

## 60 inch Telescope Log

 Observer: P. Berlind  
 PI: J. Huchra/Geller/Stuffer

 Spectrograph: FAST  
 Grating: 300L, 3" slit  
 Date: 11/1/94
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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS				0s	We're on generator
11-20	FLAT				10s	power as of today
21	SZ1.042052	22:50:07.49	+11:41:57.3	3	10m	(portable outside dom.)
22	COMP			↑		
23	SZ1.042515	22:50:08.6	+11:43:23.7	3	10m	Thin clouds all over
24	COMP			↑		
25	SZ1.0410744	22:51:28.23	+11:57:52.8	3	5m	
26	COMP			↑		
27	SZ1.040834	22:44:27.5	+11:37:57.1	3	10m	H $\alpha$
28	COMP			↑		
29,31	SZ1.040878	22:50:18.13	+11:57:38.4	3	5m, 10m	x 2 clouds
30,32	COMP			↑		
33	SZ1.041564	22:54:08.03	+11:40:20.5	3	10m	garbage; red
34	COMP			↑	12s	stopped by clouds
35	COMP	test		-		
36	SSm63A	23:12:28.24	+17:09:51.4	19	5m	600L; 2" slit ↓ H $\alpha$
37	COMP			↑	10s	
38	SSm82A	23:03:41.89	+15:33:04.5	19	3m	H $\alpha$ absorption
39	COMP			↑		
40	SSm90	23:11:20.9	+14:50:53.6	19	5m	
41	COMP			↑		
42	SSm91A	23:11:21.5	+17:38:57.1	19	5m	H $\alpha$ absorption
43	COMP			↑		
44	SSm59B	23:11:19.6	+17:39:40.2	19	10m	H $\alpha$ abs
45	COMP			↑		
46	SSm85	23:14:18.13	+15:10:20.2	19	4m	H $\alpha$ abs
47	COMP			↑		clouds thinning out a little
48	SZ1.041564	22:54:08.03	+11:40:20.5	3	10m	300L; 3" slit ↓
49	COMP			↑		Also observed as # 33
50	SZ1.047006	23:07:34.07	+11:51:35.1	3	10m	

60 inch Telescope Log

Observer: P. Berland  
 PI: \_\_\_\_\_

Spectrograph: FAST  
 Grating: 300L  
 Date: 11/1/94

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
S1	COMP			↑		Heavy cloud
S2	S21.046984	22:49:21.67	+11:55:56.1	3	10m	clouded out - needs more 600 Lmc; 2" slit ↓
S3	SSm16	23:08:43.16	+21:37:41.6	19	5m	New FAST FOC = 950
S4	COMP			↑	10s	60-100 FWHM = 4.04 3", 300L
S5	SSm2SA	23:10:36	+20:56:-	19	5m	H <sub>α</sub> abs
S6	COMP			↑		
S7	SSm15A	23:10:59.6	+21:42:41.2	19	10m	
S8	COMP			↑		stopped by clouds
S9-74	FLAT	600L;	2" slit	19	20s	
75	SSm7	23:21:53.17	+23:17:06.8	19	5m	hole to west H <sub>α</sub> em
76	COMP			↑		
77	SSm2	23:13:01.97	+23:45:33.6	19	3m	
78	COMP			↑		
79	468.013019	01:49:43.44	+10:37:56.7	3	7m	3" slit; 300 Lmc ↓ hole needs more
80	COMP			↑	15s	
81	FPTau	04:11:43.5	+26:38:58	30	4m	Kenyon PMS
82	COMP			↑		
83	LKCa3	04:11:12.8	+27:45:05	30	5m	
84	COMP			↑		
85	LKCa4	04:13:22.4	+28:00:13	30	9m	stopped by clouds
86	COMP			↑		
87-96	BIAS				0s	
97-106	FLAT				10s	300L; 3" slit
107-116	DARK				15m	

4226

3.7 30 3.2

1.2



## 60 inch Telescope Log

Observer: J. PetersPI: J. Huchra et alSpectrograph: FastGrating: 300Page: 3277Date: 11/4/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-4	DARK	<del>B</del> 3006 $\mu$	3" SLIT		15 <sup>m</sup>	File 1 DarkCT UP?
5-19	Bias					File 2 Dark down?
20-34	FLAT				10 <sup>s</sup>	} Chain Drive on } Name gets stuck } won't let shutter } open,
35	Comp			↓	15 <sup>s</sup>	
36	BDP287211	21 48 57	28 37 48	0	1 <sup>m</sup>	
37	Comp			↓	15 <sup>s</sup>	} Mouse: NOT WORKING } ON LKH1000 (Shi--)
38	N7331	22 34 46	34 09 43	0	5 <sup>m</sup>	
39	Comp			↓	15 <sup>s</sup>	} Turned LKH 1000 off } for $\approx$ 15min then } Back on seems to } work ???!
40	MK509	20 41 26	-10 54 18	6	2 <sup>m</sup>	
41	Comp			↓	15 <sup>s</sup>	
42	EG149	21 44 57	-07 58 03	0	10 <sup>m</sup>	} Thin clouds around
43	Comp			↓	15 <sup>s</sup>	
44	521.042750	22 50 20	11 44 02	3	15 <sup>m</sup>	} Delay Thin Cloud.
45	Comp			↓	15 <sup>s</sup>	
46	521.043216	22 51 06	11 45 20	3	15 <sup>m</sup>	
47	Comp			↓	15 <sup>s</sup>	
48	521.044373	22 51 04	11 48 44	3	15 <sup>m</sup>	
49	Comp			↓	15 <sup>s</sup>	
50	521.044378	22 52 18	11 48 46	3	10 <sup>m</sup>	
51	Comp			↓	15 <sup>s</sup>	
52	521.045852	23 00 15	11 52 28	3	15 <sup>m</sup>	
53	Comp			↓	15 <sup>s</sup>	
54	521.046072	22 49 13	11 53 52	3	15 <sup>m</sup>	Thin cloud
55	521.046072	↓	↓	3	15 <sup>m</sup>	" "
56	Comp			↓	15 <sup>s</sup>	
57	521.046122	22 57 34	11 53 44	3	10 <sup>m</sup>	
58	Comp			↓	15 <sup>s</sup>	
59	521.046341	22 52 43	11 54 38	3	5 <sup>m</sup>	
60	Comp			↓	15 <sup>s</sup>	
61	521.046508	22 44 10	11 54 41	3	7 <sup>m</sup>	

## 60 inch Telescope Log

Observer: J. PetersPI: J. HuchraSpectrograph: FASTGrating: 300Page: 3278Date: 11/1/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
62	Comp P			↓	15 <sup>s</sup>	
63	521.046524	22 45 20	11 54 55	3	7 <sup>m</sup>	
64	Comp P			↓	15 <sup>s</sup>	
65	521.046706	23 06 38	11 54 03	3	10 <sup>m</sup>	
66	Comp P			↓	15 <sup>s</sup>	
67	521.046784	22 49 21	11 55 56	3	15 <sup>m</sup>	
68	Comp P			↓	15 <sup>s</sup>	
69	521.047714	22 50 46	11 58 43	3	10 <sup>m</sup>	
70	Comp P			↓	15 <sup>s</sup>	
71	521.046970	22 50 52	11 56 24	3	10 <sup>m</sup>	
72	Comp P			↓	15 <sup>s</sup>	
73	521.048083	22 48 37	11 59 42	3	15 <sup>m</sup>	
74	Comp P			↓	15 <sup>s</sup>	
75	468.013019	01 49 43	10 37 56	3	10 <sup>m</sup>	
76	Comp P			↓	15 <sup>s</sup>	
77	468.014491	01 44 26	10 44 22	3	5 <sup>m</sup>	
78	Comp P			↓	15 <sup>s</sup>	
79	468.016039	01 55 42	10 50 12	3	5 <sup>m</sup>	
80	Comp P			↓	15 <sup>s</sup>	
81	468.017813	01 48 31	10 58 30	3	5 <sup>m</sup>	
82	Comp P			↓	15 <sup>s</sup>	
83	468.021025	01 45 56	11 11 40	3	5 <sup>m</sup>	
84	Comp P			↓	15 <sup>s</sup>	
85	468.021304	01 40 49	11 12 47	3	5 <sup>m</sup>	
86	Comp P			↓	15 <sup>s</sup>	
87	468.025462	01 47 02	11 29 25	3	5 <sup>m</sup>	
88	Comp P			↓	15 <sup>s</sup>	
89	468.025853	01 41 23	11 31 03	3	5 <sup>m</sup>	
90	Comp P			↓	15 <sup>s</sup>	
91	468.027074	01 45 18	11 35 48	3	5 <sup>m</sup>	

## 60 inch Telescope Log

Observer: J. PetersPI: J. HuchraSpectrograph: FASTGrating: 300Page: 3279Date: 11/4/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
92	Comp			↓	30 <sup>s</sup>	
93	468.028604	01 47 21	11 42 08	3	10 <sup>m</sup>	
94	Comp			↓	15 <sup>s</sup>	
95	468.029047	01 31 43	11 43 08	3	5 <sup>m</sup>	
96	Comp			↓	15 <sup>s</sup>	
97	468.031243	01 51 00	11 52 13	3	7 <sup>m</sup>	
98	Comp			↓	15 <sup>s</sup>	
99	468.036305	01 36 53	12 09 36	3	5 <sup>m</sup>	
100	Comp			↓	15 <sup>s</sup>	
101	468.038015	01 31 55	12 15 09	3	5 <sup>m</sup>	
102	Comp			↓	15 <sup>s</sup>	
103	468.041096	01 53 24	12 26 29	3	7 <sup>m</sup>	
104	Comp			↓	15 <sup>s</sup>	
105	468.042004	01 41 08	12 30 27	3	5 <sup>m</sup>	
106	Comp			↓	15 <sup>s</sup>	
107	468.046213	01 32 04	12 45 19	3	5 <sup>m</sup>	
108	Comp			↓	15 <sup>s</sup>	
109	468.047364	01 37 14	12 49 59	3	5 <sup>m</sup>	
110	Comp			↓	15 <sup>s</sup>	
111	AKN 120	05 13 37	-00 12 15	6	3 <sup>m</sup>	
112	Comp			↓	15 <sup>s</sup>	
113	H215	04 37 56	08 35 00	0	5 <sup>m</sup>	
114	Comp			↓	15 <sup>s</sup>	
115	BD P26595	03 36 54	26 47 00	0	15 <sup>s</sup>	
116	Comp			↓	15 <sup>s</sup>	
117	AGK2 P14783	07 17 48	15 01 00	0	10 <sup>s</sup>	
118	Comp			↓	15 <sup>s</sup>	
119	HD 52971	06 57 42	27 14 00	0	2 <sup>s</sup>	
120	Comp			↓	15 <sup>s</sup>	
121	08115N0008A	08 11 30	-00 08 00	1	1 <sup>m</sup>	?

60 inch Telescope Log

Spectrograph: FASTObserver: J. PetersGrating: 300Page: 3280PI: J. HuchraDate: 11/4/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
122	Comp			↓	15 <sup>s</sup>	
123	08115N0008 B	08 11 30	-00 08 00	↓	5 <sup>m</sup>	
124	Comp			↓	15 <sup>s</sup>	
125	08380P0221	08 38 00	02 21 00	↓	1 <sup>m</sup>	
126	Comp			↓	15 <sup>s</sup>	
127	08395P0105	08 39 30	01 05 00	↓	2 <sup>m</sup>	
128	Comp			↓	15 <sup>s</sup>	
129	08413P0101	08 41 18	01 01 00	↓	5 <sup>m</sup>	
130	Comp			↓	15 <sup>s</sup>	
131	08401N0023	08 40 06	-00 23 00	↓	6 <sup>m</sup>	
132	Comp			↓	15 <sup>s</sup>	
133	08458N0250	08 45 48	-02 50 00	↓	15 <sup>m</sup>	
134	Comp			↓	15 <sup>s</sup>	
135	08481P0132	08 48 06	01 32 00	↓	4 <sup>m</sup>	
136	Comp			↓	15 <sup>s</sup>	
137	08486P0026	08 48 36	00 26 00	↓	4 <sup>m</sup>	
138	Comp			↓	15 <sup>s</sup>	
139	08516P0041	08 51 36	00 41 00	↓	5 <sup>m</sup>	
140	Comp			↓	15 <sup>s</sup>	
141	08532P0058	08 53 12	00 58 00	↓	5 <sup>m</sup>	
142	Comp			↓	15 <sup>s</sup>	
143	08559P0012	08 55 54	00 12 00	↓	4 <sup>m</sup>	
144	Comp			↓	15 <sup>s</sup>	
55 145	08568P0059	08 56 48	00 59 00	↓	5 <sup>m</sup>	
146	Comp			↓	15 <sup>s</sup>	
56 147	09062P0042	09 06 12	00 42 00	↓	3 <sup>m</sup>	
148	Comp			↓	15 <sup>s</sup>	
57 149	09341P0129	09 34 06	01 29 00	↓	5 <sup>m</sup>	
150	Comp			↓	15 <sup>s</sup>	
151	I 566	09 47 24	00 00 00	↓	2 <sup>m</sup>	





60 inch Telescope Log

Observer: J. PetersPI: J. HuchraSpectrograph: FASTGrating: 300Page: 3282Date: 11/5/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-4	Dark	↑	↑		15M	
5-19	Bias	↓	↓			
20-34	FLAT	3006/mm	3" SLIT		10S	Some Thin Clouds
35	Comp			↓	15S	
36	MK509	20 41 26	-10 54 18	6	2M	
37	Comp			↓	15S	
38	EG149	21 44 57	-07 58 03	0	10M	
39	Comp			↓	15S	
40	N7331	22 34 46	34 09 43	0	5M	
41	Comp			↓	15S	
42	HD198858	20 49 50	47 31 07	0	1S	
43	Comp			↓	15S	
44	M31	00 40 00	40 59 42	0	1M	
45	Comp			↓	15S	
46	M31 SKY	Moved TL	NORTH 15 MIN	0	1M	
47	Comp			↓	15S	
48	M32	00 39 58	40 35 30	0	1M	
49	Comp			↓	15S	
50	158-213	00 43 30	40 50 55	0	10M	
51	Comp			↓	15S	
52	225-280	00 41 45	41 05 12	0	10M	
53	Comp			↓	15S	
54	163-217	00 40 33	41 11 20	0	10M	
55	Comp			↓	15S	
56	BOP284211	21 48 57	28 37 48	0	1M	
57	Comp			↓	15S	
58	521.048319	22 49 37	12 00 20	3	10M	
59	Comp			↓	15S	
60	521.049076	22 53 28	12 02 41	3	10M	
61	Comp			↓	15S	

60 inch Telescope Log

Observer: J. Peters

PI: J. Huckra

Spectrograph: FAST

Grating: 300 / 1200

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Date: 11/5/94 Jeff McClintock

Number	Object	R.A.	Dec.	L/R	Exp	Comments
62	521.049177	22 48 31	12 02 48	3	5 <sup>m</sup>	
63	Comp			↓	15 <sup>s</sup>	
64	521.049389	22 45 19	12 03 25	3	10 <sup>m</sup>	
65	Comp			↓	15 <sup>s</sup>	
16 66	521.049479	22 49 47	12 03 48	3	10 <sup>m</sup>	
67	Comp			↓	15 <sup>s</sup>	
17 68	521.049484	22 50 23	12 03 53	3	7 <sup>m</sup>	
69	Comp			↓	15 <sup>s</sup>	
18 70	521.049539	22 48 46	12 03 33	3	10 <sup>m</sup>	
71	Comp			↓	15 <sup>s</sup>	
19 72	521.049626	22 48 00	12 04 02	3	15 <sup>m</sup>	
73	Comp			↓	15 <sup>s</sup>	
74	521.049619	22 56 14	12 04 03	3	15 <sup>m</sup>	
75	Comp			↓	15 <sup>s</sup>	Got stuck in IRAF
20 76	521.049996	22 53 12	12 05 23	3	5 <sup>m</sup>	
77	Comp			↓	15 <sup>s</sup>	
22 78	521.050312	22 48 30	12 06 22	3	15 <sup>m</sup>	
79	Comp			↓	15 <sup>s</sup>	
23 80	521.050498	22 54 56	12 06 53	3	15 <sup>m</sup>	This may be over kill but I want this one dead.
81	521.050498	↓	↓	3	15 <sup>m</sup>	
82	Comp			↓	15 <sup>s</sup>	
24 83	521.050555	23 02 26	12 06 16	3	10 <sup>m</sup>	
84	Comp			↓	15 <sup>s</sup>	
85	521.051409	22 58 09	12 09 33	3	10 <sup>m</sup>	
86	Comp B	12004/mm	2*SLT Blue	↓	2 <sup>m</sup>	Jeff McClintock Obj
87	SS0019P21 B	00 17 13	21 40 20	13	15 <sup>m</sup>	
88	Comp B			↓	1 <sup>m</sup>	
89	HILTNER 102 B	01 05 53	62 31 32	0	2 <sup>m</sup>	
90	FLAT B			↑	1 <sup>m</sup>	
91	Comp R			↓	11 <sup>s</sup>	

60 inch Telescope Log

Observer: J. Peters

PI: J. Huchra

Spectrograph: Fast

Grating: 300 / 1200

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Date: 11/5/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
92	SS0019P21R	00 17 13	21 40 20	13	15 <sup>m</sup>	
93	Comp R			↓	115	
94	HILTNER 102 R	01 05 53	62 31 32	13	2 <sup>m</sup>	
95	FLAT R			↑	455	
96	Comp			↓	12 <sup>s</sup>	
97	TheTa Ori	05 32 49	-05 25 14	27	10 <sup>s</sup>	Johw Stauffer 1.5" slit 1200 l/mm
98	FLAT R			↑	455	↓
99	Comp			↓	15 <sup>s</sup>	
100	BDP26595	03 37 08	26 48 01	0	10 <sup>s</sup>	
101	Comp			↓	15 <sup>s</sup>	
102	468.048238	01 53 46	12 52 48	3	7 <sup>m</sup>	
103	Comp			↓	15 <sup>s</sup>	
104	468.048861	01 49 02	12 55 37	3	7 <sup>m</sup>	
105	Comp			↓	15 <sup>s</sup>	
106	468.049006	01 45 45	12 56 17	3	10 <sup>m</sup>	
107	Comp			↓	15 <sup>s</sup>	
108	468.049077	01 47 05	12 56 27	3	5 <sup>m</sup>	
109	Comp			↓	15 <sup>s</sup>	
110	468.051193	01 51 22	13 03 35	3	5 <sup>m</sup>	
111	Comp			↓	15 <sup>s</sup>	
112	468.051292	01 31 01	13 03 14	3	5 <sup>m</sup>	
113	Comp			↓	15 <sup>s</sup>	
114	468.053165	01 42 47	13 10 48	3	5 <sup>m</sup>	
115	Comp			↓	15 <sup>s</sup>	
116	468.053522	01 52 44	13 11 31	3	5 <sup>m</sup>	
117	Comp			↓	15 <sup>s</sup>	
118	468.054096	01 49 33	13 13 58	3	10 <sup>m</sup>	
119	Comp			↓	15 <sup>s</sup>	
120	AKN 120	05 13 37	-00 12 15	6	5 <sup>m</sup>	
121	Comp			↓	15 <sup>s</sup>	

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## 60 inch Telescope Log

Observer: J. PetersPI: J. HuckraSpectrograph: FastGrating: 300Page: 3285Date: 11/5/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
92 122	HZ 15	04 37 56	08 35 00	⊙	5 <sup>m</sup>	Clouds North + West
123	Comp			↓	15 <sup>s</sup>	
124	07487P1054	07 48 42	10 54 00	1	10 <sup>m</sup>	
125	Comp			↓	15 <sup>s</sup>	
126	07504P1302	07 50 24	13 02 00	1	15 <sup>m</sup>	
127	Comp			↓	15 <sup>s</sup>	
128	07505P0905	07 50 30	09 05 00	1	5 <sup>m</sup>	
129	Comp			↓	15 <sup>s</sup>	
130	07506P0903	07 50 36	09 03 00	1	5 <sup>m</sup>	
131	Comp			↓	15 <sup>s</sup>	
132	07505P0932	07 50 30	09 32 00	1	3 <sup>m</sup>	
133	Comp			↓	15 <sup>s</sup>	
134	07509P1328	07 50 54	13 28 00	1	3 <sup>m</sup>	
135	Comp			↓	15 <sup>s</sup>	
136	07512P1405	07 51 12	14 05 00	1	5 <sup>m</sup>	
137	Comp			↓	15 <sup>s</sup>	
50 138	07514P1424	07 51 24	14 24 00	1	5 <sup>m</sup>	
139	Comp			↓	15 <sup>s</sup>	
51 140	07518P1432	07 51 48	14 32 00	1	3 <sup>m</sup>	
141	Comp			↓	15 <sup>s</sup>	
52 142	07524P1430	07 52 24	14 30 00	1	10 <sup>m</sup>	
143	Comp			↓	15 <sup>s</sup>	
53 144	07524P1434	07 52 24	14 34 00	1	5 <sup>m</sup>	
145	Comp			↓	15 <sup>s</sup>	
54 146	07532P1307	07 53 12	13 07 00	1	3 <sup>m</sup>	
147	Comp			↓	15 <sup>s</sup>	
55 148	07544P1044	07 54 24	10 44 00	1	3 <sup>m</sup>	
149	Comp			↓	15 <sup>s</sup>	
56 150	07580P0948	07 58 00	09 48 00	1	15 <sup>m</sup>	
151	Comp			↓	15 <sup>s</sup>	



60 inch Telescope Log

Observer: J. PetersPI: J. HuchraSpectrograph: FASTGrating: 300Page: 3287Date: 11/2/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-4	Dark	3004/mm	3" SLIT		15 <sup>m</sup>	
5-19	Bias	↓	↓			
20-34	FLAT	↓	↓		10 <sup>s</sup>	
35	Comp			↓	15 <sup>s</sup>	Clouds
36	HD 198858	20 49 42	47 32 00	0	2 <sup>s</sup>	
37	Comp			↓	15 <sup>s</sup>	
38	MK509	20 41 26	-10 54 18	6	2 <sup>m</sup>	THRU Clouds
39	Comp			↓	15 <sup>s</sup>	
40	EE149	21 44 57	-07 58 03	0	10 <sup>m</sup>	↓ Delay on cloud.
41	Comp			↓	15 <sup>s</sup>	
42	M31	00 40 00	40 59 42	0	1 <sup>m</sup>	
43	M31 SKY	20 MIN	NORTH	0	1 <sup>m</sup>	
44	Comp			↓	15 <sup>s</sup>	
45	M32	00 39 58	40 35 30	0	1 <sup>m</sup>	
46	Comp			↓	15 <sup>s</sup>	
47	N7331	22 34 46	34 09 43	0	5 <sup>m</sup>	
48	Comp			↓	15 <sup>s</sup>	
49	225-280	00 41 45	41 05 12	0	10 <sup>m</sup>	
50	Comp			↓	15 <sup>s</sup>	
51	163M217	00 40 33	41 11 20	0	10 <sup>m</sup>	Dumped on By Clouds
52	Comp			↓	15 <sup>s</sup>	→ S. Kenyon ITS NOT
53	PU VOL	20 19 01	21 24 43	12	30 <sup>s</sup>	PHOTOMETRIC Clouds
54	Po VOL	↓	↓	12	1 <sup>s</sup>	ALL over USING
55	Comp			↓	15 <sup>s</sup>	3" SLIT.
56	AG Peg	21 48 36	12 23 27	12	2 <sup>s</sup>	
57	AG Peg	↓	↓	12	8 <sup>s</sup>	
58	Comp			↓	15 <sup>s</sup>	
59	Z And	23 31 15	48 32 32	12	3 <sup>s</sup>	
60	Z And	↓	↓	12	30 <sup>s</sup>	
61	Comp			↓	15 <sup>s</sup>	

60 inch Telescope Log

Spectrograph: FASTObserver: J. PetersGrating: 300Page: 3288PI: J. HuchraDate: 11/6/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
62	EG And	00 41 52	40 24 22	12	2 <sup>s</sup>	In Clouds
63	Com P			↓	15 <sup>s</sup>	}
64	AX Per	01 33 06	54 00 18	12	12 <sup>s</sup>	
65	AX Per	↓	↓	12	60 <sup>s</sup>	
66	Com P			↓	15 <sup>s</sup>	15R Survey in Hole
67	521.051713	22 58 08	12 10 34	3	15 <sup>m</sup>	
68	Com P			↓	15 <sup>s</sup>	
69	521.051990	22 52 57	12 11 50	3	11 <sup>m</sup>	Mabey
70	Com P			↓	15 <sup>s</sup>	
71	468.055454	01 43 26	13 19 11	3	15 <sup>m</sup>	Due To Clouds doing
72	Com P			↓	15 <sup>s</sup>	Long Exp
73	468.057134	01 33 53	13 24 11	3	10 <sup>m</sup>	}
74	Com P			↓	15 <sup>s</sup>	
75	468.058620	01 34 07	13 29 29	3	10 <sup>m</sup>	
76	Com P			↓	15 <sup>s</sup>	}
77	470.026641	02 44 44	11 17 39	3	10 <sup>m</sup>	
78	Com P			↓	15 <sup>s</sup>	
79	470.032045	02 21 15	11 41 44	3	5 <sup>m</sup>	In 2 objects? double peaked at top
80	Com P			↓	15 <sup>s</sup>	
81	470.044213	02 44 30	12 31 17	3	5 <sup>m</sup>	
82	Com P			↓	15 <sup>s</sup>	
83	470.048640	02 23 07	12 51 52	3	5 <sup>m</sup>	
84	Com P			↓	15 <sup>s</sup>	
85	471.024425	02 55 25	10 45 07	3	5 <sup>m</sup>	
86	Com P			↓	15 <sup>s</sup>	
87	471.025247	02 45 13	10 47 21	3	5 <sup>m</sup>	
88	Com P			↓	15 <sup>s</sup>	
89	471.037701	02 44 44	11 17 39	3	5 <sup>m</sup>	
90	Com P			↓	15 <sup>s</sup>	
91	BDP26595	03 36 54	26 47 00	0		

60 inch Telescope Log

Observer: J. PetersPI: J. HuchraSpectrograph: FASTGrating: 300Page: 3289Date: 11/6/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
92	Comp P			↓	15 <sup>s</sup>	
93	AKN 120	05 13 37	-00 12 15	6	5 <sup>m</sup>	
94	Comp P			↓	15 <sup>s</sup>	
95	H 215	04 37 56	08 35 00	0	5 <sup>m</sup>	
96	Comp P			↓	15 <sup>s</sup>	
97	471.038964	02 54 33	11 20 38	3	10 <sup>m</sup>	
98	Comp P			↓	15 <sup>s</sup>	
99	471.039703	02 58 28	11 22 13	3	5 <sup>m</sup>	
100	Comp P			↓	15 <sup>s</sup>	
101	471.048722	02 47 03	11 43 33	3	5 <sup>m</sup>	
102	Comp P			↓	15 <sup>s</sup>	
103	471.050850	02 50 46	11 48 38	3	5 <sup>m</sup>	
104	Comp P			↓	15 <sup>s</sup>	Clouds
105	471.051577	02 53 45	11 50 26	3	5 <sup>m</sup>	
106	Comp P			↓	15 <sup>s</sup>	
107	471.056182	02 48 48	12 01 13	3	5 <sup>m</sup>	
108	Comp P			↓	15 <sup>s</sup>	
109	H052971	06 57 51	27 13 42	0	2.5 <sup>s</sup>	
110	Comp P			↓	15 <sup>s</sup>	
111	AGK2P 14783	07 17 47	14 59 37	0	10 <sup>s</sup>	
112	Comp P			↓	15 <sup>s</sup>	1200L/MM, 1.5" SLIT
113	TheTa ORI	05 32 49	-05 25 16	27	10 <sup>s</sup>	
114	TheTa ORI	↓	↓	27	60 <sup>s</sup>	
115	TheTa ORI	↓	↓	27	2 <sup>m</sup>	Clouded Out
116	FLAT R			↑	45 <sup>s</sup>	
117						
118						
119						
120						
121						



## 60 inch Telescope Log

Observer: P. BerlindPI: J. HuchraSpectrograph: F1BTGrating: 302; 3" slitPage: 3290Date: 11/8/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-33	foctestsetz					
34-39	DARK				15m	
40-49	BIAS				0s	
50-59	FLAT				10s	
60	SZ1.05206Z	23:05:31.7	+12:10:38.1	3	10m	
61	COMP			↑	1	
62	SZ1.052347	22:44:34.53	+12:12:33	3	10m	sup <sup>x</sup> column 2422 dead
63	COMP			↑		trapped
64	SZ1.05291S	22:47:04.2	+12:14:17.5	3	5m	
65	COMP			↑		
66, 68	SZ1.65292G	22:55:48.51	+12:14:29	3	10m	H <sub>α</sub> X2
67, 69	COMP			↑		
70	SZ1.053250	22:43:07.84	+12:15:12.7	3	10m	screamer
71	COMP			↑		
72	RXJ2307.6p2715C	23:07:38.7	+27:15:49	99	10m	
73	COMP			↑		
74	RXJ2307.6p2715D	"	"	99	10m	
75	COMP			↑		
76	RXJ2319.4252A	23:19:53.5	+42:52:28	99	2m	star
77	COMP			↑		
78	RXJ2319.4252B	23:19:47	+42:51:15	99	2m	N 7618
79	COMP			↑		
80	RXJ2318.4258A	23:18:41	+43:00:08	99	1m	star
81	COMP			↑		
82	RXJ2318.4258B	23:18:38	+42:57:28	99	2m	fuzz ball
83	COMP			↑		
84, 86	RXJ2325p1841A	23:24:58.7	+18:41:56	99	10m	X2
85, 87	COMP			↑		
88, 90	RXJ2340p1029A	23:40:31.1	+10:29:42	99	10m	V <sub>x</sub> 54,800 Km/sec
89, 91	COMP			↑		

Mon 20 -15

## 60 inch Telescope Log

Observer: P. BerlindPI: J. HuchraSpectrograph: FASTGrating: 30;3"Date: 11/8/94Page: 3291

Number	Object	R. A.	Dec.	L/R	Exp	Comments
92,94	RXJ2340p1029B	23:40:31.1	+10:29:42	99	10m	dim e range
93,95	COMP			↑		
96	RXJ2341p0018A	23:41:08	+10:18:22	99	10m	H $\alpha$
97	COMP			↑		
98	RXJ2341p0018B	23:41:02	+10:19:05	99	10m	H $\alpha$ where??
99	COMP			↑		
100	RXJ2345p0510A	23:45:24.3	+09:10:22	99	5m	star east comp on slit
101	COMP			↑		
102	RXJ2345p0910B	23:45:31.8	+09:12:35	99	5m	99!
103	COMP			↑		
104	A262m4	01:43:48.8	+34:46:04	25	5m	
105	COMP			↑		
106	A262m33	01:44:17.1	+35:39:54	25	5m	
107	A262m28	01:43:36.4	+35:39:45	25	10m	
108	COMP			↑		
109	A262m36	01:44:27.9	+35:54:21	25	10m	
110	COMP			↑		
111	A262m6	01:44:26.8	+35:08:46	25	4m	
112	A262m30	01:43:51.6	+35:12:33	25	10m	
113	COMP			↑		
114	A262m35	01:44:27.5	+35:02:59	25	5m	H $\alpha$ tail <del>short</del>
115	COMP			↑		
116	A262m5	01:44:14.5	+33:46:34	25	5m	
117	A262m27	01:43:23.3	+33:48:45	25	10m	
118	COMP			↑		
119	A262m155	01:50:03.1	+35:51:42	25	5m	
120	COMP			↑		
121	A262m1	01:49:14.1	+34:49:36	25	3m	star
122	A262m126	01:48:52.7	+34:48:11	25	10m	
123	A262m129	01:49:01.8	+34:45:54	25	10m	

60 inch Telescope Log

Observer: P. Berlind

PI: Huchra

Spectrograph: FAST

Grating: 302

Date: 11/8/94

Page: 3292

Number	Object	R. A.	Dec.	L/R	Exp	Comments
124	COMP			↑		
125	A262m3	01:43:13.4	+37:28:18	2S	5m	H <sub>α</sub>
126	A262m25	01:43:00.8	+37:30:10	2S	10m	
127	COMP			↑		
128	A262m7	01:44:39.1	+37:22:28	2S	5m	H <sub>α</sub>
129	A262m38	01:44:30.6	+37:35:15	2S	10m	H <sub>α</sub>
130	A262m24	01:43:02.9	+37:40:23	2S	10m	
131	COMP			↑		
132	A262m26	01:43:17.6	+37:03:54	2S	10m	
133	A262m37	01:44:28.2	+36:55:13	2S	10m	dome ran away again H <sub>α</sub>
134	COMP			↑		
135	A262m39	01:44:32.2	+36:52:02	2S	10m	H <sub>α</sub>
136	A262m41	01:44:45.4	+37:11:49	2S	10m	
137	COMP			↑		
138	A262m42	01:44:50.8	+37:06:40	2S	10m	
139	A262m43	01:44:55.5	+37:10:18	2S		
140	COMP			↑		
141	A262m44	01:45:01	+37:01:12	2S	5m	
142	COMP			↑		
143 <sup>145</sup>	AWM7G20	02:51:02.3	+41:27:27	22	5m	$\times 2$ <sup>143-5185±39</sup> <sub>145-5235±29</sub> DIFF TEMPLA
144	COMP			↑		
146	AWM7G22	02:51:15.0	+41:21:22	22	4m	
147	COMP			↑		
148	AWM7G38	02:51:19.8	+41:21:22	22	5m	
149	AWM7G18	2:50:37.2	+41:31:20	22	4m	dome ran away
150	COMP			↑		
151	AWM7G27	02:51:48.1	+41:24:16	22	5m	
152	COMP			↑		
153	AWM7G19	02:51:00.9	+41:10:45	22	4m	
154	AWM7G21	02:51:18.2	+41:14:05	22	5m	sup *

60 inch Telescope Log

Observer: P. Berlin

PI: Huchra

Spectrograph: FAST

Grating: 302

Date: 11/8/94

Page: 3293

Number	Object	R. A.	Dec.	L/R	Exp	Comments
155	COMP			↑		
156	ZA0335p09611B	03:38:20.7	+10:02:16.5	99	10m	J200 11-B
157	COMP			↑		
158,160	ZA0335p09611A	03:38:20.1	+10:02:19.6	99	10M	x2 11-A
159,114	COMP			↑		
162	RXJ0119.7p2719	04:19:40.3	+27:46:34	99	1m	*
163	COMP			↑		
164	RXJ0439.4p332A	04:39:26.2	+33:32:13.6	99	5m	*
165	RXJ0439.4p332B	"	"	99	3m	*
166	COMP			↑		
167	RXJ0748.2p1834A	07:48:10.6	+18:34:16	99	3m	
168	RXJ0748.2p1834B	"	"	99	3m	
169	COMP			↑		
170	RXJ0748.2p1834C	"	"	99	4m	
171	RXJ0748.2p1834D	"	"	99	4m	
172	COMP			↑		
173	RXJ0748.2p1834E	"	"	99	7m	
174	COMP			↑		
175	RXJ0748.2p1834F	"	"	99	10m	
176	COMP			↑		
177	RXJ0748.2p1834G	"	"	99	5m	
178	RXJ0748.2p1834H	"	"	99	5m	
179	COMP			↑		
180	RXJ0748.2p1834E	"	"	99	5m	
181	comp			↑		
182,184,186	U4850	09:10:01	+33:57:40	1	10m	x3
183,185,187	COMP			↑		
188-192	Theta Ori	05:32	-05:25	25	10s/5s	1200km 1.5" slit 2
193,5	COMP			↑	12s	note 193 is obs (!)
194	FLAT			↑	45s	

196-205  
206-215

FLAT  
BIAS

302 7.3" slit

6778

## 60 inch Telescope Log

Observer: J. PetersPI: J. HuckraSpectrograph: FASTGrating: 200Page: 3294Date: 11/9/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-6	Dark	↑	↑			
7-22	Bias					
23-37	Flat	3006/μm	7" SLIT		15 <sup>s</sup>	
38	Comp			↓	15	
39	HD 198858	20 49 50	47 31 07	0	2 <sup>m</sup>	
40	Comp			↓	15 <sup>s</sup>	
41	MK 509	20 41 26	-10 54 18	6	2 <sup>m</sup>	
42	Comp			↓	15 <sup>s</sup>	
43	EG-149	21 44 57	-07 58 03	0	10 <sup>m</sup>	
44	Comp			↓	15 <sup>s</sup>	
45	N 7331	22 34 46	34 09 43	0	5 <sup>m</sup>	
46	Comp			↓	15 <sup>s</sup>	
47	M 31	00 40 00	40 59 42	0	1 <sup>m</sup>	
48	Comp			↓	15 <sup>s</sup>	
49	M 31 SKY	20 min	NORTH	0	1 <sup>m</sup>	
50	Comp			↓	15 <sup>s</sup>	
51	M 32	00 39 58	40 35 30	0	1 <sup>m</sup>	
52	Comp			↓	15 <sup>s</sup>	
53	158 N 213	00 40 30	40 50 55	0	10 <sup>m</sup>	
54	Comp			↓	15 <sup>s</sup>	
55	235 N 250	00 41 45	41 05 12	0	10 <sup>m</sup>	
56	Comp			↓	15 <sup>s</sup>	
57	163 N 217	00 40 33	41 11 20	0	10 <sup>m</sup>	
58	Comp			↓	15 <sup>s</sup>	
59	521.053827	22 53 09	12 17 25	3	10 <sup>m</sup>	
60	Comp			↓	15 <sup>s</sup>	
61	521.053872	22 55 40	12 17 27	3	10 <sup>m</sup>	
62	Comp			↓	15 <sup>s</sup>	
63	521.053991	22 53 30	12 17 48	3	7 <sup>m</sup>	Had to RESTART this obj. My fault.
64	Comp			↓	15 <sup>s</sup>	

## 60 inch Telescope Log

Observer: J. PetersPI: J. HuchraSpectrograph: FASTGrating: 300Page: 3295Date: 11/9/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
65	521.054066	22 54 36	12 18 03	3	10 <sup>m</sup>	
66	Comp P			↓	15 <sup>s</sup>	
67	521.054414	22 45 51	12 18 56	3	8 <sup>m</sup>	
68	Comp P			↓	15 <sup>s</sup>	
69	521.054845	23 03 47	12 19 20	3	10 <sup>m</sup>	
70	Comp P			↓	15 <sup>s</sup>	
71	521.055728	22 43 09	12 22 42	3	12 <sup>m</sup>	
72	Comp P			↓	15 <sup>s</sup>	
73	521.056566	22 43 25	12 23 26	3	12 <sup>m</sup>	T.V. Starting To get Br! from something. Makey
74	Comp P			↓	15 <sup>s</sup>	
75	521.056791	22 57 28	12 26 17	3	12 <sup>m</sup>	Moon Reflecting in dome? T.V OK Now?
76	Comp P			↓	15 <sup>s</sup>	
77	521.057119	22 49 51	12 27 31	3	12 <sup>m</sup>	
78	Comp P			↓	15 <sup>s</sup>	
79	521.057562	22 58 08	12 28 27	3	10 <sup>m</sup>	
80	Comp P			↓	15 <sup>s</sup>	
81	521.057909	23 03 16	12 28 52	3	10 <sup>m</sup>	
82	Comp P			↓	15 <sup>s</sup>	
83	HD 12623	02 03 18	67 36 03	0	5 <sup>s</sup>	
84	Comp P			↓	15 <sup>s</sup>	
85	BD 26595	03 37 08	26 48 01	0	5 <sup>s</sup>	
86	Comp P			↓	15 <sup>s</sup>	
87	471.057892	03 03 50	12 04 13	3	5 <sup>m</sup>	
88	Comp P			↓	15 <sup>s</sup>	
89	471.061211	02 57 08	12 12 51	3	5 <sup>m</sup>	
90	Comp P			↓	15 <sup>s</sup>	
91	471.060800	02 53 24	12 12 02	3	5 <sup>m</sup>	
92	Comp P			↓	15 <sup>s</sup>	
93	471.067644	02 43 27	12 27 47	3	5 <sup>m</sup>	
94	Comp P			↓	15 <sup>s</sup>	

60 inch Telescope Log

Spectrograph: FastObserver: J. PetersGrating: 300Page: 3296PI: J. HuchraDate: 11/9/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
95	471.070797	02 59 24	12 34 49	3	5 <sup>m</sup>	
96	Comp			↓	15 <sup>s</sup>	
97	471.074003	03 08 21	12 40 47	3	5 <sup>m</sup>	
98	Comp			↓	15 <sup>s</sup>	
99	471.078337	02 46 58	12 52 42	3	5 <sup>m</sup>	
100	Comp			↓	15 <sup>s</sup>	
101	471.079490	02 52 12	12 55 08	3	5 <sup>m</sup>	
102	Comp			↓	15 <sup>s</sup>	
103	471.083412	02 52 54	13 03 54	3	5 <sup>m</sup>	
104	Comp			↓	15 <sup>s</sup>	
105	471.085621	02 49 50	13 08 41	3	5 <sup>m</sup>	
106	Comp			↓	15 <sup>s</sup>	
107	471.093329	02 49 04	13 26 32	3	5 <sup>m</sup>	
108	Comp			↓	15 <sup>s</sup>	
109	472.022419	03 27 01	10 36 24	3	5 <sup>m</sup>	
110	Comp			↓	15 <sup>s</sup>	
111	472.033780	03 27 22	11 14 02	3	10 <sup>m</sup>	
112	Comp			↓	15 <sup>s</sup>	
113	472.039077	03 11 17	11 29 47	3	5 <sup>m</sup>	
114	Comp			↓	15 <sup>s</sup>	
115	472.039262	03 14 36	11 30 51	3	5 <sup>m</sup>	
116	Comp			↓	15 <sup>s</sup>	
117	472.041116	03 29 56	11 35 14	3	10 <sup>m</sup>	
118	Comp			↓	15 <sup>s</sup>	
119	472.043791	03 28 52	11 43 06	3	5 <sup>m</sup>	
120	Comp			↓	15 <sup>s</sup>	
121	472.048366	03 27 16	11 56 51	3	5 <sup>m</sup>	
122	Comp			↓	15 <sup>s</sup>	
123	472.053554	03 21 07	12 11 37	3	7 <sup>m</sup>	
124	Comp			↓	15 <sup>s</sup>	

60 inch Telescope Log

Spectrograph: FASTObserver: J. PetersGrating: 300Page: 3297PI: J. HuchraDate: 11/9/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
125	472.064493	03 08 21	12 40 47	3	5 <sup>M</sup>	
126	Comp			↓	15 <sup>S</sup>	
127	472.069953	03 16 16	12 55 52	3	6 <sup>M</sup>	
128	Comp			↓	15 <sup>S</sup>	
129	472.075016	03 28 06	13 08 26	3	5 <sup>M</sup>	
130	Comp			↓	15 <sup>S</sup>	
131	472.078724	03 09 52	13 17 54	3	5 <sup>M</sup>	
132	Comp			↓	15 <sup>S</sup>	
133	AKN120	05 13 37	-00 12 15	6	5 <sup>M</sup>	
134	Comp			↓	15 <sup>S</sup>	
135	H215	04 37 56	08 35 00	0	5 <sup>M</sup>	
136	Comp			↓	15 <sup>S</sup>	
137	473.022939	03 39 46	10 34 46	3	5 <sup>M</sup>	
138	Comp			↓	15 <sup>S</sup>	
139	473.024674	03 36 01	10 40 37	3	10 <sup>M</sup>	
140	Comp			↓	15 <sup>S</sup>	
141	473.026010	03 41 17	10 44 32	3	5 <sup>M</sup>	
142	Comp			↓	15 <sup>S</sup>	
143	473.030031	03 50 40	10 57 04	3	8 <sup>M</sup>	
144	Comp			↓	15 <sup>S</sup>	
145	473.031359	03 35 38	11 02 43	3	6 <sup>M</sup>	
146	Comp			↓	15 <sup>S</sup>	
147	473.036347	03 47 32	11 18 42	3	6 <sup>M</sup>	
148	Comp			↓	15 <sup>S</sup>	
149	474.074075	04 13 14	13 21 05	3	5 <sup>M</sup>	??
150	Comp			↓	15 <sup>S</sup>	
151	HD 52971	06 57 51	27 13 42	0	2 <sup>S</sup>	
152	Comp			↓	15 <sup>S</sup>	
153	AGK2 P14783	07 17 47	14 59 37	0	10 <sup>S</sup>	
154	Comp			↓	15 <sup>S</sup>	



## 60 inch Telescope Log

Observer: J. PetersPI: J. HuchraSpectrograph: FastGrating: 300Date: 11/9/94Page: 3298

	Number	Object	R.A.	Dec.	L/R	Exp	Comments
59	155	08026 P5107	08 02 36	51 07 00	1	6 <sup>m</sup>	
	156	Comp			↓	15 <sup>s</sup>	
60	157	08027 P5517	08 02 42	55 17 00	1	6 <sup>m</sup>	
	158	Comp			↓	15 <sup>s</sup>	
61	159	08042 P5539	08 04 12	55 39 00	1	5 <sup>m</sup>	
	160	Comp			↓	15 <sup>s</sup>	
62	161	08085 P5338	08 08 30	53 38 00	1	5 <sup>m</sup>	
	162	Comp			↓	15 <sup>s</sup>	
63	163	08092 P5446	08 09 12	54 46 00	1	5 <sup>m</sup>	
	164	Comp			↓	15 <sup>s</sup>	
64	165	08094 P5237	08 09 24	52 37 00	1	5 <sup>m</sup>	
	166	Comp			↓	15 <sup>s</sup>	
65	167	08107 P5517	08 10 42	55 17 00	1	5 <sup>m</sup>	
	168	Comp			↓	15 <sup>s</sup>	good solution
66	169	08125 P5235	08 12 30	52 35 00	1	8 <sup>m</sup>	
	170	Comp			↓	15 <sup>s</sup>	
67	171	N2695	08 51 54	-02 53 00	1	2 <sup>m</sup>	
	172	Comp			↓	15 <sup>s</sup>	
68	173	N2697	08 52 30	-02 48 00	1	2 <sup>m</sup>	
	174	Comp			↓	15 <sup>s</sup>	good solution
69	175	09406 P0039	09 40 36	00 39 00	1	8 <sup>m</sup>	
	176	Comp			↓	15 <sup>s</sup>	1200/μm. Yes It's The
70	177	AGK2 P43928	09 49 20	43 42 07	1	5 <sup>s</sup>	↓ 1.5" SLIT
	178	Comp	1200/μm	1.5" SLIT	↓	12 <sup>s</sup>	↓ ↓
71	179	TheTa Ori	05 32 49	-05 25 16	27	10 <sup>s</sup>	Poss Mic 772.5
	180	FLATR			↑	45 <sup>s</sup>	↓
	181	Comp			↓	15 <sup>s</sup>	300/μm 3" SLIT. Pos 590
72	182	08155 P5515	08 15 30	55 15 00	1	8 <sup>m</sup>	v. good solution
	183						Danned
	184						

## 60 inch Telescope Log

Observer: J. PetersPI: J. HuxhraSpectrograph: FastGrating: 300 L/mmPage: 3299Date: 11/9/94 11/10/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
<del>1-4</del>	Dark				15 <sup>m</sup>	
5-19	Bia					
20-34	FLAT				15 <sup>s</sup>	
35	Comp			↓	15 <sup>s</sup>	
36	M31	00 40 00	40 59 42	○	1 <sup>m</sup>	Clouds All Over
37	Comp			↓	15 <sup>s</sup>	
38	M31SKY	20 min	NORTH	○	1 <sup>m</sup>	South Cloudy
39	Comp			↓	15 <sup>s</sup>	
40	M32	00 39 58	40 35 30	○	1 <sup>m</sup>	↓
41	Comp			↓	15 <sup>s</sup>	
42	N7331	22 34 46	34 09 43	○	5 <sup>m</sup>	↓
43	Comp			↓	15 <sup>s</sup>	
44	HD12623	02 02 18	62 56 03	○	2 <sup>s</sup>	↓
45	Comp			↓	15 <sup>s</sup>	
46	158N213	06 40 30	40 50 55	○	4 <sup>m</sup>	↓
47	Comp			↓	15 <sup>s</sup>	
48	163N217	00 40 33	41 11 20	○	5 <sup>m</sup>	↓ cloud
49	Comp			↓	15 <sup>s</sup>	
50	225N280	00 41 45	41 05 12	○	5 <sup>m</sup>	IN OUT of clouds.
51	Comp			↓	15 <sup>s</sup>	
52	BOP26595	03 37 08	26 48 01	○	5 <sup>s</sup>	
53	Comp			↓	15 <sup>s</sup>	
54	HBC 352	03 51 20	31 54 14	30	3 <sup>m</sup>	● 353
55	HBC 353	03 51 20	31 54 18	30	2 <sup>m</sup>	● ← 352
56	<del>Comp</del>			↓	15 <sup>s</sup>	
57						
58						
59						
60						
61						

I have Always been  
impressed how clouds can  
find a T.L. Clouded Out.

60 inch Telescope Log

Observer: J. Peters

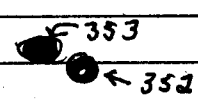
PI: J. Huchra

Spectrograph: FAST

Grating: 300 L/mm

Page: 3299

Date: 11/9/94 11/10/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
<del>1-4</del>	Dark				15 <sup>M</sup>	
5-19	Bra					
20-34	Flat				15 <sup>S</sup>	
35	Comp			↓	15 <sup>S</sup>	
36	M31	00 40 00	40 59 42	○	1 <sup>M</sup>	Clouds All Over
37	Comp			↓	15 <sup>S</sup>	
38	M31 SKY	20 min	North	○	1 <sup>M</sup>	South Cloudy
39	Comp			↓	15 <sup>S</sup>	
40	M32	00 39 58	40 35 30	○	1 <sup>M</sup>	
41	Comp			↓	15 <sup>S</sup>	
42	N7331	22 34 46	34 09 43	○	5 <sup>M</sup>	
43	Comp			↓	15 <sup>S</sup>	
44	HD12623	02 02 18	62 56 03	○	2 <sup>S</sup>	
45	Comp			↓	15 <sup>S</sup>	
46	158N213	06 40 30	40 50 55	○	4 <sup>M</sup>	
47	Comp			↓	15 <sup>S</sup>	clouded out here
48	163N217	00 40 33	41 11 20	○	5 <sup>M</sup>	In cloud
49	Comp			↓	15 <sup>S</sup>	
50	225N280	00 41 45	41 05 12	○	5 <sup>M</sup>	In out of clouds.
51	Comp			↓	15 <sup>S</sup>	
52	BOP26595	03 37 08	26 48 01	○	5 <sup>S</sup>	
53	Comp			↓	15 <sup>S</sup>	
54	HBC 352	03 51 20	31 54 14	30	3 <sup>M</sup>	
55	HBC 353	03 51 20	31 54 18	30	2 <sup>M</sup>	
56	<del>Comp</del>			↓	15 <sup>S</sup>	
57						
58						
59						
60						
61						

I have always been impressed how clouds can find a T.L. Clouded Out.

# New Dome In Use

60 inch Telescope Log

Observer: J. Peters

AI: J. Kachava

Spectrograph: FAST

Grating: 300

Date: 11/17/94

Page: 3300

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1	Comp	Test				
2	Comp			↓	15s	
3	HD 12623	02 02 18	62 56 03	0	2s	
4	Comp			↓	15s	
5	BDP 26595	03 37 08	26 48 01	0	5s	
6	Comp			↓	15s	
7	M31	00 40 00	40 59 42	0	1m	
8	M31 SKY	20min	North	0	1m	
9	Comp			↓	15s	
10	M32	00 39 58	40 35 30	0	1m	
11	Comp			↓	15s	
12	158N213	00 40 30	40 50 55	0	10m	
13	Comp			↓	15s	
14	<del>163N217</del> <sup>235N230</sup>	00 41 33 <del>40 33</del>	41 05 18 <del>40 30</del>	0	10m	
15	Comp			↓	15s	
16	163N217	00 40 33	41 11 20	0	10m	
17	Comp			↓	15s	
18	0335N5	03 35 58	09 48 10	99	10m	Obj #5 ROSAT ON CHART
19	Comp	↓	↓	↓	15s	
20	0335N6	↓	↓	99	10m	
21	Comp	↓	↓	↓	15s	
22	0335N15	↓	↓	99	15m	
23	Comp	↓	↓	↓	15s	
24	0335N17	↓	↓	99	10m	
25	Comp	↓	↓	↓	15s	
26	0335N18	↓	↓	99	15m	
27	Comp	↓	↓	↓	15s	
28	0335N16	↓	↓	99	15m	
29	Comp	↓	↓	↓	15s	
30	PX0344 P2447A	03 47 21	24 47 13	99	10s	Exp done on spot where CSP NOT EXTRACT obj should be. I don't see this obj ON TV. Seeing ~1.2" sky clear

60 inch Telescope Log

Observer: J. Peters

PI: J. Huchra

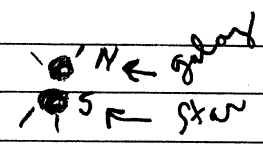
Spectrograph: Fast

Grating: 300

Page: 3301

Date: 11/27/94

Number	Object	R A.	Dec.	L/R	Exp	Comments
31	Comp			↓	15 <sup>s</sup>	
32	RX0344.4P2447C	03 44 21	24 47 13	99	5 <sup>s</sup>	
33	Comp	↓	↓	↓	15 <sup>s</sup>	
34	RX0344.4P2447D	↓	↓	99	15 <sup>s</sup>	
35	Comp	↓	↓	↓	15 <sup>s</sup>	
36	RX0344, P2447E	↓	↓	99	2 <sup>m</sup>	
37	Comp			↓	15 <sup>s</sup>	
38	RX0405.3P2009A	04 05 18	20 09 06	99	10 <sup>s</sup>	
39	RX0405.3P2009 B	↓	↓	99	10 <sup>s</sup>	
40	RX0405.3P2009 C	↓	↓	99	2 <sup>m</sup>	
41	RX0405.3P2009 D	↓	↓	99	5 <sup>s</sup>	
42	RX0405.3P2009 E	↓	↓	99	2 <sup>m</sup>	
43	Comp			↓	15 <sup>s</sup>	
44	HZ15	04 37 56	08 35 00	0	5 <sup>m</sup>	
45	Comp			↓	15 <sup>s</sup>	
46	AKN 120	05 13 37	-00 12 15	6	5 <sup>m</sup>	SKY Clear seeing = 1-2"
47	Comp			↓	15 <sup>s</sup>	No clouds,
48	HD 52971	06 57 51	27 13 42	0	2 <sup>s</sup>	
49	Comp			↓	15 <sup>s</sup>	
50	AGK2 P14783	07 17 47	14 59 37	0	10 <sup>s</sup>	
51	Comp			↓	15 <sup>s</sup>	
52	08165 P5417	08 16 30	54 17 00	1	10 <sup>m</sup>	
53	Comp			↓	15 <sup>s</sup>	
54	08167 P5416	08 16 54	54 16 00	1	8 <sup>m</sup>	
55	Comp			↓	15 <sup>s</sup>	
56	08171 P5520	08 17 06	55 20 00	1	5 <sup>m</sup>	
57	Comp			↓	15 <sup>s</sup>	
58	08188 P5628 N	08 18 48	56 28 00	1	5 <sup>m</sup>	
59	08188 P5628 S	↓	↓	1	5 <sup>m</sup>	
60	Comp			↓	15 <sup>s</sup>	



60 inch Telescope Log

Observer: J. PetersPI: J. HuchraSpectrograph: FASTGrating: 300Date: 11/27/94Page: 3302

Number	Object	R. A.	Dec.	L/R	Exp	Comments
61	08202P5330	08 20 12	53 30 00	1	5 <sup>m</sup>	
62	Comp P			↓	15 <sup>s</sup>	
63	08237P5504	08 23 42	55 04 00	1	5 <sup>m</sup>	
64	Comp P			↓	15 <sup>s</sup>	
65	08240P5518	08 24 00	55 18 00	1	5 <sup>m</sup>	
66	Comp P			↓	15 <sup>s</sup>	
67	08256P5510	08 25 36	55 10 00	1	5 <sup>m</sup>	
68	Comp P			↓	15 <sup>s</sup>	
69	08260P5550	08 26 00	55 50 00	1	8 <sup>m</sup>	
70	Comp P			↓	15 <sup>s</sup>	
71	SN1993J	09 51 25	69 15 13	2	30 <sup>m</sup>	
72	Comp P	↓	↓	↓	15 <sup>s</sup>	
73	SN1993J	↓	↓	2	30 <sup>m</sup>	
74	Comp P	↓	↓	↓	15 <sup>s</sup>	
75	SN1993J	↓	↓	2 <sup>m</sup>	30 <sup>m</sup>	
76	Comp P			↓	15 <sup>s</sup>	
77	EG71	10 36 41	43 21 50	0	30 <sup>s</sup>	↑ STD STAR
78	Comp P			↓	15 <sup>s</sup>	↓
79	SN1994AE	10 44 23	17 32 18	2	11 <sup>m</sup>	
80	Comp P			↓	15 <sup>s</sup>	
81	AGK2P43928	09 49 20	43 42 07	0	5 <sup>s</sup>	
82	Comp P			↓	15 <sup>s</sup>	
83	09105P0215	09 10 30	02 15 00	1	7 <sup>m</sup>	
84	Comp P			↓	15 <sup>s</sup>	
85	09107P0204	09 10 41	02 04 00	1	5 <sup>m</sup>	
86	Comp P			↓	15 <sup>s</sup>	
87	09478P0148	09 47 48	01 48 00	1	6 <sup>m</sup>	
88	Comp P			↓	15 <sup>s</sup>	
89	09502P0010	09 50 12	00 10 00	1	6 <sup>m</sup>	
90	Comp P			↓	15 <sup>s</sup>	



## 60 inch Telescope Log

Observer: P. BerlindPI: Hucha/GellerSpectrograph: FASTGrating: 300L; 3" slitDate: 11/28/94Page: 3304

Number	Object	R.A.	Dec.	L/R	Exp	Comments
10	BIAS				0s	Focus = 950
11-20	FLAT				10s	clear sky
21	COMP				—	
22-24	HD 4744	00:47:05.3	+30:10:21	0	15s	std template Ⓚ?
25	COMP			↑	15s	
26-28	HD 1918	00:21:00	+44:48:00	0	15s	G 9 III
29	COMP			↑		
30	22 Sm 280	00:41:45.1	+44:05:12	0	5m	M 31 Glob
31	COMP			↑		seems 2-3"4
32	158m 213	00:40:02	+40:50:55	0	7m	
33	COMP			↑		
34	464.014722	23:52:38.19	+10:16:17	3	5m	ISR Survey
35	COMP			↑		slit E-W (180°)
36	SN 1937p 2950	19:37:26.1	+29:50:00	-1	5m	3" south of star ( <sup>~12 mag star</sup> rich field)
37	SN 1937p 2950 B	19:37:26.5	+29:50:17	-1	5m	3" north of star; clumpy-fuzz
38	SN 1937p 2950 C	19:37:25.9	+29:50:01	-1	5m	1" south of star - true offset
39	COMP			↑		all ~1.5 arcmin N of SAO star
40	464.015505	00:01:23	+10:19:30.7	3	5m	1950 coords!
41	COMP			↑		
42	464.023399	23:52:53.8	-10:44:26.9	3	5m	
43	COMP			↑		
44	464.030995	23:56:54.57	+11:23:53.1	3	5m	
45	COMP			↑		
46	464.032655 B	23:59:06.94	+11:12:25.4	3	3m	star
47	464.032655 A	"	"	3	3m	star
48	464.036263	23:54:15.86	+11:22:18.5	3	5m	
49	COMP			↑		
50	464.023420	00:04:46.12	+10:44:55.6	3	5m	
51	COMP			↑		
52	464.027029	00:12:24.83	+10:54:51.2	3	5m	



## 60 inch Telescope Log

Observer: P. BerliandPI: GellerSpectrograph: FASTGrating: 3002Date: 11/28/94Page: 3305

Number	Object	R. A.	Dec.	L/R	Exp	Comments
53	COMP			↑		
54	464.033161	00:08:03.01	+11:13:12.2	3	Sm	
55	COMP			↑		
56	464.035803	00:13:21.06	+11:20:30.9	3	Sm	H <sub>α</sub>
57	COMP			↑		
58	464.043527	00:16:23.68	+11:42:24.4	3	Sm	H <sub>α</sub>
59	COMP			↑		
60	464.047755	23:53:20.15	+11:54:10.3	3	Sm	H <sub>α</sub>
61	COMP			↑		
62	464.051827	00:05:41.48	+12:14:41.4	3	Sm	
63	COMP			↑		
64	464.064506	00:12:49.51	+12:40:24.2	3	Sm	H <sub>α</sub>
65	COMP			↑		
66	464.066423	00:16:43.12	+12:45:23.7	3	Sm	
67	COMP			↑		
68	00341p3034	00:34:06	+30:34:10	21	10m	Rich Groups H <sub>α</sub>
69	COMP			↑		
70	00362p2915	00:36:12	+29:15:10	21	Sm	Bright in blue
71	COMP			↑		1/2 17,000k, Strong H <sub>α</sub> etc
72	00294p3051	00:29:24	+30:51:10	21	Sm	H <sub>α</sub>
73	COMP			↑		
74	00408p2947	00:40:48	+29:17:10	21	Sm	H <sub>α</sub>
75	COMP			↑		
76	00442p3000	00:44:12	+30:40:10	21	Sm	H <sub>α</sub>
77	COMP			↑		
78	01038p2436	01:03:48	+24:36:10	21	4m	
79	COMP			↑		
80	01057p2128	01:05:42	+21:28:10	21	Sm	H <sub>α</sub>
81	01062p2128A	01:06:12	+21:28:10	21	4m	
82	01062p2128B	01:06:12	+21:28:10	21	Sm	see chart! id's

## 60 inch Telescope Log

Observer: P. BerlindPI: Geller & HuchraSpectrograph: FASTGrating: 302Date: 11/28/94Page: 3306

Number	Object	R. A.	Dec.	L/R	Exp	Comments
83	comp			↑		
84	01074p2241	01:07:24	+22:41:W	21	Sm	H <sub>α</sub>
85	comp			↑		
86	01141p2252	01:14:06	+22:52:W	21	Sm	H <sub>α</sub>
87	comp			↑		
88	01150p1941	01:15:W	+19:41:W	21	Sm	
89	comp			↑		
90	01166p2031	01:16:36	+20:31:W	21	Sm	
91	comp			↑		
92	01204p2155	01:20:24	+21:55:W	21	Sm	H <sub>α</sub>
93	comp			↑		
94	01241p2121N	01:24:06	+21:21:W	21	Sm	North comp $v \approx 14,600$ km/s
95	01241p2121S	01:24:06	+21:21:W	21	7m	South H <sub>α</sub> $v \approx 14,300$ km/s
96	comp			↑		double; see chart
97	01277p2050	01:27:42	+20:50:W	21	Sm	a very pretty galaxy
98	comp			↑		$v \approx 10,000$ km/sec
99	0133Sp19S1N	01:33:30	+19:51:W	21	Sm	$v \approx 10,900$
100	0133Sp19S1S	01:33:30	+19:51:W	21	Sm	$v \approx 10800$
101	comp			↑		
102	01441p2229	01:44:06	+22:29:W	21	Sm	
103	comp			↑		
104	01350p2717	01:35:W	+27:17:W	21	Sm	
105	comp			↑		
106	01388p2805	01:38:48	+28:05:W	21	10m	LSB H <sub>α</sub>
107	comp			↑		
108	A262m29	01:43:49.2	+38:39:11	25	7m	2 MASS / KBAND LF
109	comp			↑		
110	A262m10	01:44:45.1	+38:41:54	25	10m	
111	comp			↑		
112	A262m109	01:47:55.8	+38:38:03	25	10m	

60 inch Telescope Log

Observer: P. Berlind  
 PI: Geller & Huchra

Spectrograph: FAST  
 Grating: 302  
 Date: 11/28/94

Page: 3307

Number	Object	R. A.	Dec.	L/R	Exp	Comments
113	COMP			↑		nearby star marked on chart
114	A262m112	01:48:05.7	138:41:23	2S	10m	See chart for ID
115	COMP			↑		→ V <sub>3</sub> 45,000 km/sec!
116	A262m125	01:48:43.5	+38:49:09	2S	7m	
117	COMP			↑		
118	A262m132	01:49:09.5	+38:36:58	2S	10m	V = 43K
119	COMP			↑		
120	A26m147	01:49:41	+38:47:04	2S	2m	star - wrong ID on chart
121	A262m147	01:49:41	+38:47:04	2S	10m	galaxy - correct object (?)
122	COMP			↑		
123	A262m68	01:46:40.4	+38:32:25	2S	12m	companion galaxy 6" to W is also on slit
124	COMP			↑		
125	A262m74	01:46:48.9	+38:51:50	2S	10m	
126	COMP			↑		what a gorgeous night out
127	03136m025	03:13:36	-02:15:W	21	5m	Rich Groups <sup>there!</sup> clear.
128	COMP			↑		
129	U02645	03:14:54	-0:15:W	21	5m	H <sub>α</sub>
130	COMP			↑		
131	03151m0154	03:15:06	-01:54:W	21	4m	⇒ coords in header might be off; this log is correct
132	U02650	03:15:06	-01:52:W	21	4m	
133	COMP			↑		
134	03153m0044	03:15:18	-00:44:W	21	5m	strong H <sub>α</sub>
135	03155m0043	03:15:30	-00:43:W	21	5m	H <sub>α</sub>
136	COMP			↑		
137	03156m0130	03:15:36	-01:30:W	21	10m	LSB H <sub>α</sub>
138	COMP			↑		
139	03158m01W	03:15:48	-01:W:W	21	5m	H <sub>α</sub>
140	COMP			↑		
141	312.005019	08:36:50.08	+26:32:43.2	3	5m	ISR H <sub>α</sub>
142	COMP			↑		

123 - w/pt on slit  
 A 262m68E  
 w/pt west  
 A 262m68W

## 60 inch Telescope Log

Observer: P. BelinPI: GellerSpectrograph: FASTGrating: 302Date: 11/28/94Page: 3308

Number	Object	R. A.	Dec.	L/R	Exp	Comments
143	312.004065	08:36:02.78	+26:30:07.2	3	5m	Moon is up
144	COMP			↑		seeing 1-2"
145	312.005034	08:41:23.08	+26:33:53.1	3	5m	
146	COMP			↑		
147	312.005924	08:37:51.67	+26:35:55.4	3	5m	
148	COMP			↑		
149	312.006079	08:36:21.79	+26:37:51.5	3	5m	
150	COMP			↑		
151	312.007842a	08:41:49.73	+26:42:57.8	3	5m	
152	312.007842b	08:41:49.73	+26:42:57.8	3	5m	SE comp <del>but I got</del> <del>the right object</del>
153	COMP			↑		
154	312.014779	08:39:13.96	+27:04:31.5	3	7m	
155	COMP			↑		
156	312.015490	08:51:16.11	+27:07:15.5	3	5m	Hk
157	312.016431	08:54:21.36	+27:10:00.3	3	7m	
158	COMP			↑		
159	312.003600	08:54:59.07	+26:29:23	3	7m	
160	COMP			↑		
161	312.018660	08:56:51.44	+27:16:10.4	3	5m	
162	COMP			↑		
163	312.018771	08:36:04.69	+27:15:34.6	3	5m	
164	COMP			↑		
165	312.020163	08:36:47.16	+27:17:57.1	3	10m	Hk
166	COMP			↑		
167	312.019531	08:52:41.64	+27:19:36.8	3	5m	Star on slit to W
168	COMP			↑		
169	312.020074	08:51:09.09	+27:21:18.9	3	7m	
170	COMP			↑		
171	312.024118	08:52:56.05	+27:33:40.1	3	7m	Hk
172	COMP			↑		

19:39:24 +29:56:57

## 60 inch Telescope Log

 Observer: P. Berlind  
 PI: Geller & Kirshner
Spectrograph: FASTGrating: 3002Page: 3309Date: 11/28/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
173	312.025177	08:53:37.05	+27:36:48.3	3	7m	
174	312.025237	08:53:39.5	+27:36:58	3	7m	
175	COMP			↑		
176	312.025647	08:41:28.3	+27:38:01.1	3	10m	wind picking up
177	COMP			↑		
178	COMP			—		change grating tilt to 55c
179	SN1994ae	10:44:23	+17:32:18	2	15m	X-tra blue
180	COMP			↑	15s	as per Pete Challis request
181	F34	10:36:41.2	+43:21:50	2	2m	
182	COMP			↑		
183	312.028538	08:57:35.46	+27:46:01.6	3	5m	grating tilted back to 590
184	COMP			↑		(standard setup)
185	312.029749	08:51:10.62	+27:51:02.7	3	7m	
186	COMP			↑		
187	312.031050	08:41:13.94	+27:54:26.6	3	7m	
188	COMP			↑		
189	312.033096	08:40:20.81	+28:00:43	3	7m	
190	COMP			↑		
191	312.035856	08:38:21.67	+28:08:53.3	3	4m	
192	COMP			↑		
193	312.036048	08:46:00.04	+28:10:45.1	3	7m	Hk
194	COMP			↑		be done by 6
195	312.044682	08:57:28.65	+28:36:58.3	3	4m	twilight needs more
196	COMP			↑		
197-201	HID 52971	06:57:51.14	+27:13:12	0	5s	
202	COMP			↑		
203-212	FLAT				10s	standard setup; tilt to 590
213-222	BIAS				0s	
223-234	FLATB				10s	tilt at 550 for SNquips
235-240	DARK				15m	done crew on its way up the mountain; may be lights on some sun (and) night!

only 536 images  
(2 DARKS @ end)



60 inch Telescope Log

Observer: P. BerlindPI: Geller & HuchraSpectrograph: FASTGrating: 302Page: 3311Date: 11/19/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
65	464.071459	23:52:21.3	+13:01:13.1	3	5m	
66	COMP			↑		
67	464.074159	23:53:06.58	+13:09:29.6	3	5m	
68	COMP			↑		
69	464.074988	23:52:06.34	+13:11:43.8	3	5m	
70	COMP			↑		
71	464.071047	00:17:51.92	+12:51:17.2	3	5m	it's a star
72	COMP			↑		
73	465.032757	00:33:52.23	+12:10:09.8	3	4m	seemingly pretty rough
74	COMP			↑		2-3"+++
75	465.040715	00:19:06.52	+12:53:41.9	3	4m	
76	COMP			↑		
77	A262m214	01:51:57.1	+36:04:38	25	10m	
78	COMP			↑		
79	A262m8	01:48:01.3	+38:15:17	25	4m	
80	A262m108	01:47:54.8	+38:11:47	25	10m	star 480
81	COMP			↑		0-b
82	A262m108b	01:47:54.8	+38:11:47	25	10m	chart was ambiguous star
83	COMP			↑		seemingly so bad it's
84	COMP			↓	10s	time for integrated
85, 87	158m213	00:40:30.2	+40:50:55	24	10m	globular cluster action!
86, 88	COMP			↑	10s	600 line grating centered 08500
89, 91	225m280	00:41:45.1	+41:05:12	24	15m	3" slit
90, 92	COMP			↑		seemingly approaching ∞
93, 95	163m217	00:40:33.3	+41:11:20	24	15m	these fringes are bad!
94, 96	COMP			↑		I hope this is usable data
97, 99	Pa12	04:45:48	+31:22:10	24	15m	mmmm ← spectra
98, 100	COMP			↑		drift rate = 0.5"/sec
101	SKV	04:46:10	+31:15:10	24	15m	seemingly 5"
102	COMP			↑		SecZ = 1.00

60 inch Telescope Log

Observer: P. Berlind

PI: Hucher & Geller

Spectrograph: FAST

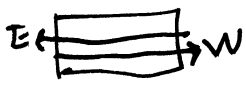
Grating: 600L; 3" slit / 30

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Date: 11/29/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
103,105	N2419	07:37:48	+38:54:W	24	15m	600L of centered @ 85W A
104,106	COMP			↑		3" slit low counts
107	SKY	07:38:07	+38:42	24	15m	seeing still bad 3-5"
108	COMP			↑		
109	N2419	07:37:48	+38:54:W	24	15m	300 line gr 3" slit ↓
110	COMP			↑	15s	seeing a little better
111	SKY	07:38	+38:55	24	15m	
112	COMP			↑		
113	312.038603	08:40:14.72	+28:16:07.1	3	5m	star to E on slit
114	COMP			↑		
115	312.038489	08:46:40.47	+28:18:27.4	3	5m	hazy night; bright sky
116	COMP			↑		but no clouds
117	312.040321	08:45:43.3	+28:24:12.4	3	5m	
118	COMP			↑		
119	312.037616	08:48:14.57	+28:15:38.5	3	10m	fla at pixel 2115
120	COMP			↑		
121	312.042472	08:58:42.62	+28:29:35.6	3	5m	
122	COMP			↑		
123	312.042746	08:34:47.38	+28:29:32.6	3	5m	
124	COMP			↑		
125	312.044682	08:57:28.5	+28:36:58.3	3	5m	also observe 11/28 in twilight
126	COMP			↑		
127	07593p0949	07:59:18	+09:49:W	1	5m	H $\alpha$
128	N2510	07:59:24	+09:37:W	1	3m	u04778 H $\alpha$
129	07597p0944	07:59:42	+09:44:W	1	3m	
130	COMP			↑		seeing has improved
131	07599p0939	07:59:54	+09:39:W	1	3m	
132	07592p0946	07:59:12	+09:46:W	1	3m	
133	COMP			↑		
134	IS10EW	08:27:36	-02:00:W	1	5m	ETH comps u4460

E object above on slit  
W " below on slit





## 60 inch Telescope Log

Observer: P. BerlindPI: Kennyon/Geller/Huchra/KirshnerSpectrograph: FASTGrating: 300L; 3" slitPage: 3313Date: 11/29/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
135	COMP			↑		
136.7	BX Mon	07:22:54	-03:30:00	12	10s, 60s	5" slit ↓
138	COMP			↑	10s	
139	Hiltner 600	06:47:37.2	+02:11:25	12	10s	
140	COMP			↑	10s	
141	Faye 34	10:36:41.2	+43:21:50	2	2m	3" slit ↓
142	COMP			↑		tilt = 550; extra blue ↓
143	SN 1994ae	10:44:23	+17:32:18	2	15m	
144	COMP			↑		
145	312.045795	08:36:46.72	+28:39:54.5	3	5m	tilt = 590; std setup ↓
146	312.045893	08:36:49.25	+28:40:06	3	5m	
147	COMP			↑		
148	312.047042	08:51:01.44	+28:45:05.4	3	7m	
149	COMP			↑		
150	312.047057	08:38:35.86	+28:44:20.4	3	7m	
151	COMP			↑		
152	UOS 211	09:42:06	+00:01:00	1	4m	star to EAST
153	COMP			↑		
154	N 3062	09:54:40	+01:40:00	1	2m	
155	COMP			↑		
156	09576 p0224	09:57:36	+02:24:00	1	3m	
157	COMP			↑		Venus is very bright
158	09578 p0557	09:57:48	+02:57:00	1	2m	
159	COMP			↑		
160	09583 p0130	09:58:18	+01:30:00	1	10m	H <sub>α</sub>
161	COMP			↑		
162	UOS 388	09:58:36	+02:28:00	1	3m	
163	09586 p0335	09:58:36	+02:35:00	1	5m	H <sub>α</sub>
164	10000 p0053	10:00:00	+02:33:00	1	3m	H <sub>α</sub>
165	COMP			↑		



60 inch Telescope Log

Observer: P. Berlind

PI: Huchra

Spectrograph: FAST

Grating: 300L; 600L

Date: 11/30/94

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
110	BIAS				0s	clear; big haze to W
11-20	FLAT				10s	300 line g; 3" slit @ 590
21	COMP			↓	10s	delay; Best Lou working in dom.
22	M72	20:53:12	-12:33:00	24	15m	600 line; 3" slit @ 1030 ↓
23	COMP			↑		
24	SKY	20:53	-12:25	24	15m	
25	COMP			↑		
26	M72			24	15m	
27	COMP			↑		
28	M2	21:33:12	-0:51:00	24	10m	300 line @ 590; 3" slit ↓
29	COMP			↑		↳ now there are some photons!
30	SKY	21:33	-0:40	24	10m	
31	COMP			↑		
32	M15	21:29:42	+12:09:00	24	10m	
33	COMP			↑		
34	SKY	21:29	+12:22	24	10m	
35	COMP			↑		
36	N7331	22:34:46.9	+34:09:43	0	5m	nucleus
37	COMP			↑		
38	A262m143	01:49:26	+38:24:45	25	10m	2 MASS H <sub>α</sub>
39	COMP			↑		Welcome to Triangulum
40	A262m187	01:47:22.5	+35:15:37	25	5m	H <sub>α</sub>
41	A262m100	01:49:47.3	+35:30:56	25	5m	
42	A262m114	01:48:08	+35:32:13	25	10m	H <sub>α</sub>
43	COMP			↓		
44	A262m118	01:48:18	+35:36:48	25	10m	
45	A262m134	01:49:14	+35:16:07	25	5m	star to E; star to W H <sub>α</sub>
46	COMP			↑		
47	A262m22	01:52:07.5	+35:59:33	25	4m	
48	A262m198	01:51:50.7	+35:46:39	25	7m	

object

## 60 inch Telescope Log

Observer: P. BerlindPI: HuchraSpectrograph: FASTGrating: 300LDate: 11/30/94Page: 3316

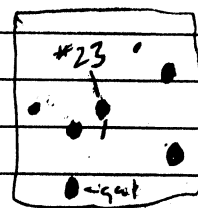
Number	Object	R. A.	Dec.	L/R	Exp	Comments
49	COMP			↑		
50	A262m21	01:57:04.6	+34:35:03	25	4m	
51	A262m153	01:49:55.7	+34:33:19	25	7m	H <sub>α</sub>
52	COMP			↑		
53	A262m169	01:50:52.4	+34:29:37	25	10m	nice spectra <sup>4/5!</sup>
54	COMP			↑		
55	A262m173	01:50:58.9	+34:23:32	25	10m	H <sub>α</sub>
56	A262m185	01:51:18.2	+34:25:28	25	7m	H <sub>α</sub>
57	COMP			↑		
58	A262m6	01:45:27.8	+35:53:20	25	7m	another beauty
59	A262m135	01:45:54	+35:44:36	25	10m	South Comp $v_z \approx 22,500$
60	COMP			↑		
61	A262m13N	01:45:54	+35:44:36	25	10m	North Comp $v_z \approx 22,700$
62	COMP			↑		
63	A262m34	01:44:17.5	+34:10:08	25	5m	
64	COMP			↑		
65	SN1994xx	03:02:57.97	-12:22:54.9	2	30m	$V \geq 18$ ; gal has H <sub>α</sub> 2004
66	COMP			↑		$v_z \approx 4200$ km/s $z \approx 0.013$
67	AWM7G10	02:48:54.3	+41:22:30	22	4m	Pair Clusters
68	COMP			↑		
69	AWM7G9	02:48:47.2	+41:14:56	22	2m	Star * GC 76
70	AWM7G11	02:49:02.3	+41:11:14	22	5m	these are positive id's
71	COMP			↑		since I can read charts again
72	AWM7G14	02:50:21.3	+42:06:02	22	5m	H <sub>α</sub>
73,75	AWM7G12	02:49:05.5	+42:00:34	22	7m, 10m	x2
74	COMP			↑		
76	AWM7G24	02:51:20.9	+41:53:16	22	1m	all stars *
77	AWM7G25	02:51:24	+41:57:27	22	3m	gal
78	AWM7G26	02:51:39.9	+41:55:47	22	5m	possible mis ID on <sup>page 684</sup> chart
79	COMP			↑		

~~926 8017~~

## 60 inch Telescope Log

Observer: P. BarlundPI: Huchra & GellerSpectrograph: FASTGrating: 300LDate: 11/30/94Page: 3317

Number	Object	R. A.	Dec.	L/R	Exp	Comments
80	AWM7G28	02:51:54.2	+41:17:16	22	3m	No chart.
81	COMP			↑		
82	AWM7G13	02:49:54	+41:00:24	22	7m	H $\alpha$
83	AWM7G15	02:50:27.5	+41:01:13	22	7m	star
84	COMP			↑		
85	AWM7G29	02:51:59.5	+41:35:25	22	5m	
86	COMP			↑		
87	AWM7G35	02:50:45.3	+41:35:23	22	4m	
88	COMP			↑		
89	AWM7G34	02:50:30	+41:15:05	22	4m	
90	AWM7G37	02:50:02.3	+41:16:59	22	4m	
91	COMP			↑		
92	AWM7G31	02:52:09.3	+41:24:09	22	4m	
93	AWM7G39	02:51:35.3	+41:24:48	22	5m	
94	COMP			↑		
95	AWM7G40	02:51:45.7	+41:24:48	22	10m	→ star to E this thing is faint → H $\alpha$ to beat the band, to
96	COMP			↑		
97	AWM7G16	02:50:33	+41:20:36	22	4m	
98	AWM7G33	02:51:16.2	+41:24:27	22	4m	
99	AWM7G36	02:51:25.7	+41:22:27	22	10m	
100	COMP			↑		
101	AWM7G23	02:51:20.8	+41:41:16	22	5m	No chart
102	COMP			↑		
103	312.068209	09:00:46.60	+29:48:47.3	3	5m	weak H $\alpha$
104	COMP			↑		IS R Survey ↓
105	312.068669	08:58:31.07	+29:50:55.5	3	7m	
106	COMP			↑		
107	312.069773	08:59:44.25	+29:54:06.6	3	5m	H $\alpha$
108	COMP			↑		
109	312.090872	08:35:52.45	+29:57:15.3	3	5m	H $\alpha$ - broad



60 inch Telescope Log

Observer: P. Berlind  
 PI: Geller/McDowell/Kirshner

Spectrograph: FAST  
 Grating: 3002  
 Date: 11/30/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
110	COMP			↑		
111	312.071619	09:00:47.65	+29:59:22.9	3	5m	
112	COMP			↑		
113	312.071739	08:53:51.34	+30:01:41.5	3	7m	
114	COMP			↑		
115	312.072313	09:01:15.82	+30:01:27.3	3	5m	
116	COMP			↑		
117	312.073599	08:39:18.75	+30:06:05.3	3	10m	fld look at chart (20/11/94?)
118	COMP			↑		
119	312.073516	08:46:28.44	+30:07:31.3	3	5m	
120	COMP			↑		
121	312.086315	09:00:04.98	+30:45:25.7	3	5m	fld
122	COMP			↑		
123	312.086377	08:43:39.47	+30:47:19.6	3	5m	
124	COMP			↑		
125	312.086542	08:57:37.87	+30:46:50.6	3	5m	
126	COMP			↑		
127	312.087208	08:37:43.99	+30:48:10.5	3	7m	
128	312.087402	08:37:34.5	+30:49:12.8	3	7m	seeing is great
129	COMP			↑		
130	312.087886	08:37:19.69	+30:50:29.5	3	7m	fld
131	COMP			↑		HST Snapshot
132	B2 0827 p 24	08:27:54.41	+24:21:07.7	23	15m	sunk nicely in slit
133	COMP			↑		no clouds but hazy
134	PG 0846 p 249	08:46:07.9	+24:56:25	23	15m	d:to
135	COMP			↑		
136	SN1994ae	10:44:23	+17:32:18	2	15m	extra blue tilt @ 550 ↓
137	COMP			↑		sunk in slit!
138	Feige 34	10:36:41.2	+13:21:50	2	2m	
139	COMP			↑		

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60 inch Telescope Log

Observer: P. Berlind  
 PI: Huchra

Spectrograph: FAST  
 Grating: 300L; 3" slit  
 Date: 11/30/94

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
140	U05439	10:03:40	+W:19:40	1	15m	grating tilt = 590 (std.) ↓ incredibly LSB
141	COMP			↑		
142	10032p0229S	10:03:12	+02:29:30	1	4m	seems 2-3" South North Comp S=13,000 N=13,200
143	10032p0229N	10:03:12	+02:29:30	1	4m	
144	COMP			↑		
145	10053p0033	10:05:18	+W:33:40	1	5m	Hx
146	10054p0031	10:05:24	+W:31:40	1	4m	
147	10059p0037	10:05:54	+W:37:40	1	4m	
148	COMP			↑		
149	10093p0010	10:09:18	+W:10:40	1	5m	Hx
150	COMP			↑		
151	N4486B	12:28:40	+12:45:59	0	5m	
152	COMP			↑		
153, 155, 156	N4151	12:08:01	+39:41:02	6	4m	2mm, 30s use 30sec!
154	COMP			↑		
157, 8	AGK2p43928	09:49:20	+43:42:07	0	5s	
159	COMP			↑		clear skies
160-169	FLAT			0	10s	300L @ 590; 3" slit
170-179	BIAS			0	0s	
180-189	FLAT6			2	10s	300L @ 550; 3"
190-209	FLAT600			24	20s	600L @ 1030
210-214	DARK				15m	dome crew may have been in dome they look ok though