

60 inch Telescope Log

Observer: Perry Berlind
 PI: J. Huchra et al

Spectrograph: FAST

Grating: 300

Date: 3/3/94

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Number	Object	R.A.	Dec.	IR	Exp	Comments
1-10	BIAS			Program	0s	2x binning
11-20	BIAS				0s	1x binning for Nelson
21-25	FLAT				0.6s	1.1" slit, 1x binning ↓
26	S1250	08:48:46	+11:58:34	10	2m	clearing
27	S1288	08:48:58.2	+12:02:40	10	3m	seeing 2-3"
28	S1277	08:48:58.1	+12:01:27	10	5m	
29	S961	08:48:25.5	+11:53:01	10	5m	
30	S488	08:47:28	+12:02:37	10	1m	
31	COMP			↑	10s	
32	F34	10:36:41.2	+43:21:50	10	5m	std
33	10069p5444	10:06:54	+54:44:W	1	5m	3" slit; 2x binning ↓
34	COMP			↑		
35	10104p0625	10:10:24	+06:25:W	1	5m	Hα
36	COMP			↑		
37	10117p0645	10:11:42	+06:45:W	1	5m	clouds Hα?
38	COMP			↓		
39	10117p0645	"	"	1	5m	Hα for sure a redo
40	10125p0555	10:12:30	+05:55:W	1	5m	delay to align + focus.
41	COMP			↑		thanks Jim
42	10132p0712A	10:13:12	+07:12:W	1	3m	
43	10132p0712B	10:13:12	+07:12:W	1	5m	
44	COMP			↑		increasing clouds
45	10150p0638	10:15:00	+06:38:W	1	3m	
46	COMP			↑		
47	10219p0824	10:21:54	+08:24:W	1	5m	through cloud
48	COMP			↑		
49	HS1218p236	12:18:09.8	+23:36:W	8	3m	QSO for Elvis 150 cts
50	COMP			↑		
51	HS1220p224	12:20:22.2	+22:43:29	8	5m	300 cts
52	COMP			↑		

→
→

no flats for 2x binning - WHY?

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
53	HS1219p233	12:19:11.5	+23:33:01	8	5m	clouds ~200 c
54	COMP			↑		moon's up
55	HS1219p244	12:19:55.3	+24:40:27	8	7m	seeing 1-2" ~280c
56	COMP			↑		
57	HS1223p211	12:23:10.9	+21:11:41	8	7m	
58	COMP			↑		
59	HS1236p201	12:36:10	+20:15:51	8	10m	no problem in reflector - cosmic rays galore
60	COMP			↑		cloud forming over mtn.
61	HS1232p215	12:32:03.9	+21:55:06	8	10m	clouds/clear 500 cts
62	COMP			↑		
63	HS1237p212	12:37:02.6	+21:24:34	8	10m	nice!
64	COMP			↑		
65	F67	12:39:18.9	+17:47:24	0	3m	stel
66	COMP			↑		
67	HS1241p202	12:41:25.3	+20:22:52	8	5m	150+ cts
68	COMP			↑		
69	HS1237p244	12:37:40.5	+24:41:58	8	10m	
70	COMP			↑		
71	HS1242p212	12:42:37.8	+21:26:36	8	3m	
72	COMP			↑		
73	HS1245p215	12:45:01.6	+21:52:39	8	7m	250 cts
74	COMP			↑		clouds increasing again
75	HS1244p241	12:44:32.5	+24:10:40	8	7m	may need more 125 cts
76	COMP			↑		
77	HS1251p214	12:51:09.9	+21:42:34	8	5m	cool
78	COMP			↑		
79	HS1253p233	12:53:30.1	+23:30:36	8	2m	
80	COMP			↑		
81	HS1243p204	12:43:45.9	+20:44:17	8	7m	
82	COMP			↑		

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
83	HZ44	13:21:19.1	+36:23:38	0	2m	std
84	COMP			↑		lots of cirrus
85	12521p0222	12:52:06	+02:22:00	S	5m	3C 273 H _α
86	COMP			↑		
87	12538p0743	12:53:48	+07:43:00	S	5m	
88	COMP			↑		
89	12574p0519	12:57:24	+05:19:00	S	5m	
90	COMP			↑		
91	12595p0633	12:59:30	+06:33:00	S	5m	
92	COMP			↑		
93	12596p0322	12:59:36	+03:22:00	S	5m	H _α
94	COMP			↑		sky looks terrible outside
95	13062m0032	13:06:12	-00:32:00	S	3m	
96	13063m0031	13:06:18	-00:31:00	S	3m	
97	COMP			↑		
98	13146m0156	13:14:36	-00:56:00	S	5m	
99	COMP			↑		
100	13146p0110	13:14:36	+01:10:00	S	5m	H _α
101	COMP			↑		
102	13149m0255	13:14:54	-02:55:00	S	5m	H _α (comes through when you need it!)
103	COMP			↑		
104	N5071	13:16:06	+08:12:00	S	5m	
105	I4223	13:16:24	+08:03:00	S	2m+	stopped by clouds w/a vanga
106	COMP			↑		
107	I4223	13:16:24	+08:03:00	S	5m	clouds come again
108	N5075	13:16:36	+08:05:00	S	3m	
109	COMP			↑		
110	13171p0317	13:17:06	+03:17:00	S	3m	
111	COMP			↑		
112	14494p0532	14:49:24	+05:32:00	1	5m	

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Number	Object	R.A.	Dec.	L/R	Exp	Comments
0133	Comp				10 ^s	Test frame
0146	Comp			↓ 0	10 ^s	Some clouds above
0167	H2 15	04 37 56	08 35 00	0	5 ^m	
0168	Comp			↓ 0	10 ^s	
0169	J0217P1312	02 17 44	13 12 29	3	7 ^m	
0170	J0217P1312	↓	↓	3	7 ^m	
0171	Comp			↓ 0	10 ^s	
0172	AGK2P14783.	07 17 48	15 01 00	0	5 ^s	
0173	Comp			↓	10 ^s	
0174	08003P0025.	08 00 12	00 25 00	1	5 ^m	
0175	Comp			↓	10 ^s	
0176	I494	08 53 48	01 11 00	1	5 ^m	
0177	Comp			↓	10 ^s	
0178	08062P0146.	08 06 12	01 46 00	1	5 ^m	
0179	Comp			↓	10 ^s	
0180	N2555	08 15 24	00 54 00	1	5 ^m	
0181	Comp			↓	10 ^s	
0182	08154P0220	08 15 24	02 20 00	1	5 ^m	
0183	Comp			↓	10 ^s	
0184	08329P0156	08 32 54	-01 56 00	1	7 ^m	
0185	Comp			↓	10 ^s	
0186	I514	08 32 54	-01 53 00	1	5 ^m	
0187	Comp			↓	10 ^s	
0188	08332P0154	08 33 12	01 54 00	1	5 ^m	
0189	Comp			↓	10 ^s	
0190	0914P0729	09 14 00	07 29 00	1	8 ^m	
0191	Comp			↓	10 ^s	
0192	09335P0314	09 33 30	03 14 00	1	8 ^m	
0193	Comp			↓	10 ^s	
0194	09393P0321	09 39 18	03 21 00	1	8 ^m	

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
0195	Comp			↓	10 ^s	
0196	09398P0335	09 39 48	03 35 00	1	8 ^m	
0197	Comp			↓	10 ^s	
0198	09406P0339	09 40 36	03 39 00	1	5 ^m	
0199	Comp			↓	10 ^s	
0200	A6K2P43928	09 49 18	43 42 00	0	5 ^s	
0201	Comp			↓	10 ^s	
0202	09409P0741	09 40 54	07 41 00	1	8 ^m	
0203	Comp			↓	10 ^s	
0204	09444P0247	09 44 24	02 47 00	1	8 ^m	
0205	Comp			↓	10 ^s	
0206	09464P0242	09 46 24	02 42 00	1	8 ^m	Hard Time finding
0207	Comp			↓	10 ^s	
0208	09486P0420	09 48 36	04 20 00	1	8 ^m	
0209	Comp			↓	10 ^s	
0210	09499P0505	09 49 54	05 05 00	1	8 ^m	
0211	Comp			↓	10 ^s	
0212	1147N0312	11 47 01	-03 12 37	5	5 ^m	Obj A on Chart
0213	1147N0317	11 47 04	-03 17 27	5	8 ^m	Obj B on Chart
0214	1147N0315	11 47 06	-03 15 06	5	5 ^m	Obj C on Chart
0215	1147N0314A	11 47 06	-03 14 00	5	5 ^m	Obj D on Chart
0216	1147N0314 B	11 47 16	-03 14 23	5	5 ^m	Obj E on Chart
0217	Comp			↓	10 ^s	
0218	11473P0657	11 47 18	07 02 00	5	5 ^m	Obj A on chart
0219	11486P0702	11 48 36	07 02 00	5	8 ^m	Obj B on Chart
0220	Comp			↓	10 ^s	
0221	11479P0458	11 47 54	04 58 00	5	5 ^m	
0222	Comp			↓	10 ^s	
0223	11491P0659	11 49 06	06 59 00	5	5 ^m	
0224	Comp			↓	10 ^s	

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	Number	Object	R. A.	Dec.	L/R	Exp	Comments
32	0225	11492 P0216	11 49 12	02 16 00	5	6 ^m	
	0226	Comp			↓	10 ^s	
33	0227	11495 P0641	11 49 30	06 41 00	5	5 ^m	
	0228	Comp			↓	10 ^s	
34	0229	11497 P0423	11 49 42	04 23 00	5	6 ^m	
	0230	Comp			↓	10 ^s	
35	0231	11514 P0637	11 51 24	06 37 00	5	6 ^m	Obj Area chart
36	0232	11524 P0636	11 52 24	06 36 00	5	6 ^m	
	0233	Comp			↓	10 ^s	
37	0234	11542 N0100	11 54 12	-01 00 00	5	8 ^m	
	0235	Comp			↓	10 ^s	
38	0236	11553 P0724	11 55 18	07 24 00	5	5 ^m	
	0237	Comp			↓	10 ^s	Changed Focus To 82
39	0238	11555 P0611	11 55 30	06 11 00	5	5 ^m	
	0239	Comp			↓	10 ^s	
40	0240	11562 N0221	11 56 12	-02 21 00	5	5 ^m	
	0241	Comp			↓	10 ^s	
41	0242	11567 P0628	11 56 42	06 28 00	5	5 ^m	
	0243	Comp			↓	10 ^s	
42	0244	H2 67	12 39 18	17 47 24	0	2 ^m	
	0245	Comp			↓	10 ^s	
43	0246	H2 44	13 21 19	36 23 38	0	2 ^m	
	0247	Comp			↓	10 ^s	
44	0248	N4486 B	12 28 00	12 45 59	0	5 ^m	
	0249	Comp			↓	10 ^s	
45	0250	GD 140	11 34 27	30 04 35	0	2 ^m	
	0251	Comp			↓	10 ^s	
46	0252	N4151	12 08 01	39 41 02	6	2 ⁵ 17"	
	0253	Comp			↓	10 ^s	
47	0254	H2 43	13 14 00	29 21 49	0	3 ^m	

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	Number	Object	R. A.	Dec.	L/R	Exp	Comments
	0255	Comp			↓	10 ^s	Thin Clouds Around
48	0256	H5548	14 15 43	25 22 01	6	5 ^m	
	0257	Comp			↓	10 ^s	
49	0258	11573N0105	11 57 18	-01 05 00	5	5 ^m	
5	0259	Comp			↓	10 ^s	
50	0260	11576P0722	11 57 36	07 22 00	5	5 ^m	
	0261	Comp			↓	10 ^s	
51	0262	12005P0527	12 00 30	05 27 00	5	5 ^m	
	0263	Comp			↓	10 ^s	
52	0264	12023N0209	12 02 18	-02 09 00	5	5 ^m	
	0265	Comp			↓	10 ^s	
53	0266	13189P0220	13 12 54	02 20 00	5	5 ^m	
	0267	Comp			↓	10 ^s	
54	0268	13122P0635	13 12 12	06 35 00	5	8 ^m	
	0269	Comp			↓ 5	10 ^s	
55	0270	13143N0248	13 14 18	-02 48 00	5	6 ^m	
	0271	Comp			↓	10 ^s	
56	0272	13145P0205	13 14 30	02 05 00	5	5 ^m	
	0273	Comp			↓	10 ^s	
57	0274	13145P0555	13 14 30	05 55 00	5	5 ^m	
	0275	Comp			↓	10 ^s	
58	0276	13278N0239	13 27 48	-02 39 00	5	5 ^m	
	0277	Comp			↓	10 ^s	
59	0278	13297P0625	13 29 42	06 25 00	5	8 ^m	
	0279	Comp			↓	10 ^s	
60	0280	14251P0310	14 25 04	03 10 40	5	5 ^m	
	0281	Comp			↓	10 ^s	
61	0282	B0P332642	15 50 02	33 05 49	0	2 ^m	
	0283	Comp			↓	10 ^s	
62	0284	15139P0603	15 13 54	06 03 00	1	5 ^m	

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Number	Object	R. A.	Dec.	L/R	Exp	Comments
0318	SKY FLAT	For	Caldwell		.2	Flats & Bias done
0319	SKY FLAT	"	"		.4	Then Combined.
0320	SKY FLAT	"	"		3 ^s	Sunset 6:30
0321	Comp			↓	10 ^s	18:31 MST
0322	HILTNER 600	06 42 37	02 11 25	0	3 ^m	Saturated
0323	Comp	↓	↓	↓	10 ^s	
0324	HILTNER 600	↓	↓	0	2 ^m	Doing These Now Th
0325	Comp			↓	10 ^s	Gude T.V is Full of
0326	AGK2 P14783	07 17 48	15 01 00	0	3 ^s	Noise veritable how
0327	Comp			↓	10 ^s	No way I can find
0328	08032N 0325	08 03 12	-03 25 00	1	5 ^m	a galaxy yet.
0329	Comp			↓	10 ^s	
0330	08068 P0045	08 06 48	00 45 00	1	6 ^m	
0331	Comp			↓	10 ^s	
0332	08079N 0117	08 09 54	-01 17 00	1	6 ^m	
0333	Comp			↓	10 ^s	
0334	08243 P0012	08 24 18	00 12 00	1	5 ^m	
0335	Comp			↓	10 ^s	
0336	08204N 0012	08 20 24	-00 12 00	1	5 ^m	
0337	Comp			↓	10 ^s	
0338	08225N 0103	08 22 30	-01 03 00	1	5 ^m	
0339	Comp			↓	10 ^s	
0340	08257 P0027	08 25 42	00 27 00	1	5 ^m	Obj A on chart
0341	08264 P0047	08 26 24	00 47 00	1	5 ^m	Obj B on chart
0342	Comp			↓	10 ^s	
0343	08271N 0059	08 27 06	-00 59 00	1	5 ^m	
0344	Comp			↓	10 ^s	
0345	08290N 0102	08 29 00	-01 02 00	1	5 ^m	
0346	Comp			↓	10 ^s	
0347	08299N 0044	08 29 54	-00 44 00	1	5 ^m	

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	Number	Object	R.A.	Dec.	L/R	Exp	Comments
	0348	Comp			↓	10 ^s	
14	0349	09167 P0814	09 16 42	08 14 00	↓	6 ^m	Some Clouds West Seeing ≈ 2-3"
	0350	Comp			↓	10 ^s	
15	0351	09174 P0956	09 17 24	05 56 00	↓	5 ^m	BRT Star West Edge
	0352	Comp			↓	10 ^s	
16	0353	09197 P0416	09 19 42	04 16 00	↓	10 ^m	Faint.
	0354	Comp			↓	10 ^s	
17	0355	09214 P0525	09 21 24	05 25 00	↓	7 ^m	
	0356	Comp			↓	10 ^s	
19	0357	09284 P0647	09 28 24	06 47 00	↓	6 ^m	
	0358	Comp			↓	10 ^s	
20	0359	09306 P0546	09 30 36	05 46 00	↓	6 ^m	Had To stop guide T.V
	0360	Comp			↓	10 ^s	one big Mess of
21	0361	09314 P0241	09 31 24	02 41 00	↓, 1	8 ^m	Vertical Lines.
	0362	09314 P0241	↓	↓	1	7 ^m	Pain in Ass.
	0363	Comp			↓	10 ^s	
22	0364	AGK2 P43928	09 49 18	43 42 00	0	3 ^s	
	0365	Comp			↓	10 ^s	
23	0366	11557 N0136	11 55 42	-01 36 00	5	5 ^m	Obj A on chart
24	0367	11558 N0140	11 55 48	-01 40 00	5	5 ^m	Obj B on chart
25	0368	11560 N0150	11 56 00	-01 50 00	5	5 ^m	Obj C on chart
	0369	Comp			↓	10 ^s	
26	0370	12080 P0006	12 08 00	00 06 00	5	5 ^m	
	0371	Comp			↓	10 ^s	
29	0372	12085 P0115	12 08 30	01 15 00	5	5 ^m	
	0373	Comp			↓	10 ^s	
28	0374	12136 P0127	12 13 18	01 27 00	5	5 ^m	
	0375	Comp			↓	10 ^s	
29	0376	12140 N0040	12 14 00	-00 40 00	5	5 ^m	
	0377	Comp			↓	10 ^s	

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	Number	Object	R. A.	Dec.	L/R	Exp	Comments
30	0378	12 153 N 0022	12 15 18	-00 22 00	5	5 ^m	
	0379	Comp			↓	10 ^s	
31	0380	12 266 P 0052	12 26 36	00 52 00	5	8 ^m	
	0381	Comp			↓	10 ^s	
32	0382	GD 40	11 34 27	30 04 35	0	2 ^m	
	0383	Comp			↓	10 ^s	
33	0384	N 4151	12 08 01	39 41 02	6	5 ^m	Think I saturated.
	0385	N 4151	↓	↓	6	2 ^m	↓
	0386	N 4151	↓	↓	6	30 ^s	OK
	0387	Comp			↓	10 ^s	
34	0388	N 4486 B	12 28 00	12 45 59	0	5 ^m	
	0389	Comp			↓	10 ^s	
35	0390	Feige 67	12 39 18	17 47 24	0	2 ^m	
	0391	Comp			↓	10 ^s	
36	0392	H 2 44	13 21 19	36 23 38	0	2 ^m	
	0393	Comp			↓	10 ^s	
37	0394	12 285 N 0204	12 28 30	-02 04 00	5	5 ^m	
	0395	Comp			↓	10 ^s	
38	0396	12 286 P 0452	12 28 36	04 52 00	5	5 ^m	
	0397	Comp			↓	10 ^s	
39	0398	12 303 P 0604	12 30 18	06 04 00	5	8 ^m	
	0399	Comp			↓	10 ^s	
40	0400	12 308 P 0147	12 30 48	01 47 00	5	10 ^m	
	0401	12 308 P 0147	↓	↓	5	10 ^m	
	0402	Comp			↓	10 ^s	
41	0403	12 325 P 0609	12 32 30	06 09 00	5	8 ^m	
	0404	Comp			↓	10 ^s	
42	0405	HS 1241 P 230	12 41 43	23 08 56	8	10 ^m	I just had to do
	0406	Comp			↓	10 ^s	one of these. I've
43	0407	HS 1240 P 215	12 40 43	21 51 47	8	10 ^m	never done a QSO Seeing going bad.

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Spectrograph: Fast

Observer: J. Peters

Grating: 300

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	Number	Object	R.A.	Dec.	L/R	Exp	Comments
	408	Com P			↓	10 ^s	
44	409	HS1240P211	12 40 36	21 13 36	8	10 ^m	
	410	Com P			↓	10 ^s	
45	411	HS1242P241	12 42 38	24 14 09	8	10 ^m	
	412	Com P			↓	10 ^s	
46	413	H243	13 14 00	29 21 49	0	2 ^m	
	414	Com P			↓	10 ^s	
47	415	N5548	14 15 43	25 22 01	6	5 ^m	Wilkes
	416	Com P			↓	10 ^s	
48	417	15139P0818	15 13 55	08 17 05	1	7 ^m	
	418	Com P			↓	10 ^s	
49	419	15149P0541	15 14 54	05 41 00	1	7 ^m	
	420	Com P			↓	10 ^s	
50	421	I 1109	15 14 36	05 26 00	1	5 ^m	
	422	Com P			↓	10 ^s	
51	423	15154P0825	15 15 24	08 24 39	1	7 ^m	
	424	Com P			↓	10 ^s	
52	425	BOP332642	15 50 02	39 05 49	0	1 ^m	
	426	Com P			↓	10 ^s	
53	427	CI Cyg	19 48 20	35 39 23	?	2 ^m	Symbiot For Kenyon
	428	CI Cyg	↓	↓	?	30 ^s	1st saturated
	429	CICyg	↓	↓	?	15 ^s	
	430	CICyg	↓	↓	?	5 ^s	

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	Number	Object	R. A.	Dec.	L/R	Exp	Comments
	461	Comp			↓ 0	10 ^s	Flats + Bias
1	462	H ϵ 15	04 37 56	08 35 00	0	2 ^m	Combined
	463	Comp			↓	10 ^s	
2	464	AGK2P14783	07 17 48	15 01 00	0	10 ^s	
	465	Comp			↓	10 ^s	
3	466	08152N0044	08 15 12	-00 44 00	1	5 ^m	
	467	Comp			↓	10 ^s	
4	468	08180N0113	08 18 00	-01 13 00	1	10 ^m	Obj A on Chart ^{beautiful}
5	469	08182N0115	08 18 12	-01 15 00	1	7 ^m	Obj B on Chart
	470	Comp			↓	10 ^s	
6	471	08199N0057	08 19 54	-00 57 00	1	5 ^m	Obj A on Chart
	472	Comp			↓	10 ^s	
7	473	08207N0042	08 20 42	-00 42 00	1	5 ^m	
	474	Comp			↓	10 ^s	
8	475	08320P0022	08 32 00	00 22 00	1	6 ^m	
	476	Comp			↓	10 ^s	
9	477	08326N0256	08 32 36	-02 56 00	1	5 ^m	
	478	Comp			↓	10 ^s	
10	479	N2618	08 33 18	00 52 00	1	5 ^m	
	480	Comp			↓	10 ^s	
11	481	08335P0130	08 33 30	01 30 00	1	5 ^m	
	482	Comp			↓	10 ^s	
12	483	08335P0204	08 33 30	02 04 00	1	5 ^m	
	484	Comp			↓	10 ^s	
13	485	I 517	08 33 48	-01 54 00	1	5 ^m	
	486	Comp			↓	10 ^s	
14	487	08344P0158	08 34 24	01 58 00	1	5 ^m	
	488	Comp			↓	10 ^s	
15	489	08340N0129	08 34 00	-01 29 00	1	8 ^m	Wind bounce T.L.
	490	Comp			↓	10 ^s	

60 inch Telescope Log

Spectrograph: FASTObserver: J. PetersGrating: 300Page: 2837PI: J. Huchra et al.Date: 3/6/94

	Number	Object	R.A.	Dec.	L/R	Exp	Comments
16	491	08347N0312	08 34 42	-03 12 00	1	5 ^m	Obj A on Chart
17	492	08351N0302	08 35 06	-03 02 00	1	5 ^m	Obj B on Chart
	493	Comp			↓	10 ^s	
18	494	08351N0041	08 35 06	-00 41 00	1	5 ^m	
	495	Comp			↓	10 ^s	
19	496	08354N0217	08 35 24	-02 17 00	1	5 ^m	Obj A on Chart
20	498	08355N0232	08 35 30	-02 32 00	1	5 ^m	Obj B on Chart
	499	Comp			↓	10 ^s	
21	500	08067N0013	08 06 42	-00 13 00	1	5 ^m	
	501	Comp			↓	10 ^s	
22	502	09333P0414	09 33 18	04 14 00	1	5 ^m	
	503	Comp			↓	10 ^s	
23	504	AGK2P43928	09 49 18	43 42 00	0	2 ^s	
	505	Comp			↓	10 ^s	
24	506	10136P0354	10 13 36	03 54 00	1	5 ^m	Obj A on chart
25	507	10143P0400	10 14 18	04 00 00	1	5 ^m	
	508	Comp			↓	10 ^s	
26	509	10156P0641	10 15 36	06 41 00	1	5 ^m	Obj B on Chart
	510	Comp			↓	10 ^s	
27	511	10157P0336	10 15 42	03 36 00	1	5 ^m	Obj A on chart
28	512	10160P0330	10 16 00	03 30 00	1	5 ^m	
	513	Comp			↓	10 ^s	
29	514	10167P0501	10 16 42	05 01 00	1	5 ^m	
	515	Comp			↓	10 ^s	
30	516	10175P0801	10 17 30	08 01 00	1	5 ^m	Obj A on chart
	517	10178P0757	10 17 48	07 57 00	1	5 ^m	Obj B on chart
	518	Comp			↓	10 ^s	
31	519	10223P0406	10 22 18	04 06 00	1	5 ^m	
	520	Comp			↓	10 ^s	
32	521	10224P0328	10 22 24	03 28 00	1	5 ^m	

m 497

60 inch Telescope Log

Spectrograph: FastObserver: J. PetersGrating: 300Page: 2838PI: J. Huckra et. alDate: 3/6/94

	Number	Object	R. A.	Dec.	L/R	Exp	Comments
	522	Comp			↓	10 ^s	
33	523	GD 140	11 34 17	30 04 35	0	2 ^m	Trying To get away from The wind.
	524	Comp			↓	10 ^s	
34	525	N4151	12 08 01	39 41 02	6	30 ^s	
	526	Comp			↓	10 ^s	
35	527	N 4486 B	12 28 00	12 45 59	0	5 ^m	
	528	Comp			↓	10 ^s	
36	529	Feige 67	12 39 18	17 47 24	0	2 ^m	
	530	Comp			↓	10 ^s	
37	531	H2 44	13 21 19	36 23 38	0	2 ^m	
	532	Comp			↓	10 ^s	
37	533	J12528P2747	12 52 48	27 47 27	3	5 ^m	322 027258
	534	Comp			↓	10 ^s	
39	535	J12528P2724	12 52 49	27 24 05	3	5 ^m	322 021138
	536	Comp			↓	10 ^s	
40	537	J12583P3109	12 58 16	31 09 29	3	6 ^m	322 078448
	538	Comp			↓	10 ^s	
41	539	J12583P2710	12 58 17	27 10 24	3	6 ^m	322 071169
	540	Comp			↓	10 ^s	
42	541	J12585P2858	12 58 28	28 58 26	3	6 ^m	322 045953
	542	Comp			↓	10 ^s	
43	543	J12585P2831	12 58 28	28 31 35	3	5 ^m	322 038712
	544	Comp			↓	10 ^s	
44	545	J12588P3211	12 58 46	32 11 28	3	5 ^m	322 092475
	546	Comp			↓	10 ^s	
45	547	J12596P2833	12 59 36	28 33 03	3	5 ^m	322 039087
	548	Comp			↓	10 ^s	
46	549	J13011P2821	13 01 09	28 21 33	3	5 ^m	322 035929
	550	Comp			↓	10 ^s	
47	551	J13014P2811	13 01 22	28 11 44	3	5 ^m	322 033396

60 inch Telescope Log

Spectrograph: FAST

Observer: J. Peters

Grating: 300

Page: 2839

PI: J. Huchra et al.

Date: 3/7/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
	Comp			↓	10 ^s	
48	J13019P2919	13 01 56	29 19 20	3	5 ^m	322 051328
	Comp			↓	10 ^s	
49	J13021P2853	13 02 04	28 53 39	3	5 ^m	322, 044493
	Comp			↓	10 ^s	
50	J13027P3205	13 02 44	32 05 03	3	5 ^m	322, 090793
	Comp			↓	10 ^s	
51	J13037P2854	13 03 42	28 54 18	3	5 ^m	322 044648
	Comp			↓	10 ^s	
52	J13056P2844	13 05 03	28 44 18	3	5 ^m	322 041954
	Comp			↓	10 ^s	
53	J13052P3158	13 05 13	31 58 18	3	5 ^m	322 089216
	Comp			↓	10 ^s	
54	J13073P2817	13 07 16	28 17 00	3	5 ^m	322 034682
	Comp			↓	10 ^s	
55	J13085P3202	13 08 31	32 02 30	3	5 ^m	322 090193
	Comp			↓	10 ^s	Get Clouded Out.
	J13027P2844	13 02 04	28 53 39	3	5 ^m	
	Comp			↓	10 ^s	

*parts are saturated
cannot use
for flatfielding*

60 inch Telescope Log

Observer: Perry BerlindPI: J HuchraSpectrograph: FASTGrating: 300, 3" slitPage: 2840Date: 3/7/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
570	BIAS					clouds
571	U04251	08:06:36	+00:25:00	1	5m	H α clouded out
572	COMP			↑	10s	
573-82	BIAS					
584-594	FLAT				0.1s	hole in clouds
595	12048 p0008	12:04:48	+00:08:00	5	5m	H α
596	COMP			↑		
597	U06312	11:15:24	+08:07:00	1	3m	H α
598	COMP			↑		
599	11167 p0741	11:16:42	+07:41:00	1	5m	H α close
600	COMP			↑		open again
601	12345 p4556	12:34:30	+45:56:00	1	3m	H α through clouds
602	COMP			↑		
603	13093 p4637	13:09:18	+46:37:00	1	3m	cts
604	COMP			↑		
605	U08603	13:34:30	+44:51:00	1	3m	cts
606	COMP			↑		
607	U08702	13:43:30	+48:11:00	1	10m	H α
608	COMP			↑		
609	N5209	13:30:06	+07:36:00	1	2m	U8522
610	13300 p0734	13:30:00	+07:34:00	1	5m	
611	COMP			↑		
612	13303 p0739	13:30:18	+07:39:00	1	3m	
613	13304 p0733	13:30:24	+07:33:00	1	5m	H α header ok?
614	COMP			↑		possibly corrupted
615	13308 p0635	13:30:48	+06:35:00	1	2m	
616	COMP			↑		
617	13310 p0724	13:31:00	+07:24:00	1	3m	
618	COMP			↑		
619	13313 p0334	13:31:18	+03:34:00	1	3m	

wing 583

2828-39 sent to Susan

60 inch Telescope Log

Observer: P BerlinPI: J HuchaSpectrograph: FASTGrating: 300Date: 3/7/94Page: 2841

Number	Object	R.A.	Dec.	L/R	Exp	Comments
620	13314p0332	13:31:24	+03:32:00	1	1m	lots of clouds
621	COMP			↑		seeing 2-3"
622	U08543	13:31:30	+05:00:00	1	5m	H α
623	COMP			↑		
624	13326p0354	13:32:36	+03:54:00	1	2m	
625	COMP			↑		
626	N5224	13:32:36	+06:44:00	1	2m	
627	U8569	13:33:00	+06:29:00	1	7m	
628	N5235	13:33:30	+06:50:00	1	3m	U8582 H α
629	U8596	13:34:12	+06:45:00	1	5m	H α
630	COMP			↑		
631	U8572	13:33:06	+07:48:00	1	3m	
632	N5239	13:33:54	+07:38:00	1	5m	U8589
633	N5231 COMP	13:33:12	+03:15:00	1	3m	U8574 H α
634	COMP			↑		
635	N5245	13:34:48	+04:09:00	1	3m	
636	N5246	13:34:54	+04:21:00	1	3m	H α
637	COMP			↑		
638	HZ43	13:14:00.9	+29:21:49	0	1m	std
639	COMP			↑		
640	N5548	14:15:43.5	+25:22:01	6	5m	AGN
641	COMP			↑		
642	14139p2625	14:13:54	+26:25:00	1	5m	=U133020 AWM3
643	COMP			↑		
644	I1068	14:51:01.6	+03:16:49	1	2m	
645	14514p0313	14:51:24	+03:13:00	1	5m	
646	N5776	14:52:01.4	+03:10:06	1	3m	unnamed jet/disk
647	COMP					down

60 inch Telescope Log

Observer: P Berlincl / STokarzPI: J HuchraSpectrograph: FASTGrating: 300Date: 3/8/94Page: 2842

Number	Object	R. A.	Dec.	LTR	Exp	Comments
1-10	BIAS					
11	U04248	08:06:18	+00:27:W	1	5m	superposed star to south
12	U04248	"	"	1	10min	
13	COMP			↑		
14	G8037m0308	08:03:42	-03:08:W	1	5m	H α
15	COMP			↑		
16	U04285	08:11:12	+00:48:W	1	5m	
17	COMP			↑		
18	08123p0013	08:12:18	+00:13:W	1	3m	
19	COMP			↑		
20	08141m0250	08:14:06	-02:50:W	1	5m	H α
21	COMP			↑		
22	08141m0015	08:14:06	-00:15:W	1	5m	
23	U04310	08:14:42	+01:22:W	1	10m	
24	COMP			↑		
25	08214m0008	08:21:24	-00:08:W	1	3m	
26	08216m0009	08:21:36	-00:09:W	1	5m	
27	08215m0013	08:21:30	-00:13:W	1	7m	H α
28	COMP			↑		seeing 2-3"
29	08226m0225	08:22:36	-02:25:W	1	5m	
30	COMP			↑		
31	08228p0209	08:22:48	+02:09:W	1	5m	
32	08230p0207	08:23:00	+02:07:W	1	10m	H α
33	COMP			↑		
34	U4850	09:09:54	+33:37:W	1	3m	garbage ^{not garbage!} NOTHING! sky
35	10125p0529	10:12:30	+05:29:W	1	7m	
36	COMP			↑		
37	10127p0538	10:12:42	+05:38:W	1	5m	H α
38	10133p0630	10:13:18	+06:30:W	1	3m	
39	10136p0630	10:13:48	+06:30:W	1	5m	

file 79 + 93
do not print

60 inch Telescope Log

Observer: PB/STPI: J HuchraSpectrograph: FASTGrating: 300Date: 3/8/94Page: 2843

Number	Object	R. A.	Dec.	L/R	Exp	Comments
40	COMP			↑		
41	10180p0807	10:18:00	+08:07:00	1	5m	
42	10179p0817	10:17:54	+08:17:00	1	5m	
43	10179p0817	"	"	1	10m	needs more
44	10186p0822	10:18:48	+08:22:00	1	7m	
45	COMP			↑		
46	10182p0625	10:18:12	+06:25:00	1	5m	Hk
47	10189p0612	10:18:54	+06:12:00	1	5m	
48	10190p0617	10:19:00	+06:17:00	1	3m	
49	COMP			↑		
50	10199p0450	10:19:54	+04:50:00	1	2m	
51	10203p0501	10:20:18	+05:01:00	1	5m	
52	COMP			↑		
53	16215p0645	10:21:30	+06:45:00	1	5m	Hk
54	10214p0644	10:21:24	+06:44:00	1	7m	Hk
55	COMP			↑		
56	11474m0322	11:47:24	-03:22:00	#5	3m	
57	COMP			↑		
58	U6959A	11:55:54	+01:00:00	S	7m	
59	U6959B	11:55:54	+01:00:00	S	10m	
60	U6959C	11:55:54	+01:00:00	S	7m	
61	COMP			↑		
62	11578p0035	11:57:48	+00:35:00	S	7m	renamed file
63	11579p0047	11:57:54	+00:47:00	S	5m	
64	COMP			↑		
65	U7011	11:59:24	-00:46:00	S	5m	
66	COMP			↑		delay; TCS won't take J20
67	12014p0734	12:01:24	+07:34:00	S	5m	Hk
68	COMP			↑		
69	12024p0635	12:02:24	+06:35:00	S	5m	

60 inch Telescope Log

Observer: PIB/STPI: J. HuchraSpectrograph: FASTGrating: 300Date: 3/8/94Page: 2844

Number	Object	R. A.	Dec.	L/R	Exp	Comments
70	COMP			↑		
71	12058 p0023	12:05:48	+00:23:00	5	7m	
72	COMP			↑		
73	A0994	10:19:54.2	+19:38:57	#9	7m	2" slit 13m; Abell
74	COMP			↑		3" slit TL problems
75	12055 p0059	12:05:30	+00:59:00	5	10m	Hx getting stuck in de
76	COMP			↑		no more Abells
77	12057 m0215	12:05:57	-02:15:00	5	5m	tonight!
78	COMP			↑		telescope repeatedly
80	N4485 B	12:28:00	+12:45:59	0	5m	std tmpt. stalling out!?
81	COMP			↑		
82	13147 p0640	13:14:42	+06:40:40	5	5m	delay, delay, delay!
83	14535 p0239	14:53:30	+02:39:00	#1	3m	star to W of galaxy
84	14556 p0238	14:55:36	+02:38:00	1	5m	
85	COMP			↑		
86	14542 p0640 S	14:54:12	+06:40:00	1	5m	South Comp
87	14542 p0640 M	14:54:12	+06:40:00	1	10m	Middle Comp
88	14542 p0640 N	14:54:12	+06:40:00	1	10m	
89	COMP			↑		
90	14556 p0337	14 55 36	+03 37 00	1	5m	Hx
91	14556 p0337	14 55 36	+03 37 00	1	5m	
92	14560 p0343	14 56 00	+03 43 00	1	5m	Hx
93	14557 p0330	14 55 42	+03 30 00	1	5m	
94	COMP			↑		
95						
96	I 1082	14 56 21.5	07 12 22	1	5m	
97	14562 p0659	14:56:12	+06:59:00	1	5m	
98	COMP			↓		
99	14562 p0659	14:56:12	+06:59:00	1	5m	
100	14598 p0230	14:57:48	+02:30:00	1	7m	
101	COMP			↑		

60 inch Telescope Log

Observer: PB/ST/SMPI: J HuchraSpectrograph: FASTGrating: 300 3" slitDate: 3/9/94Page: 2846

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS				0s	
11-12	AGK 2+14783	07:17:47.36	+14:59:37.7	0	3 min	other delays... done ran away - no con
14	08246m0055	08:24:36	-01:55:00	1		clear skies
15	COMP			↑		
16	08250m0128	08:25:00	-01:28:00	1	5m	H/d
17	08250m0124	08:25:00	-01:24:00	1	5m	
18	U04430	08:25:36	-01:22:00	1	3m	
19	COMP			↑		
20	U04432	08:25:36	+01:10:00	1	5m	
21	COMP			↑		
22	08284p0024	08:28:24	+00:04:00	1	3m	H/d
23	COMP			↑		
24	U04467	08:30:12	+00:24:00	1	2m	
25	COMP			↑		
26	08305m0222	08:30:30	-02:22:00	1	3m	
27	08308m0221	08:30:48	-02:21:00	1	5m	
28	N2615	08:32:00	-02:22:00	1	3m	U4481
29	COMP			↑		
30	08308m0320	08:30:48	-03:20:00	1	3m	
31	COMP			↑		
32	N2616	08:33:00	-01:40:00	1	2min	
33	08331m0135	08:33:06	-01:35:00	1	7m	
34	COMP			↑		
35	08366m0212	08:36:36	-02:12:00	1	5m	H/d
36	08366m0207	08:36:36	-02:07:00	1	5m	
37	COMP			↑		
389	U4850	09:01:54	+33:37:00	1	5m	garbage - needed 10 min
40	COMP			↑		
41	09163p0606	09:16:18	+06:06:06	1	5m	H/d - also file 44

NO 13

(40)

60 inch Telescope Log

Observer: PB/ST/SMPI: JHuchraSpectrograph: FASTGrating: 300Date: 3/9/94Page: 2847

Number	Object	R. A.	Dec.	L/R	Exp	Comments
42-43	09165 p0606	09:16:30	+06:06:00	1	5m	H α
44	09163 p0606	09:16:18	+06:06:00	1	5m	a redo H α use this f
45	COMP			↑		nice seeing!
46-7	09368 p0627	09:36:48	+06:29:00	1	5m	
48	09368 p0640	09:36:48	+06:40:00	1	5m	star to W on slit H
49	09369 p0639	09:36:54	+06:39:00	1	5m	H α - nice
50	COMP			↑		
51	U4601	08:45:00	+85:00:00	1	5m	H α
52	COMP			↑		
53-55	A0865	09:46:50.20	+13:25:25	9	5m	2" slit is in H α
56	COMP			↑		J2000
57-58	A0994A	10:22:37.82	+19:23:47	9	5m	
59	COMP			↑		some thin clouds on
60-62	A1003A	10:25:01.67	+47:50:27	9	5m	
63	COMP			↑		
64	A1021A	10:29:25.23	+37:37:47	9	5m	
65	A1021A	10:29:25.23	+37:37:47	9	5m	
66	A1021A	10:29:25.23	+37:37:47	9	5m	
67	A1021A	10:29:25.23	+37:37:42	9	5m	
68	COMP			↓		
69	A1021B	10:29:25.23	+37:37:47	9	5m	H α
70-72	A1032A	10:30:10.2	+04:00:24	9	5m	
73	COMP			↑		
74-77	A1179A	11:10:09.41	+23:57:33	9	5m	
78	COMP			↓		
79	A1179B	11:10:19.57	+23:58:00	9	5m	H α
80-83	A1186A	11:14:02.15	+75:25:05	9	5m	
84	COMP			↑		
85-87	A1203A	11:13:48.25	+40:17:08	9	5m	
88	COMP			↑		

60 inch Telescope Log

Observer: PB/ST/SMPI: J. HuchraSpectrograph: FASTGrating: 300Date: 3/9/94Page: 2848

Number	Object	R. A.	Dec.	L/R	Exp	Comments
89-91	A0979A	10:20:19.3	-07:53:38	9	5m	
92	COMP			↑		
93-95	A1375A	11:46:03.76	-08:16:16	9	5m	
96	COMP			↑		
97-99	A1404A	11:52:12.44	-07:48:18.1	9	5m	
100	COMP			↑		
101	J12527p2628	12:52:44.4	26:28:12	3	3m	3" slit ↓
102	COMP			↑		
103	J12527p2621	12:52:41.6	26:21:55	3	5M	
104	COMP			↑		
105	J12536p2736	12:53:37.6	27:36:53	3	5M	
106	COMP			↑		
107	J12536p2747	12:53:38.1	27:47:02	3	5M	
108	COMP			↑		
109	J12539p3214	12:53:52.28	32:14:25.3	3	5M	
110	COMP			↑		
111	J12539p2657	12:53:54.47	26:57:57	3	5M	
112	COMP			↑		
113	J12542p2805	12:54:10.2	28:05:31	3	5M	
114	COMP			↑		
115	J12543+2705	12 54 22.5	27 05 1.4	3	5"	gal + 0 W of obj
116	J12543+2705	12 54 22.5	27 05 1.4	3	5"	on slit
117	COMP			↑		
118	J12545+2620	12 54 30	26 20	3	5m	"renamed"
119	J12545+2620	12 54 30	26 20	3	5m	
120	COMP			↑		
121	J12551+3030	12 55 07.6	30 30 44	3	5m	
122	COMP			↑		
123	J12555+3212	12 55 34.7	32 12 17		5m	
124	COMP			↑		

60 inch Telescope Log

Observer: PB/ST/SM

PI: VV JPH

Spectrograph: FAST

Grating: 300

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Date: 3/9/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
125	J12558+3045	125549.2	3045.13	3	5 ^m	Seeing blowing up
126	COMP			↑		needs more ?
127	15030+0317	15 03 00.	+03 17	1	5 ^m	* to E Con slit
128	COMP			↓		
129	15030+0317	15 03 00	+03 17	1	5 ^m	
130	N5847	15 03 54	+06 35	1	5	H+
131	COMP			↑		
132	15090p0526	15:09:00	+05:26:00	1	5m	H+
133	15097p0526	15:09:42	+05:26:00	1	5m	H+
134	COMP			↑		
135	15095p0545	15:09:30	+05:45:00	1	5m	H+
136	COMP			↑		delay for dome - on tower
137	15107p0532	15:10:42	+05:32:00	1	5m	H+
138	15111p0538	15:11:06	+05:38:00	1	5m	
139	COMP			↑		
140	N5548	14:15:43.5	+25:22:01	6	3m	
141	COMP			↑		
142	H243	13:14:00.7	+29:21:49	6	2m	
143	COMP			↑		
144-153	BIAS				0s	
154-163	FLAT				0.6s	

60 inch Telescope Log

Spectrograph: FASTObserver: TOKAREGrating: 300Page: 2850PI: DD JPH, othersDate: 3/10/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					
11	COMP					practice with
12	09437+0555	09 43 72	05 55	I		garbage! ok
13	COMP			↑		
14	COMP					
✓ 15	10243 p 0824	10 24 18	08 24	I	5m	cords fixed
16	"	10 24 18	08 24		5m	wrong
17	COMP			↓		
✓ 18	10241 p 0826	10 24 06	08 26	I	7m	
19	10241 p 0826	10 24 06	08 26	I	5m	
✓ 20	10277 p 0819	10 27 42	08 19	I	5m	
21	COMP			↑		
✓ 22	10234+0544	10 23 24	05 44	I	5m	
23	COMP			↓		
24	10234+0544	10 23 24	05 44	I	5m	
✓ 25	10250+0443	10 25 0	04 43	I	5m	
26	COMP			↓		
27	10250+0443	10 25 00	04 42	I	5m	
28	10250+0443	10 25 00	04 42	I	5m	
✓ 29	10292+0814	10 29 12	08 14	I	5m	
30	COMP			↑		
31	Page 36	12 04 13	11 56 55	2	20S	
32	SID COMP			↓		
33	SN 1994D	12 31 31	07 58 30	2	10S	
34	SN 1994D	12 31 31	07 58 30	2	50S	
35	SN 1994D	12 31 31	07 58 30	2	80S	
36	11008 p 0711	11 00 48	07 11	I	5m	B on chart *?
37	11009 p 0708	11 00 54	07 08	I	5m	C on chart
38	11009 p 0708	11 00 54	07 08	↑		reference C on chart
39	11009 p 0708	11 00 54	07 08	I	5m	C on chart

MAJOR PROBLEMS WITH LRH 1000 ; started at
~11:30

60 inch Telescope Log

Observer: TOKARZPI: JPH, KIRSHNERSpectrograph: FASTGrating: 300Page: 2851Date: 3/10/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
40	11008+0706	11 08 48	07 06	1	5 ^m	A on chart
41	COMP			↓		
42	11008+0711	11 00 48	07 11	1	5 ^m	B (see file 36)
43	COMP			↑		
44	SN 1994 D	12 31 31	07 58 30	2	5 ^m	
45	COMP			↑		
46	Flize 56	12 04 13	11 56 55	2	20 ^s	
47	COMP			↑		
48	12330+0636	12 33 00	06 36	5	5 ^m	can barely see
49	12330+0636	12 33 00	06 36	5	5 ^m	object
50	COMP			↓		
51	12330+0636	12 33 00	06 36	5	5 ^m	
52	13174+0604	13 17 24	06 04	5	5 ^m	1+d
53	COMP			↑		CLOUDS!
54	N44 RL B	12 28 00	12 45 51	0	5 ^m	
55	COMP			↑		
56	15128+0523	15 12 48	05 23	1	5 ^m	through some cloud
57	COMP			↓		
58	15128+0523	15 12 48	05 23	1	5 ^m	
59	15165+0442	15 16 30	04 42	1	5 ^m	in + out of clouds
60	COMP			↑		
61	N5911	15 17 48.0	03 42	1	3 ^m	
62	COMP			↑		
63	I 1106	15 11 30	04 54	1	5 ^m	Wind picking up
64	COMP			↓		18 mph
65	I 1107	15 11 42	04 54	1	5 ^m	
66	15129+0452	15 12 54	04 52	1	5 ^m	
67	COMP			↑		
68	15199+0534	15 19 54	05 34	1	5 ^m	
69	COMP			↑		

847530
848110

60 inch Telescope Log

Spectrograph: FAST

Observer: TONARZ

Grating: 300

Page: 2853

PI: JPH, etc

Date: 3/11/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	BIAS					winds gusting 15-
11	EGGO	06 44 14.8	37 34 59	0	30S	seeing 3-4"
12	COMP			↑		focus 848940
13	COMP					TkST (renintos)
14	09 51 6 + 07 23	09 51 36	07 23	1	7" 50S	can barely see object
15	COMP			↑		guiding must be pe
16	09 51 7 + 02 31	09 51 42	02 31	1	7"	almost invisible H _α
17	COMP			↑		
18	10 23 4 p 04 31	10 23 54	04 31	1	5m	B on chart H _α
19	COMP			↑		
20	10 23 5 + 04 37	10 23 30	04 37	1	5m	H _α A on chart
21	COMP			↑		
22	I 623	10 30 48	03 49			extended galaxy H _α
23	COMP					
24	10333 + 0409	10 33 18	04 09	1	5m	
25	COMP					CLOUDED OUT 4/26
26-35	FLAT				0.1S	
36-45	I BIAS	14 42 00	15 45		5m	
46	I 4494	14 42 0	15 45	1	5m	opened at 4:45
47	COMP			↕		
48	I 4494	14 42 0	15 45	1	5m	
49	I 4494	14 42 0	15 45	1	5m	
50	COMP			↑		
51	N5960	15 33 48	05 50	1	5m	
52	COMP					

Sum of 46, 48 + 49 is a star (M₁)
wrong object??

60 inch Telescope Log

Spectrograph: FASTObserver: TOKARZGrating: 300Page: 2854PI: HUCHRA, 012Date: 3/12/74

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					
11-16	FLAT					
17	COMP					TEST
18	ISO				30 ^s	
19	COMP			↑		
20	I 561	09 43 24	03 22	↓	5 ^m	H α
21	COMP			↑		
22	10 227 p 0512	10 22 42	05 12	↓	5 ^m	H α
23	COMP			↑		
24	10 229 p 0743	10 22 54	07 43	↓	5 ^m	
25	COMP			↑		
26	10 249 p 0309	10 24 54	03 09	↓	5 ^m	
27	COMP			↑		
28	U 5678	10 26 06	03 56	↓	5 ^m	B on chart
29	COMP			↑		
30	U 5678	10 26 06	03 56	↓	5 ^m	H α
31	10 175 + 07 13	10 17 30	07 13	↓	5 ^m	H α
32	COMP			↑		
33	10 290 + 04 16	10 29 00	04 16	↓	5 ^m	H α
34	COMP			↑		
35	10 399 p 0301	10 39 54	03 01	↓	3 ^m	
36	COMP			↑		
37	10 275 p 0518	10 27 30	05 18	↓	5 ^m	H α
38	COMP			↑		
39	10 307 p 0252	10 30 42	02 52	↓	5 ^m	H α
40	COMP			↑		
41	I 621	10 30 42	02 55	↓	5 ^m	could use a little more
42	COMP			↑		
43	10 410 p 0514	10 41 00	05 14	↓	3 ^m	H α
44	COMP					

60 inch Telescope Log

Observer: MUSCARELLAPI: HuchraSpectrograph: FastGrating: 300Page: 2856Date: 3/14/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					At sunset; surrounded w/ clouds; clear over.
11-15	FLAT			0		After dark; clouds mov. quickly and light ra.
16	COMP			0	10 ^s	Had about a 20 min wind 1940-2000. Then clouded o
17	SN1994D	12 31 31	07 58 30	2	10M	Clearing - some thin clou
18	SN1994D	"	"	2	10M	overhead, mostly on Hert; Repeat to insure correct location of obj on slit
19	COMP			↑	10 ^s	
20	Feige 56	12 04 13.8	11 56 55	2	20 ^s	
21	COMP			↑	10 ^s	
22	08365p 0444	08 36 30	04 44 00	1	10M	missed it - repeat #24
23	COMP			↓	10	
24	08365p 0444	08 36 30	04 44 00	1	10M	still doesn't look like
25	08550p 5205	08 55 00	52 05 00	1	10M	star also partly in slit
26	COMP			↑	10 ^s	
27	AGK2p 43928	09 49 20.96	43 42 07.5	0	30 ^s	
28	COMP			↑	10 ^s	
29	SN1994D	12 31 31	07 58 30	2	10M	
30	COMP			↑	10 ^s	
31	Feige 56	12 04 13.8	11 56 55	2	20 ^s	
32	COMP			↑	10 ^s	
33	N2895	09 28 48	57 43 00	1	10M	Thin clouds only
34	COMP			↑	10 ^s	
35	10277p 0728	10 27 42	07 28 00	1	5M	counts too low, repeat
36	COMP			↓	10 ^s	
37	10277p 0728	10 27 42	07 28 00	1	10M	
38	10279p 0726E	10 27 54	07 26 00	1	10M	
39	COMP			↓	10 ^s	
40	10279p 0726W	10 27 54	07 26 00	1	10M	
41	Feige 67	12 39 18.9	17 47 24	0	2M	
42	COMP			↑	10 ^s	
43	HZ 44	13 21 19.1	36 29 38	0	2M	

60 inch Telescope Log

Observer: TOKAN?PI: HUCHRA + FAST GROUPSpectrograph: FASTGrating: 300Page: 2858Date: 3/15/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					
11	COMP					TEST
12-14	FLAT				15	
16	EG 50				30 ^s	
17	COMP					
18	05575p6523				3 ^m	H α
19	COMP					
20	06109p6427	05 57 30	65 23		3 ^m	H α
21	COMP					
22	06425p5309	06 42 30	53 09		5 ^m	H α
23	COMP					
24	07042p5616	07 04 12	56 16		5 ^m	H α COLLIM
25	COMP					
26	07074p5116	07 07 24	51 16		5 ^m	H α
27	COMP					
28	070848p5602	07 08 48	56 02		5 ^m	screening H α
29	COMP					
30	07100p5507	07 10 00	55 07		7 ^m	A on chart
31	COMP			↕		
32	07103p5514	07 10 18	55 14		5 ^m	H α B on chart
33	07104p5500	07 10 24	55 00		5 ^m	A on chart H α +
34	COMP			↕		
35	07105p5501	07 10 30	55 01		5 ^m	B on chart - diffuse
* 36	07144+5227	07 14 24	52 27		5 ^m	low surface brightness G A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
37	COMP			↑		
38	07578+1350	07 57 48	13 50		4 ^m	
39	COMP			↑		
40	07509+1328	07 50 54	13 28		4 ^m	H α (high)
41	COMP			↑		
42	07544p1044	07 54 24	10 44		5 ^m	

* could not see object; screen began to lock up
 redo - (may be total garbage)

60 inch Telescope Log

Spectrograph: FASTObserver: TOKARZGrating: 300Page: 2P59PI: HUCIRA & FAST GROUPDate: 3/15/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
43	COMP			↓		
44	07544 p1044	075424	10 44	1	5 ^m	
45	07553 p1027	075518	10 27	1	4 ^m	
46	COMP					
47	07592 p 0946	075912	09 46	1	5 ^m	A on chart reversed cov
48	COMP			↓		
49	07593 p 0949	075918	09 49	1	5 ^m	B on chart #2
50	08210 p 0000N	08 21 00	00 00	1	4 ^m	N on chart
51	COMP			↓		
52	08210 p 0000S	08 21 00	00 00	1	5 ^m	S on chart HX
53	08511 p 0144	08 51 06	01 44	1	4 ^m	
54	08511 p 0144	08 51 06	01 44	1	5 ^m	moved on slit, hard to
55	COMP			↑		
56	SN 1994D	12 31 31	07 5830	2	10 ^m	* on slit also 25,000 count
57	COMP			↑		
58	Felgo 56	12 04 138	11 5655	0	20 ^s	
59	COMP			↑		
60	10310 p 0431	10 31 00	04 31	1	5 ^m	
61	COMP			↑		
62	10310 p 0431	10 31 00	04 31	1	5 ^m	
63	COMP			↑		
64	10310 p 0804	10 31 00	08 04	1	5 ^m	A on chart
65	COMP			↑		dome moved almost 360° between A + B
66	10316 p 0811	10 31 36	08 11	1	5 ^m	B on chart
67	COMP			↑		
68	10498 p 0821	10 49 48	08 21	1	3 ^m	B on chart HX
69	COMP			↑		
70	10495 p 0338	10 49 30	03 38	1	3 ^m	
71	COMP			↑		
72	10526 p 0607	10 52 30	06 07	1	5 ^m	HX

LKH1000 problems (again) while on SN

Between 61 + 62 switched LKH1000

AG-11U between 68 + 70 dome moved

ff for ~ 5^m
~ 360°

60 inch Telescope Log

Spectrograph: FASTObserver: TOKARZGrating: 300Page: 2860PI: HUCHRA & FAST GROUPDate: 3/15/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
73	COMP			↑		
74-76	BIAS					STOPPED FOR LKH 1000
77	10530 p 0438	10 53 00	04 38	1	5m	
78	COMP			↑		
79	SN1994D	12 31 31	07 58 30	2	7m	
80	COMP			↑		
81	Feige 56	12 04 13.8	11 56 55	0	20 ^s	
82	COMP			↑		
83	11263 p 0341	11 26 18	03 41	1	4m	
84	COMP			↑		
85	13145 p 0637	13 14 30	06 37	1	4m	A on chart
86	COMP			↕		
87	13147 p 0640	13 14 42	06 40	1	4m	B on chart
88	13337 p 0500	13 33 42	05 00	1	4m	
89	COMP			↑		
90	13352 p 0530	13 36 12	05 30	1	3m	Hα
91	COMP			↑		
92	13349 p 0646	13 34 54	06 46	1	5m	2 stars + gal C on ch
93	COMP			↕		
94	13348 p 0644	13 34 48	06 44	1	4m	A on chart
95	COMP			↕		
96	13349 p 0641	13 34 54	06 41	1	5m	C on chart Hα
97	13415 p 0817	13 41 30	08 17	1	5m	LKH locked again
98	COMP			↑		
99	SN1994D	12 31 31	07 58 30	2	7m	
100	COMP			↑		
101	Feige 92	14 09 43	50 21 07	0	25 ^s	Feige 56 too far gone
102	COMP			↑		
103	14494 p 0334	14 49 24	03 34	1	5m	LKH settled down ^{weak #}
104	COMP			↕		

60 inch Telescope Log

Observer: TOKAZPI: HUCHRA & FAST GROUPSpectrograph: FASTGrating: 300Date: 3/15/94Page: 286

Number	Object	R. A.	Dec.	L/R	Exp	Comments
105	14500p0330	14 5000	03 20	I	5m	B on chart
106	I 1063	14 49 42	04 53	I	5m	* on slit
107	COMP			↕		
108	14500p0445	14 5000	04 45	I	5m	
109	15164p0417	15 16 24	04 17	I	5m	
110	COMP			↑		
111	N 5548	14 15 43.5	25 201	C	5m	
112	COMP			↕		
113	EG 193	15 4203	18 16 12	O	3m	could use 2x
114	15191p0525	15 19 06	05 25	I	5m	Had
115	COMP			↑		
116	15205m0110	15 20 30	-01 10	I	5m	
117	COMP			↕		
118	15205m0110	15 20 30	-01 10	I	5m	
119/19	N 5983	15 36 18	07 04	I	3m	dawn - disappeared from slit
120	COMP			↑		
121-130	FLAT				0.1s	

There were major problems with the LKH 1000 ALL night - herringbone pattern, and jitters - could not see many objects, guiding sometimes impossible

60 inch Telescope Log

Observer: TOXARZPI: HUCHRA + FAST GROUPSpectrograph: FASTGrating: 300 l/mmPage: 2862Date: 3/16/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					
11	COMP					TEST
12	KG 50	06 44 14.2	57 34 59	0	30 ^s	
13	COMP			↑		
14	07110 p 5530	07 11 00	55 30	1	5 ^m	
15	COMP			↑		
16	07160 p 5251	07 16 00	52 51	1	5 ^m	
17	COMP					
18	07160 p 5601	07 16 00	56 01	1	5 ^m	
19	COMP			↑		
20	07016 p 5617	07 01 36	56 17	1	5 ^m	Hx
21	COMP			↑		
22	07052 p 1314	07 05 12	13 14	1	3 ^m	
23	COMP			↓		
24	07052 p 1314	07 05 12	13 14		3 ^m	
25	07545 p 1111	07 54 30	11 11	↑	5 ^m	A on chart
26	07545 COMP	07 54 30	11 11	↓	5 ^m	
27	07546 p 1121	07 54 36	11 21	1	5 ^m	B on chart
28	07546 p 1121	07 54 36	11 21	1	5 ^m	
29	COMP			↑		
30	NLS10	07 59 24	09 37 00	1	5 ^m	UGC 4178 (B on chart)
31	COMP			↑		CLOSED FOR
32	04569 p 5447	04 56 54	54 47	1	5 ^m	#a 2 CLOUDS 11:30
33	COMP			↑		
34	1007 p 6531	10 07 42	65 31	1	5 ^m	Hx
35	COMP			↑		
36	1004 p 4648	10 04 12	46 48	1	5 ^m	Hx
37	COMP			↑		STOPPED AGAIN - CLOUDS
38	10414 p 0456	10 41 27	04 56	1	5 ^m	Hx
39	COMP			↑		

LOTS OF CLOUDS AT 2pm

60 inch Telescope Log

Observer: TOKARZPI: KUCHRA + FAST GROUPSpectrograph: FASTGrating: 300 l/mmDate: 3/17/94Page: 2864

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS					
11	COMP					T&F
12	EG 50	60 44 46	37 34 54	0	300	SLOW START
13	COMP			↑		
14	07 058 p 5503	07 05 48	55 03	1	300	Hx
15	COMP			↓		
16	07 150 p 5258	07 15 00	52 58	1	200	
17	COMP			↓		
18	07 150 p 5258	07 15 00	52 58	1	300	
19	08 461 p 0113	08 46 06	01 13	1	300	PROBLEMS E DOME-STOPA
20	COMP			↓		
21	08 472 p 0111	08 47 12	01 11	1	300	Hx B on chart
22	10 004 p 0235	10 00 24	02 35	1	300	Hx
23	COMP			↑		
24	10 189 p 0612	10 18 54	06 12	1	300	SCREAMING Hx
25	COMP			↑		
26	10 266 p 0523	10 26 36	05 23	1	300	
27	COMP			↓		
28	10 266 p 0523	10 26 36	05 23	1	200	moved obj off + on slit edge day edge in 2-d w/
29	10 294 p 0319	10 29 24	03 19	1	300	check coord (6)
30	COMP			↑		TU probugain - stop
31	10 320 p 0653	10 32 00	06 53	1	300	A on chart
32	COMP			↓		
33	10 320 p 0653	10 32 00	06 53	1	300	B on chart
34	10 348 p 0234	10 34 48	02 34	1	300	SOUTH A
35	10 348 p 0234	10 34 48	02 34	1	300	SOUTH B 100 Hx
36	COMP			↓		
37	10 348 p 0234	10 34 48	02 34	1	300	West on chart
38	10 410 p 0514	10 41 00	05 14	1	300	Hx
39	COMP			↑		

SLOW START - TV & DOME problems

60 inch Telescope Log

Observer: TOKANEPI: HUCHRA + FAST GROUPSpectrograph: FASTGrating: 300 l/mmDate: 3/17/94Page: 286

Number	Object	R.A.	Dec.	L/R	Exp	Comments
40	10 357 p 0411	10 3542	04 11	1	5m	
41	COMP			↑		
42	10416 p 0303	10 4136	03 03	1	5m	A merchant Hα
43	COMP			↓		
45	10417 p 0303	10 4142	03 03	1	5m	
46	10495 p 0338	10 4930	03 38	1	5m	
47	COMP			↑		
48	SN 1994D	12 31 31	07 58 30	2	8m	29,000
49	COMP			↓		
50	SN 1994D	12 31 31	07 58 30	2	7m	
51	Feige 56	12 0413	11 56 55	0	2m	10,000
52	COMP					
53	Feige 56	12 0413	11 56 55	0	2m	
54	N4486 B	12 2800	12 45 59	0	5m	
55	COMP			↑		
56	12071 p 0532	12 07 06	05 32	5	5m	
57	COMP			↓		
58	12071 p 0532	12 07 06	05 32	5	5m	
59	12490 p 0818	12 49 00	08 18	5	7m	Hα TV problems again
60	COMP			↑		
61	13296 p 0152	13 29 30	01 52	5	3m	A merchant
62	COMP			↑		
63	13298 p 0150	13 29 48	01 50	5	6m	B on chart (* mtd 200
64	COMP			↑		* core
65	13375 p 0456	13 37 30	04 56	1	5m	
66	COMP			↑		
67	H244	13 21 19.1	36 23 38	0	1m	
68	COMP			↑		
69	N5548	14 15 43.5	25 22 01	6	5m	
70	COMP			↑		

no #44

60 inch Telescope Log

Observer: TOKARZPI: HUCHRA + FAST GROUPSpectrograph: FASTGrating: 300 l/mmPage: 2864Date: 3/17/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
71	N5261	13 37 42	05 19		5 ^m	A on chart
72	COMP			↓		
73	13391 p 0517	13 39 06	05 17		5 ^m	D on chart
74	COMP			↓		
75	13388 p 0517	13 38 48	05 17		5 ^m	C on chart [FIX COORDS]
76	COMP			↓		
77	13385 p 0521	13 38 30	05 21		5 ^m	B on chart [FIX COORDS]
78	13385 p 0521	13 38 30	05 21		5 ^m	B on chart "
79	COMP			↑		
80	I 943	13 48 00	03 26		5 ^m	
81	COMP			↓		
82	I 943	13 48 00	03 26		5 ^m	
83	I 964	13 55 42	05 39		5 ^m	
84	COMP			↓		
85	I 966	13 55 42	05 39		5 ^m	
86	15411 p 0501	15 41 06	05 01		5 ^m	A on chart
87	COMP			↓		
88	15416 p 0456	15 41 36	04 56		7 ^m	B on chart
89	15366 p 0600	15 36 36	06 00		5 ^m	A on chart H.
90	COMP			↓		
91	15368 p 0559	15 36 48	05 59		5 ^m	B on chart H.
92-101	FLAT				0.1	(FIX COORDS)
102-106	BIAS					

50 inch Telescope Log

Spectrograph: FAST

Observer: J. Peters

Grating: 300

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PI: J. Huchra et al.

Date: 3/20/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-15	FLAT	For N. Caldwell			.3 ^s	FLATS CCD = 2704 x 264
16-30	FLAT				.2 ^s	2.5" SLIT
31-45	Bias					FLAT CCD = 2704 x 176
46	COMP			↓	10 ^s	2.3" SLIT
48	SN1994D				7 ^m	TEST FRAME
49	SN1994D	12 31 31	07 58 30	↓	7 ^m	Thin Clouds Around
50	SN1994D	↓	↓	↓	8 ^m	Seeing ≈ 2-3"
51	SN1994D	↓	↓	↓	8 ^m	
52	COMP			↓	10 ^s	
53	Feige 56	12 04 13	11 56 55	0	3 ^m	WRONG STAR
54	Feige 56	↓	↓	0	2 ^m	" "
55	COMP			↓	20 ^s	
56	Feige 56	12 04 13	11 56 55	0	3 ^m	CORRECT STAR
57	Feige 56	↓	↓	0	4 ^m	" "
58	COMP			↓	10 ^s	
59	Feige 67	12 39 18	17 47 24	0	2 ^m	
60	COMP			↓	10 ^s	
61	M4486B	12 28 00	12 45 59	0	5 ^m	Seeing going up down
62	COMP			↓	10 ^s	Hum 86% going UP.
63	H243	13 14 00	29 21 49	0	5 ^m	
64	COMP			↓	10 ^s	
65	N5548	14 15 43	25 22 01	6	7 ^m	
66	COMP			↓	10 ^s	
67	N 4151	12 08 01	39 41 02	6	30 ^s	
68	COMP			↓	30 ^s	
69	BD140	11 34 27	30 04 35	0	2 ^m	
70	COMP			↓	10 ^s	
71	HS1316P21	13 16 52	21 12 59	8	6 ^m	OSQ IN ELVIS
72	COMP			↓	10 ^s	Seeing 2-4"
73	HS1229P20	12 29 33	20 26 02	8	8 ^m	Big Time

MO #47

10 inch Telescope Log

Observer: J. Peters

PI: J. Huchra et al

Spectrograph: FAST

Grating: 300

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Date: 3/21/94

Number	Object	R.A.	Dec.	L/R	Exp	Comments
74	COMP			↓	10 ^s	
75	HS1222P12	12 22 54	22 51 49	8	10 ^m	Looks good
76	COMP			↓	10 ^s	
77	HS1222P21	12 22 23	21 39 23	8	10 ^m	
78	COMP			↓	10 ^s	
79	15303 P0826	15 30 18	08 26 00	↓	5 ^m	
80	COMP			↓	10 ^s	
81	15322 P0628	15 32 12	06 28 00	↓	6 ^m	
82	COMP			↓	10 ^s	
83	15342 P0358	15 34 12	03 58 00	↓	10 ^m	
84	COMP			↓	10 ^s	
85	15344 P0455	15 34 24	04 55 00	↓	10 ^m	
86	COMP			↓	10 ^s	
87	15352 P0311	15 35 12	03 11 00	↓	10 ^m	
88	COMP			↓	10 ^s	
89	16282 P0608	16 28 12	06 08 00	↓	10 ^m	
90	16282 P0608	↓	↓	↓	10 ^m	

60 inch Telescope Log

Observer: J. Peters / StevePI: J. HuchraSpectrograph: FASTGrating: 300Page: 2876Date: 3/31/94

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1	COMP			0	30 ^s	
2	COMP			↓	30 ^s	
3	AGK2, 43928	09:49:18	43:42:00	0	30 ^s	
4	COMP			↓	30 ^s	
5	AGK2, 14783	07:17:48	15:01:00	0	30 ^s	
6	COMP			↓	30 ^s	
7	07327, 1725	07:32:42	12:25:00	1	5M	
8	COMP			↓	30 ^s	
9	07340, 1001	07:34:00	10:01:00	1	8M	
10	COMP			↓	30 ^s	
11	07489, 0955	07:48:54	09:55:00	1	5M	
12	07489, 0955 E	07:48:54	09:55:00	1	10M	
13	COMP			↓	30 ^s	
14	SN1994D	12:31:31	07:58:30	2	10M	
15	COMP			↓	30 ^s	
16	Feige 56	12:04:13.8	11:56:55	2	3M	
17	COMP			↓	30 ^s	
18	Feige 67	12 39 18	17 47 24	0	2M	
19	COMP			↓	30 ^s	
20	H244	19 21 19	26 23 38	0	2M	
21	COMP			↓	30 ^s	
22	N4486 B	12 28 00	12 45 59	0	5M	
23	COMP			↓	30 ^s	
24	GD140	11 54 27	30 04 35	6	2M	
25	COMP			↓	30 ^s	
26	N4151	12 08 01	39 41 02	6	30 ^s	
27	COMP			↓	30 ^s	
28	12003m0130C	12:00:17	-01:29:57	X 5	10M	Haeckburg obj
29	12003m0130B	"	"	X 5	6M	" "
30	COMP			↓	30 ^s	

