COMP			↑		
185	Z005676E	23:33	+01:52	60	5m	pec? also #188
186	Z005676W	23:33	+01:52	60	90s	em+ stellar nucleus
187	COMP			↑		
188	Z005676E	23:33	+01:52	60	8m	redo from #185
189	COMP			↑		
190	A001013EW	23:34	-01:57	60	10m	all Balmer H absorption no supposed star
191	COMP			↑		also comp to E
192	Z010608	23:46	+01:57	60	6m	em
193	COMP			↑		
194	Z009036 S	23:47	+01:47	60	4m	South comp
195	COMP			↑		
196	N7469	23:03	+08:52	6	2m	





*FAX*  
*to: Susan Tokarz*  
*py 1 of 4*

60 inch Telescope Log

Observer: P. Berlind

PI: Wilkes & Geller

Spectrograph: EAST

Grating: 3000

Date: 7/1/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	
11-20	FLAT			0	6s	
21-30	BIAS			0	0s	bmbz2
31-40	FLAT			0	12s	bmbz2
41	H244	13:21	+36:23	56	4m	
42	CMP			↑		rain storm today
43	MRK271	13:55	+19:33	6	4m	clearing ~9pm
44	CMP			↑		
45	NSS48	14:15	+25:22	6	4m	
46	CMP			↑		
47	A000223W	14:11	+01:16	60	7m	em
48	N000223E	14:11	+01:16	60	6m	
49	CMP			↑		
50	Z0008157	14:14	+05:13	60	10m	em
51	CMP			↑		
52	Z0006071S	14:13	+08:39	60	15m	good emission; 2 clumps. ew
53	CMP			↑		
54	Z012908N	14:13	+01:49	60	7m	
55	Z012908N	14:13	+01:49	60	10m	thin clouds all over
56	CMP			↑		
57	Z002923	14:13	+07:39	60	6m	em
58	CMP			↑		
59	Z013586	14:13	+04:31	60	6m	
60	CMP			↑		
61	N002967S	14:04	+29:10	60	14m	cosmic next to N; good em redo from yesterday
62	CMP			↑		
63	N002967N	14:04	+29:10	60	15m	em
64	CMP			↑		
65	0000043 S	14:54	+10:58	60	7m	
66	0000043 N	14:54	+10:58	60	7m	em

60 inch Telescope Log  
 Observer: PB  
 PI: Geller & Huchra  
 Spectrograph: FAST  
 Grating: 30R  
 Date: 7/7/97  
 Page: 5567

Number	Object	R. A.	Dec.	L/R	Exp	Comments
67	COMP			↑		clouds
68	N000843N	14:57	+11:39	60	7m	em
69	N000843S	14:57	+11:39	60	10m	wk em pri 2.15c
70	COMP			↑		
71	2006082S	14:59	+13:12	60	6m	em
72	2006082N.1	14:59	+13:12	60	5m	AGN N-NW
73	2006082N.2	14:59	+13:12	60	5m	wk N-SE
74	COMP			↑		no em, but same z as #72?
75	0000072	14:57	+14:17	60	11m	* to E
76	COMP			↑		
77	A000386S	14:59	+24:00	60	5m	
78	A000386N	14:59	+24:00	60	5m	
79	COMP			↑		
80	2011174	15:13	+04:17	60	5m	SW
81	2004417	15:13	+04:17	60	4m	NE
82	COMP			↑		
83	2013091	15:13	+04:28	60	7m	
84	COMP			↑		
85	2013090S	15:13	+04:29	60	5m	
86	2013090N	15:13	+04:29	60	6m	wk em spectrum underexposed NOT 0.5m 8000
87	COMP			↑		
88	30300.3	18:45	+79:13	6	10m	
89	COMP			↑		
90	18128p7050	18:12	+70:50	43	5m	
91	COMP			↑		
92	1812p6953	18:12	+69:53	43	6m	em
93	COMP			↑		
94	18144p6860	18:14	+68:00	43	15m	em by 2; superposed * on W side of galaxy; nice
95	COMP			↑	12s	ML emission on pri 2098

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>5568</u>	
Observer: <u>PB</u>			Grating: <u>3WR</u>		Date: <u>7/7/97</u>	
PI: <u>Huchra &amp; Geller</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
96	18130p6330	18:13	+63:30	43	6m	* to E
97	COMP			↑		
98	NGC 7	18:13	+61:18	43	15m	2 comps; both em
99	COMP			↑		
100	18299p6751	18:29	+67:51	43	20m	em
101	COMP			↑		still clouds around
102	18405p7348	18:40	+73:48	43	15m	em
103	COMP			↑		
104	18421p6358	18:42	+63:58	43	4m	
105	COMP			↑		
106	18480p7041	18:48	+70:41	43	4m	
107	COMP			↑		
108	18599p7209	18:57	+72:09	43	8m	em
109	COMP			↑		
110	18590p6433	18:59	+64:33	43	5m	* to E
111	COMP			↑		
112	19126p7017	19:12	+70:17	43	10m	em
113	COMP			↑		
114	1900p7006	19:15	+70:06	43	8m	em
115	COMP			↑		
116	A001049	23:38	+26:42	60	4m	also called Z010799
117	COMP			↑		
118	Z012624	23:36	+26:44	60	4m	
119	COMP			↑		
120	Z014896	23:36	+26:36	60	4m	3 objects in slit
121	COMP			↑		
122	Z006766	23:36	+26:59	60	3m	
123	COMP			↑		
124	Z025767	23:36	+26:50	60	5m	
125	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Geller

Spectrograph: FAST

Grating: 3WR

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Date: 7/7/97

Number	Object	R. A.	Dec.	L/R	Exp	Comments
126	ZW423S	23:40	+18:22	60	5m	em
127	ZW423N	23:40	+18:22	60	4m	
128	COMP			↑		
129	ZW9036N	23:47	+16:47	60	7m	em
130	COMP			↑		
131	N7169	23:03	+08:52	6	2m	
132	COMP			↑		
133	Z25m280	00:41	+41:05	57	4m	
134	COMP			↑		
135	MRK555	00:03	+19:55	6	3m	
136	COMP			↑		
137	Z003PIEW	23:49	+11:1	60	5m	bin by 2 E+W comps
138	COMP			↑		
139	BDP28424	21:48	+28:37	56	9m	
140	COMP			↑		
141-143	CICyg	19:50	+35:41	12	0.5, 1.0, 2.5	
144	COMP			↑		
145-147	HD17281	20:10	+10:07	56	5s	pretty clear @ dawn!
148	COMP			↑		
149-151	HD235661	22	+50	57	10s	
152	COMP			↑		
153-155	HD206267	22	+50	57	10s	only
156	COMP			↑		
157-159	HD206165	22	+50	57	1s	
160	COMP			↑		mix order
161-163	HD209715	22	+50	57	1s	
164	COMP			↑		
165-167	HD235673	22	+50	57	1s	
168	COMP			↑		
169-173	SKY	zenith		57	5s	

174 COMP  
 175-184 BIAS  
 185-194 FLAT  
 195-204 BIAS  
 205-214 FLAT

↑  
 0s  
 6s  
 0s  
 12s

60 inch Telescope Log		Spectrograph: <u>Fu5T</u>				
Observer: <u>J. Peters</u>		Grating: <u>300</u>			Page: <u>55/10</u>	
PI: <u>e.t.a.l.</u>		Date: <u>7/8/97</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	Bias	Bin	By 4			
11-30	Flat	Bin	By 4		6 <sup>s</sup>	Solid Clouds
31-30	Bias	Bin	By 2			
31-40	Flat	Bin	By 2		12 <sup>s</sup>	↓
41-45	SKY				35 <sup>s</sup>	Never Done it This way before Hope its OK
46	Comp			↑		
47	HD 192281	20 10 46	40 07 01	56		OK
48	Comp			↑		→ Thru Thin clouds
49	CICyg	19 50 12	35 41 04	12	25	Thru clouds
50	CICyg	↓	↓	12	30 <sup>s</sup>	↓
51	CICyg	↓	↓	12	90 <sup>s</sup>	↓
52	Comp			↑		Clouded Out!
53	N7469	23 03 15	08 52 25	6	2 <sup>m</sup>	→ Thru Thin clouds
54	Comp			↑		
55	Zp 15077	23 57 35	32 27 36	60	6 <sup>m</sup>	Thru clouds
56	Comp			↑		
57	Zoo 4251	23 57 57	26 01 35	60	6 <sup>m</sup>	Clouds sort of clearing off. Sure why not
58	Comp			↑		its 3:00am
59	AO010555	23 52 54	30 03 30	60	20 <sup>m</sup>	Clouds coming back 3:30
60	Comp			↑		
61-70	Bias					
71-80	Flat				6 <sup>s</sup>	

60 inch Telescope Log  
 Observer: J. Peters  
 PI: et. o.l.

Spectrograph: FAST  
 Grating: 300  
 Date: 7/10/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	Dias					
11-20	FLAT				6 <sup>s</sup>	
21-25	SKY				3 <sup>s</sup>	Clouds
26	Comp P			↑		
27-30	DARK				15 <sup>m</sup>	Clouds N+S+E+W
31	MRK 279	13 51 53	69 39 13	6	2 <sup>m</sup>	ITs a HOPE !!
32	Comp P			↑		
33	N5548	14 15 43	25 22 01	6	3 <sup>m</sup>	
34	Comp P					Seeing ~ 3"
35	MRK 501	16 53 52	39 45 36	6	5 <sup>m</sup>	
36	Comp P			↑		
37	PG 1708 p602	17 08 35	16 13 52	56	5 <sup>m</sup>	
38	Comp P					
39	ZO12909	14 14 32	01 43 54	60	10 <sup>m</sup>	Clouds moving IN from The East.
40	Comp P					
41	N001552	14 15 07	04 51 59	60	20 <sup>m</sup>	Hope This is enough
42	Comp P			↑		
43	Z000682 W	14 17 05	36 34 30	60	6 <sup>m</sup>	West Obj - Thin cloud
44	Comp P			↓		
45	Z000683 E			60	10 <sup>m</sup>	
46	Comp P			↑		
47	Z013136	14 18 39	12 59 07	60	10 <sup>m</sup>	
48	Comp P					
49	N003231 E	14 18 37	21 50 54	60	20 <sup>m</sup>	East Obj
50	Comp P			↑		
51	N002231 W			60	10 <sup>m</sup>	West Obj
52	Comp P					
53	Z008158 W	14 19 03	07 01 54	60	5 <sup>m</sup>	West obj
54	Comp P			↑		
55	Z008159	14 19 15	07 01 16	60	6 <sup>m</sup>	

## 60 inch Telescope Log

Observer: J. PetersPI: et alSpectrograph: FASTGrating: 300Page: 5572Date: 7/10/97

Number	Object	R. A.	Dec.	L/R	Exp	Comments
56	Comp P			↑	1	Thin clouds around
57	160318P165711	16 03 18	16 57 11	25	20 <sup>m</sup>	
58	Comp P			↑		
59	160009P190826	16 00 09	19 08 26	25	15 <sup>m</sup>	
60	Comp P			↑		
61	160204P161213	16 02 04	16 12 14	25	20 <sup>m</sup>	
62	Comp P			↑		
63	160314P201340	16 03 14	20 13 40	25	20 <sup>m</sup>	
64	Comp P			↑		
65	160409P202618	16 04 09	20 26 18	25	15 <sup>m</sup>	
66	Comp P			↑		
67	CICyg	19 50 12	35 41 04	12	2	
68	CICyg	↓	↓	12	20	
69	CICyg	↓	↓	12	90	
70	Comp P			↑		
71	HD192781	20 10 46	40 07 01	56	5 <sup>s</sup>	
72	Comp P			↑		
73	MRA509	20 41 26	-10 54 18	6	2 <sup>m</sup>	
74	Comp P			↑		Looks Clear Now
75	N1469	23 07 15	08 52 25	6	2 <sup>m</sup>	
76	Comp P			↑		
77	2021554	23 52 48	21 12 34	60	5 <sup>m</sup>	
78	Comp P			↑		
79	2006774	23 53 17	25 13 39	60	10 <sup>m</sup>	
80	Comp P			↑		
81	2012475	23 58 37	04 11 53	60	20 <sup>m</sup>	
82	Comp P			↑		
83	2012686	23 58 40	34 23 50	60	10 <sup>m</sup>	
84	Comp P			↑		
85	A00024 W	23 58 56	31 09 48	60	5 <sup>m</sup>	West Obj



60 inch Telescope Log

Observer: J. Peters

PI: e.l.a.l

Spectrograph: Fast

Grating: 300

Date: 7/10/97

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
86	Comp			↑		
87	A000124	23 58 56	31 09 48	60	5 <sup>m</sup>	
88	Comp			↑		
89	N001893	00 14 12	12 01 00	60	20 <sup>m</sup>	Really Faint
90	Comp			↑		
91	Z005800	00 18 52	22 16 45	60	5 <sup>m</sup>	
92	Comp			↑		
93	A000792	00 22 06	03 00 38	60	6 <sup>m</sup>	
94	Comp			↑		
95-104	Bios					Had to stop and add N2 ITS, BEEN
105-114	Flat				63	25 hours

*FAX to Susan Takatz pg 1 of 5*

BEAUTIFUL DATA ALL NIGHT LONG.  
EVERYTHING OK

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>5574</u>	
Observer: <u>P. Berland</u>			Grating: <u>300L</u>			
PT: <u>All</u>			Date: <u>7/11/97</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	
11-20	FLAT			0	6s	
21-30	BIAS			0	0s	<i>bimby 2</i>
31-40	FLAT			0	12s	<i>bimby 2</i>
41-45	sky	zenith		57	2s	
46	COMP			↑		
47-49	HD139641	15:57	+40:21	57	1s	<i>cirrus; scattered clouds</i>
50				↑		
51-53	HD141527	15:48	+28:09	57	2s	
54				↑		
55-57	HD143761	16:01	+33:18	57	2s	
58	COMP			↑		
59-60	F-amp 66	12:51	+25:20	56	45s	
61	COMP			↑		
62	N4151	12:08	+39:41	6	35s	
63	COMP			↑		
64	N4288	12:16	+47:34	6	2m	
65	COMP			↑		
66	N4081	12:00	+44:48	6	2m	
67	COMP			↑		
68	H244	13:21	+76:06	56	2m	
69	COMP			↑		
70	N5548	14:15	+25:22	6	3m	
71	COMP			↑		
72	MRK09	13:51	+69:37	6	3m	
73	COMP			↑		
74	12537p7106N	12:53	+71:06	1	3m	
75	12537p7106S	12:53	+71:06	1	6m	
76	COMP			↑		

60 inch Telescope Log

Observer: PB  
 PI: Huchra's Griller

Spectrograph: FAST

Grating: 40L

Date: 7/11/97

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Number	Object	R. A.	Dec.	I/R	Exp	Comments
77	12551 p 718N	12:55	+79:18	1	5m	clouds...
78	12551 p 718S	12:55	+79:18	1	8m	
79	WMP			↑		
80	12564 p 7142	12:56	+71:42	1	6m	
81	WMP			↑		
82	AC00277E	14:19	+76:17	60	4m	em
83	AC00277W	14:15	+76:17	60	7m	em
84	WMP			↑		
85	2013062N	14:19	+06:06	60	7m	em
86	2013062S	14:19	+06:06	60	7m	
87	WMP			↑		
88	2005136W	14:24	+01:10	60	6m	
89	WMP			↑		
90	2005136E	14:24	+01:10	60	9m	bin by 2 sup * to W
91	WMP			↑		em p 2 2015 <del>↑</del> quad em!
92	2004414N	14:27	+04:49	60	5m	em
93	2004414S	14:27	+04:49	60	6m	wk em
94	WMP			↑		
95	2012918E	14:30	+0:14	60	6m	AGN!
96	2012918W	14:30	+0:14	60	6m	
97	WMP			↑		
98	2008165	14:31	+05:18	60	10m	
99	WMP			↑		
100	201153E	14:33	+03:44	60	5m	
101	201153W	14:33	+03:44	60	5m	
102	WMP			↑		
103	2006000	14:34	+03:46	60	4m	* to E
104	WMP			↑		
105	AC00256	14:35	+00:20	60	5m	em+
106	WMP			↑		

60 inch Telescope Log  
 Observer: PB  
 PI: Geller & Muchra

Spectrograph: FAST  
 Grating: 3WL  
 Date: 7/11/97

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
107	Z013242	14:36	+11:24	60	5m	wk em
108	COMP			↑		
109	A00706 N	14:38	+10:10	60	6m	
110	A00706 S	14:38	+10:10	60	6m	
111	COMP			↑		
112	Z008771	14:42	+10:13	60	4m	
113	COMP			↑		
114	Z013074	14:40	+10:25	60	5m	
115	COMP			↑		
116	Z007073W	14:40	+10:22	60	3m	
117	Z007073E	14:40	+10:22	60	4m	
118	COMP			↑		
119	Z008422	14:41	+18:33	60	5m	
120	COMP			↑		
121	N000895 S	14:36	+39:56	60	5m	
122	N000895 N	14:36	+39:56	60	12m	em
123	COMP			↑		
124	Z004627	14:38	+28:30	60	6m	
125	COMP			↑		
126	Z010717	14:38	+46:41	60	5m	
127	COMP			↑		
128	Z004073	14:39	+42:44	60	10m	→ * to E extended gal; nice em
129	COMP			↑		
130	160255 p 185057	16:02	+18:50	25	15m	bn by 2; * to E
131	COMP			↑		wk em piz 22471
132	160011 p 155960	16:00	+15:59	25	15m	
133	COMP			↑		
134	160300 p 171410	16:03	+17:44	25	15m	em
135	COMP			↑		

60 inch Telescope Log

Observer: PBS

PI: Huchra

Spectrograph: FAST

Grating: 30R

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Date: 7/11/97

Number	Object	R.A.	Dec.	L/R	Exp	Comments
136	3C390.3	18:45	+79:43	6	12m	
137	WMP			↑		
138	17005 p6020	17:10	+60:20	1	10m	em
139	WMP			↑		
140	17018 p6114	17:01	+61:14	1	6m	em
141	WMP			↑		
142	17026 p6132SE	17:02	+61:32	1	4m	em Balmer abs
143	17026 p6132NW	17:02	+61:32	1	6m	em
144	WMP			↑		
145	17109 p4750W	17:10	+47:50	1	5m	* to W ; em
146	17109 p4750E	17:10	+47:50	1	7m	em
147	WMP			↑		
148	17383 p4320	17:38	+43:20	1	4m	
149	WMP			↑		
150	17430 p5034E	17:43	+50:34	1	7m	em
151	17430 p5034W	17:43	+50:34	1	5m	wk
152	WMP			↑		
153	17435 p5551	17:43	+55:51	1	3m	comp to W
154	WMP			↑		
155	17446 p2903	17:44	+29:03	1	3m	band lines em
156	WMP			↑		
157	17457 p1741	17:45	+17:41	1	6m	wk em; *'s on slit
158	WMP			↑		pix 20518
159	17466 p3405	17:46	+34:05	1	5m	em
160	WMP			↑		
161	17458 p5810	17:45	+58:40	1	5m	
162	WMP			↑		
163	17479 p5826	17:47	+58:26	1	5m	bm by 2; * to W
164	WMP			↑		
165	17470 p5215	17:47	+52:15	1	8m	em

60 inch Telescope Log

Observer: PB  
 PI: Gretchen Wilkes

Spectrograph: FAST

Grating: 3WE

Date: 7/11/97

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
166	COMP			↑		
167	N0033X	00:08	+35:33	60	10m	<u>em!</u>
168	COMP			↑		
169	Z010689S	00:16	+03:51	60	4m	
170	Z010689N	00:16	+03:51	60	5m	
171	COMP			↑		
172	Z00491S	00:17	+06:11	60	6m	* + E emt
173	COMP			↑		
174	Z006666	00:37	+08:43	60	5m	emt
175	COMP			↑		
176	Z003660E	00:45	+01:04	60	5m	
177	Z003660W	00:45	+01:04	60	6m	
178	COMP			↑		
179	N7469	23:03	+08:52	6	2m	
180	COMP			↑		
181	Z25m280	00:41	+14:05	56	4m	
182	COMP			↑		
183	MRK335	00:03	+19:55	6	3m	
184	COMP			↑		
185-186	BDP 284211	21:48	+28:37	56	1m	
187	COMP			↑		
188-190	CIC 88	19:50	+35:11	12	10, 20, 2s	
191	COMP			↑		
192-194	HDP 92281	20:10	+40:07	56	5s	
195	COMP			↑		
196-198	HDP 29196	20:23	+40:52	57	6s	
199	COMP			↑		
200-202	HDP 9592	20:30	+40:18	57	6s	
203	COMP			↑		
204-213	BIAS			0	0s	
214-223	FLAT			0	6s	
224-233	BIAS			0	0s	bmbz
234-243	FLAT			0	12s	bmbz

*FAX to Susan Takai pg 1 of 5*

60 inch Telescope Log

Observer: P. Berlind

PI: Huchra

Spectrograph: FAST

Grating: 3002

Date: 7/12/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	
11-20	FLAT			0	6s	
21-30	BIAS			0	0s	bin by 2
31-40	FLAT			0	12s	bin by 2
41-45	sky			57	2s	
46	COMP			↑		clear skies!
47-49	HD125162	14:16	+46:05	57	0.5s	bright moon
50	COMP			↑		
51-53	HD123657	14:07	+43:51	57	0.5s	
54	COMP			↑		
55-57	HD124752	14:42	+67:35	57	6s	
58	COMP			↑		
59-61	HD147395	16:16	+67:14	57	6s	
62-64	HD147395N	16:16	+67:14	57	15s	
65	COMP			↑		
66-67	Ferrel6	12:30	+85:04	56	45s	
68	COMP			↑		
69	N4151	12:08	+39:41	6	35s	
70	COMP			↑		
71	N4258	12:16	+47:34	6	25m	
72	COMP			↑		
73	H214	13:21	+76:23	56	25m	
74	COMP			↑		
75	N5518	14:15	+85:22	6	3m	
76	COMP			↑		
77	MRK279	13:51	+69:33	6	3m	
78	COMP			↑		
79	13002p8003	13:00	+80:23	1	4m	wk on
80	COMP			↑		
81	13000p8019	13:40	+80:19	1	4m	

60 inch Telescope Log

Observer: PB

PI: Huchra/Geller

Spectrograph: F15T

Grating: 300L

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Date: 7/12/97

Number	Object	R.A.	Dec.	L/R	Exp	Comments
82	13010p8017	13:01	+80:17	1	4m	em
83	COMP			↑		
84	12570p8123	12:57	+84:23	1	7m	em
85	COMP			↑		
86	13031p7838	13:03	+78:38	1	6m	em
87	COMP			↑		
88	13069p7350	13:06	+73:50	1	4m	
89	COMP			↑		
90	N002345	14:49	+49:14	60	5m	em +
91	COMP			↑		
92	Z000969	14:22	+50:30	60	2m	
93	COMP			↑		
94	Z011838W	14:24	+35:16	60	5m	
95	Z011858S	14:24	+35:16	60	5m	
96	COMP			↑		
97	Z011838E	14:24	+35:16	60	10m	em + cosmic
98	COMP			↑		
99	0000102	14:20	+77:47	60	1hr	em!
100	COMP			↑		
101	A000576N	14:28	+16:11	60	6m	
102	A000576S	14:28	+16:11	60	7m	
103	COMP			↑		
104	Z008120N	14:28	+15:24	60	5m	
105	Z008420S	14:28	+15:24	60	5m	em
106	COMP			↑		
107	Z014154E	14:34	+48:39	60	5m	AGN!!
108	Z014154W	14:34	+48:39	60	8m	em
109	COMP			↑		
110	Z009713E	14:40	+09:27	60	5m	Ha!!
111	Z009713W	14:40	+09:27	60	7m	bright sky !!!



60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>5581</u>	
Observer: <u>PB</u>			Grating: <u>302</u>			
Pl: <u>Geller</u>			Date: <u>7/12/97</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
112	COMP			r		H <sub>2</sub>
113	B000K6	14:24	+08:16	60	6m	em; wk; moon too bright p12 2025
114	COMP			r		
115	Z009715ED	14:42	+08:39	60	5m	E+W comps; em both
116	COMP			r		W = row 12
117	A00559N	14:42	+08:45	60	6m	
118	A00559S	14:42	+08:45	60	5m	
119	COMP			r		
120	Z002616N	14:44	+12:07	60	4m	wk em
121	Z002616S	14:44	+12:07	60	6m	
122	COMP			r		
123	Z01130Z	14:46	+08:29	60	7m	em!
124	COMP			r		
125	A000884	14:46	+10:31	60	7m	em
126	COMP			r		
127	Z003894E	14:47	+11:35	60	4m	
128	Z003894S	14:47	+11:35	60	5m	* to W
129	COMP			r		
130	Z003894W	14:47	+11:35	60	6m	
131	Z003894N	14:47	+11:35	60	5m	
132	COMP			r		
133	Z008292E	14:47	+13:39	60	5m	
134	Z008293M	14:47	+13:39	60	5m	
135	Z008293S	14:47	+13:39	60	5m	
136	COMP			r		
137	17215p041	17:21	+08:41	1	14m	LSB wk em
138	COMP			r		
						fine for Shapiro Spectrophotometry

60 inch Telescope Log

Observer: PB  
 PI: Shapiro et al

Spectrograph: FAST  
 Grating: 300R, 5" slit  
 Date: 7/12/97

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
139-141	HD192281	20:10	+40:07	98	7s	PA=180°; sec z=1.01
142	COMP			↑		tilt=60; filter=126-760; focus=840
142-144	Cyg OB2#9	20:31	+40:01	98	2m	PA=36; sec z=1.02
145-146	Cyg OB2#9	"	"	98	1m	
147	COMP			↑		
148-149	Wolf 1516	20:32	+24:53	98	3m	PA=180°; sec z=1.01
150	COMP			↑		
151-160	FLATR	- filter =	6:6495	filter =	827	focus = 840
16-162	Wolf 1346R	20:32	+24:53	98	6m	PA=20° sec z=1.01
163	COMP			↑	1s	
164-166	HD19251R	20:10	+40:07	98	7s	PA=120° sec z=1.02
167	COMP			↑		
168-169	BD p 28421R	21:48	+28:57	98	3m	PA=105° sec z=1.02
170	COMP			↑		
171-173	HD21706R	22:51	+62:57	98	7s	PA=90° sec z=1.23
174	COMP			↑		→ needed to avoid companion star.
175-176	FergelloR	23:17	-05:26	98	6m	PA=140° sec z=1.5
177	COMP			↑		
178-179	Fergello	23:17	-05:26	98	3m	PA=150° sec z=1.4 Blue
180	COMP			↑		126-760; focus=840; tilt=60
181-183	HD21706b	22:51	+62:57	98	7s	PA=90°; sec z=1.20
184	COMP			↑		
185-186	BD p 28421	21:48	+28:57	98	1m	PA=90°; sec z=1.00
187	COMP			↑		
188	PG 1706 p 602	17:08	+60:13	98	10m	PA=90°; sec z=1.65
189	COMP			↑		
190-192	HD192281	20:10	+40:07	98	7s	PA=100°; sec z=1.1
193	COMP			↑		
194-199	HR 8705	22:53	+16:50	98	1s, 2s	PA=150°; sec z=1.06
200	COMP			↑		

Blue

Red

Blue

60 inch Telescope Log

Observer: PB

PI: Shapoval

Spectrograph: FAST

Grating: 300, 5" slit

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Date: 7/12/97

Number	Object	R.A.	Dec.	L/R	Exp	Comments
201-202	Wol 1346	20:32	+24:53	98	3m	PA=62°; sec z=1.07
203	COMP			↑		
204-209	HR8703	22:53	+16:50	98	1s, 10s	PA=160°; sec z=1.05
210	COMP			↑		try to get far blue signal!
211-212	Feyjello	23:17	-05:26	98	3m	PA=168°; sec z=1.3
213	COMP			↑		
214-215	FeyjellOR	23:17	-05:26	98	6m	PA=163°; sec z=1.3
216	COMP			↑		filter=6.495; focus=860; filter
217-219	HR8703R	22:53	+16:50	98	1s	PA=172°; sec z=1.03
220	COMP			↑		
221-223	HD 17066R	22:54	+62:27	98	7s	PA=90° (toward); sec z=1.17
224	COMP			↑		
225-226	Wol 1346R	20:32	+24:53	98	6m	PA=67°; sec z=1.16
227	COMP			↑		
228-229	HR8703R	22:53	+16:50	98	1s	PA=11°; sec z=1.01
231	COMP			↑		
232-241	FLATR			98	5s	
242-244	HR8703	22:53	+16:50	98	1s	PA=15°; sec z=1.04
245	COMP			↑		
246-247	Feyjello	23:17	-05:26	98	3m	PA=180°; sec z=1.25
248	COMP			↑		
249-250	BDp 28421	21:48	+28:57	98	1m	PA=70°; sec z=1.06
251	COMP			↑		
252-254	HD 92251	20:10	+40:07	98	7s	PA=87°; sec z=1.30
255	COMP			↑		
256-258	HD 21066	22:54	+62:27	98	7s	PA=166°; sec z=1.18
259	COMP			↑		
260-279	FLATB			98	5s	clear @ dawn!
280-289	FLATAS			0	0s	
290-299	FLAT	normal	setup		6s	filter=607; no filter; focus=960
300	COMP					

Red

Blue

*FAX to Susan Tokarz - pg 1 of 5*

60 inch Telescope log

Observer: P. Berlind

PI: Kirshner

Spectrograph: FAST

Grating: 300R

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Date: 7/13/97

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BTAS			0	0s	
11-20	FLAT			0	6s	
21-30	BTAS			0	0s	bmbg 2
31-40	FLAT			0	12s	bmbg 2
41-45	SKY	zenith		57	2s	
46	COMP			↑	7s	clouds all day
47-48	Foxyz66	12:38	+25:20	56	45s	scattered cirrus
49	COMP			↑		bright moon
50-51	N4151	12:06	+39:41	6	35s, 70s	
52	COMP			↑		
53	N4258	12:16	+47:34	6	2m	
54	COMP			↑		
55	N4051	12:00	+44:48	6	2m	
56	COMP			↑		
57	H244	13:21	+76:23	56	3m	
58	COMP			↑		
59	N5518	14:15	+25:22	6	3m	
60	COMP			↑		
61	MRX27A	13:51	+69:53	6	3m	
62	COMP			↑		
63	13210 p 8038	13:21	+80:38	1	4m	
64	COMP			↑		
65	SN1997cx	10:05	+80:17	2	10m	bmbg 2
66	COMP			↑		exceeded telescope limits
67	13080 p 8002	13:08	+80:02	1	4m	em +
68	COMP			↑		
69	13076 p 7912	13:07	+79:12	1	12m	<del>em</del> em! LSB
70	COMP			↑		flk = pix 2006
71	13188 p 7110	13:18	+71:10	1	6m	em
72	COMP			↑		

60 inch Telescope Log

Observer: PB

PI: Huchra/Geller

Spectrograph: FAB

Grating: 300R

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Date: 7/13/97

Number	Object	R.A.	Dec	L/R	Exp	Comments
73	B000088W	14:47	+16:47	60	6m	ok bright sky
74	B000088E	14:47	+16:47	60	7m	em! clouds
75	COMP			↑		
76	O000057E	14:50	+16:44	60	7m	em!
77	O000057W	14:50	+16:44	60	7m	em! finishes down 2 notebook!
78	COMP			↑		
79	13110 p 7128	13:11	+71:28	1	10m	em
80	COMP			↑		
81	13300 p 8045	13:30	+80:45	1	8m	good em pre 2116
82	COMP			↑		
83	13300 p 7256	13:30	+72:56	1	8m	em
84	COMP			↑		
85	17306 p 7251	13:30	+77:51	1	8m	em
86	COMP			↑		
87	13308 p 7806	13:30	+78:06	1	4m	em finishes JPH notebook
88	COMP			↑		
89	17160 p 8014	17:16	+80:14	1	6m	em
90	COMP			↑		
91/93	17179 p 4901	17:17	+49:01	1	4m	wow - AGN ala 3C390.3!
92	COMP			↑		
94	17192 p 5028	17:19	+50:28	1	5m	em
95	COMP			↑		
96	17195 p 5157	17:19	+51:57	1	4m	
97	COMP			↑		
98	17200 p 4917	17:20	+49:17	1	5m	em
99	COMP			↑		
100	17123 p 2307E	17:12	+23:07	1	4m	em
101	17123 p 2307N	17:12	+23:07	1	5m	
102	17123 p 2307W	17:12	+23:07	1	7m	em <u>  </u>
103	COMP			↑		

60 inch Telescope Log  
 Observer: PB  
 PI: \_\_\_\_\_  
 Spectrograph: FAST  
 Grating: 300R  
 Date: 7/13/97  
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Number	Object	R.A.	Dec.	L/R	Exp	Comments
104,105	17248p1627	17:24	+16:27		5m	bin by 2; bright to NW; em
106	COMP			↑		<del>bin</del> - beware scattered starlight
107	17341p1910	17:34	+19:40		7m	good em
108	COMP			↑		
109	17362p1148	17:36	+11:48		15m	LSB w/ em!
110	COMP			↑		<del>w/ comp</del>
111	17220p7206	17:22	+77:06		6m	em
112	COMP			↑		
113	17236p5656	17:23	+56:56		5m	full-fledged ring around gal
114	COMP			↑		(•)
115	17278p5713	17:27	+57:13		4m	em
116	COMP			↑		
117	17298p5623	17:29	+56:23		4m	
118	COMP			↑		
119	17305p5146	17:30	+56:46		4m	
120	COMP			↑		
121	17316p3646A	17:31	+36:46		4m	
122	17316p3646B	17:31	+36:46		6m	half of A to W
123	17316p3646D	17:31	+36:46		6m	
124	COMP			↑		
125	17316p3646E	17:31	+36:46		6m	
126	17316p3646F	17:31	+36:46		10m	em
127	COMP			↑		
128	17316p3646C	17:31	+36:46		9m	bin by 2 * to W
129	COMP			↑		also middle comp = galaxy (:) M *
130	17337p5047	17:33	+50:47		5m	em
131	COMP			↑		
132	17360p5415NW	17:36	+54:15		6m	em
133	17360p5415SE	17:36	+54:15		7m	em
134	COMP			↑		

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60 inch Telescope Log

Observer: PB

PI: Huchra, Krishnao

Spectrograph: FAST

Grating: 302

Date: 7/13/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
135	17360p5502	17:36	+55:02		5m	em
136	COMP			↑		
137	17480p8309	17:48	+83:09		4m	em
138	COMP			↑		
139	17523p7448	17:52	+74:48		3m	em
140	COMP			↑		
141	17486p5531	17:48	+55:31		5m	em
142	COMP			↑		
143	17449p5719	17:49	+57:19		5m	
144	COMP			↑		
145	17510p5228	17:51	+52:28		4m	
146	COMP			↑		
147	17543p2622	17:54	+26:22		5m	wk
148	COMP			↑		
149	17561p6257	17:56	+62:57		5m	bright star to W, scattered light
150	COMP			↑		
151	17567p5427W	17:56	+54:27		7m	em
152	17567p5427E	17:56	+54:27		8m	em
153	COMP			↑		
154	17586p5223	17:58	+52:23		10m	em large cosmic ray blob on sky
155	COMP			↑		
156	18190p3807E	18:19	+38:07		6m	EW comps W=em
157	18190p3807W	18:19	+38:07		4m	
158	COMP			↑		
159	18404p7332	18:40	+73:32		5m	large LSB gal
160	COMP			↑	bad	good eml HE regions
161	19297p3546	19:29	+35:46		5m	em +; 2 comps
162	COMP			↑		2 CMBs sulphur 2 not black
163,165	SN1997cw	00:25	+12:53	2	15m	bm by 2
164,166	COMP			↑		

weak comp →

161 - second object (to west) is a star super posed on galaxy

60 inch Telescope Log

Observer: PB  
 PI: Wilkes

Spectrograph: FAST  
 Grating: 300L  
 Date: 7/13/97

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
167	MRK509	20:41	+05:54	6	3m	
168	COMP			↑		
169	N7469	23:03	+08:52	6	3m	
170	COMP			↑		
171	Ferje 110	23:17	-05:26	56	2m	
172	COMP			↑		
173	225m280	00:41	+41:05	59	4m	
174	COMP			↑		
175	MRK355	00:03	+19:55	6	4m	
176	COMP			↑		
177-178	BDp 284211	21:48	+29:37	56	1m	
179	COMP			↑		
180-182	CICug	19:50	+35:41	12	10s, 20s, 25s	
183	COMP			↑		
184-186	HD 197281	20:10	+40:57	56	5s	
187	COMP			↑		
188-197	BTAS			0	0s	a few clouds around
198-207	FLAT			0	6s	a dawn
208-217	BTAS			0	0s	my last FAST night 4/11 Sept!
218-227	FLAT			0	12s	



60 inch Telescope Log

Observer: J. MADER

PI: WILKES, MUDRA,

Spectrograph: FAST

Grating: 300

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Date: 7/30/97

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS	---	---	---	---	BIN X 4
11-20	FLAT	---	---	---	60s	"
21-30	BIAS	---	---	---	---	BIN X 2
31-40	FLAT	---	---	---	12s	"
41-43	DARK	---	---	---	900s	BIN X 4
44	MRK 501	16:53:48	39:45:38	6	300	correct obj??
45	COMP	13:51:		↑		
46	MRK 279	16:46:31	69:22:42	6	120	wrong object
47	COMP			↑		
48	Feige 98	14:38:14	27:29:40	56	120	
49	COMP			↑		
50	16282p0608	16:28:12	06:08:00	1	1200	FAINT (?) ONE
51	COMP			↑		
52	16463p6538	16:46:18	65:38:00	1	480	
53	COMP			↑		
54	16407p6552	16:40:42	65:52:00	1	600	
55	COMP			↑		
56	16535p7031	16:53:30	70:31:00	1	480	
57	COMP			↑		
58	17247p6004	17:24:42	60:04:00	43	480	
59	COMP			↑		
60	17334p7354	17:33:24	73:54:00	43	900	
61	COMP			↑		
62	18480p7041	18:48:00	70:41:00	43	900	
63	COMP			↑		
64	MRK 509	20:44:04	-0:44:11	6	120	
65	COMP			↑		
66	3C390.3	18:42:24	79:46:44	6	360	
67	COMP			↑		

60 inch Telescope Log

Observer: J. MADER

PI: MIKHA, WILKS, GELTZ

Spectrograph: FAST

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Number	Object	R.A.	Dec.	I/R	Exp	Comments
68	HD 192281	20:12:32	40:15:53	50	5s	
69	COMP			↑		
670	I 1261E	17:24:00	71:18:00	1	600	
71	COMP			↑		
72	I 1261W	17:24:00	71:18:00	1	1200	
73	COMP			↑		
74	N 7469	23:03:10	08:51:48	6	120	BRIGHT ONE
75	COMP			↑		
76	18197p6340	18:19:42	63:40:00	1	900	
77	COMP			↑		
78	MRK 335	00:06:19	20:11:43	6	180	
79	COMP			↑		
80	18248p6028	18:24:48	60:28:00	1	600	
81	COMP			↑		
82	Z009238A	01:13:20	32:49:32	60	300	STRONG EMISSION H, N, O, S
83	COMP			↑		
84	Z009238B	01:13:20	32:49:52	60	300	* wrong object???
85	COMP			↑		
86	N001475	01:20:33	33:10:20	60	300	
87	COMP			↑		
88	Z009159	01:16:46	12:11:58	60	420	COMPUTER SCREEN PROBE, BUT
89	COMP			↑		STILL SEEMS TO BE INTEGRATION
90	Z007849	01:16:46	12:11:06	60	720	COMP TAKEN ~10m LATER ↑
91	COMP			↑		SPECTRA LINES OK ↓
92	Z006589A	00:53:43	-01:31:33	60	460	H+K @ ~1100 Å
93	COMP			↑		
94	Z006589B	00:53:43	-01:31:33	60	480	
95	COMP			↑		
96	Z010618	00:53:49	-01:28:49	60	300	
97	COMP			↑		

60 inch Telescope Log

Observer: J. MADER

PT: GELLER, HUCHRA

Spectrograph: FAST

Grating: 300

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
98	N003289	01:13:21	19:45:12	60	900s	
99	COMP			↑		
100	N7164	21:53:54	01:07:00	<del>498</del>	600	
101	COMP			↑		
102	I1399	21:43:36	04:10:00	<del>498</del>	600	NOTHING TO GUIDE WITH, HOPE ITS STEADY
103	COMP			↑		
104	I1360	21:08:24	04:52:00	<del>498</del>	900	LOW SURFACE BRIGHTNESS
105	COMP			↑		
106	21550 p 0023	21:35:00	00:23:00	<del>498</del>	300	"BRIGHT" STAR TO EAST IN SLIT (VERY)
107	COMP			↑		
108-112	sky					
113	COMP			↑		
114-123	BIAS	-	-	-	-	BIN X 4
124-133	FLAT	-	-	-	6	"