

60 inch Telescope Log

Observer: P. Bertin & E. Barton

PI: Wilkes & Geller

Spectrograph: FAST

Grating: 3000; 3" slit; binby 4

Page: 4074

Date: 11/13/95

Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	BIAS				0s	clear
11-20	FLAT				6s	clouds to south
21	COMP				5s	
22-26	sky			0		5:40
27	COMP			↑		
28-51	spectral standards			0	2-10s	twilight
52,53	N7331	22:34	+34	0	2m	
54	COMP			↑		
55,56	BDP284211	21:48:57.1	+28:37:48	0	30s	
57	COMP			↑		
58	3C390.3	19:45:31	+79:43:07	6	2m	
59	COMP			↑		
60	MRK509	20:41:26	-10:54:48	6	90s	
61	COMP			↑		
62	SZ1.025105	22:42:45.04	+11:02:15	3	10m	
63	COMP			↑		
64	SZ1.025811	22:49:46	+10:54:18	3	10m	
65	COMP			↑		
66	SZ1.026712	22:49:23	+10:56:57.5	3	20m	H α @ pix 2099
67	COMP			↑		
68	SZ1.031992	22:50:04.15	+11:12:14.7	3	15m	cluster of galaxies
69	COMP			↑		
70	SZ1.032083	22:46:34.3	+11:12:22.4	3	15m	
71	COMP			↑		
72	SZ1.032674	23:05:11.9	+11:12:51.9	3	15m	
73	COMP			↑		
74	SZ1.035050	22:44:11.7	+11:14:01	3	20m	H α @ pix 2196
75	COMP			↑		
76	S19.068200	22:19:04.6	+11:39:50.4	3	20m	
77	COMP			↑		

gain 1.15
noise 8.89

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>4075</u>		
Observer: <u>PB/EB</u>		Grating: <u>300</u>		Date: <u>11/13/85</u>		
PI: <u>Geller</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
78	519.072980	22-11:31.44	+11:47:42.8	3	7m	
79	COMP			↑		
80	519.077246	21-58:35.42	+11:51:2.5	3	20m	H ₂
81	COMP			↑		
82	519.083064	22-01:51.8	+12:05:55.4	3	20m	
83	COMP			↑		
84	519.090682	22-18:45.52	+12:20:24.8	3	20m	
85	COMP			↑		
86,88	SN1995AK	02-45:48.8	+03:13:50	2	15m	x2
87,89	COMP			↑		
90,91	Hiltner 102	01-05:53.8	+62:31:32	0	20s	
92	COMP			↑		
93	a194-gal1041	01-27:22.5	-02:25:45.5	33	10m	
94	COMP			↑		
95	a194-gal042	01-27:22.5	-01:14:27.5	33	20m	
96	COMP			↑		
97	a194-gal043	01-27:26.5	-01:38:53.8	33	20m	
98	COMP			↑		
99	a194-gal044	01-27:32.9	-01:14:43.9	33	10m	
100	COMP			↑		
101	468.020189	01-53:02.51	+11:07:37.8	3	16m	
102	COMP			↑		
103	468.024692	01-46:56.27	+11:26:17.3	3	15m	
104	COMP			↑		
105	468.025025	01-56:12.77	+11:26:42.4	3	15m	
106	COMP			↑		
107	468.028353	01-49:39.43	+11:40:56.3	3	15m	
108	COMP			↑		
109	468.031091	01-44:20.89	+12:02:10.1	3	15m	
110	COMP			↑		

103 - H₂??

Mumise - 11 ; 08:40+12

S167.3
S172.7
S183.6

60 inch Telescope Log

Observer: PB/EB
 PI: Karanyi/Kenyon/Briceno

Spectrograph: FAST
 Grating: 3000
 Date: 11/13/95

Page: 4076

Number	Object	R.A.	Dec.	L/R	Exp	Comments
111	awm7-2001	02:49:20.6	+40:53:17	35	15m	bright moon
112	COMP			↑		
113	awm7-2004	02:49:45.9	+41:27:26.1	35	20m	H α = pix 2340
114	COMP			↑		
115	awm7-2005	02:49:52.8	+40:43:28.3	35	15m	H α
116	COMP			↑		
117	awm7-2008	02:50:26.5	+41:56:45.8	35	20m	2 bright * on slit
118	COMP			↑		
119	awm7-2012	02:50:38.9	+41:41:54.3	35	8m	bright * on slit
120	COMP			↑		
121	04108p2910E	04:10:49	+29:10:42	30	5m	East of cross hair
122	COMP			↑		
123	04108p2910W1	"	"	30	6m	*
124	04108p2910W2	"	"	30	8m	*
125	COMP			↑		
126	04171p2756E	04:17:11	+27:56:47	30	6m	
127	04171p2756W	"	"	30	15m	faint nebula to SW
128	COMP			↑		
129	04413p2608	04:41:23.9	+26:08:33	30	15m	other *'s on slit
130	COMP			↑		
131	04428p2403	04:42:53.1	+24:03:26	30	15m	this object is fuzzy for a good reason: H α 7063Å!
132	COMP			↑		
133	p1314-11	04:47:33.3	+29:31:24	38	10m	
134	COMP			↑		
135	p1314-9	04:48:49.4	+30:01:46	38	5m	
136	COMP			↑		
137	p1314-6	04:49:44.7	+28:20:29	38	90s	
138	COMP			↑		
139	p1314-7	04:49:21.3	+30:55:34	38	30s	
140	COMP			↑		

60 inch Telescope Log

Observer: PB/EBSpectrograph: FBIGrating: 300Page: 4077PI: Britzen/Kirshner/HuchraDate: 11/13/95

Number	Object	R.A.	Dec.	L/R	Exp	Comments
141	p1314-y	04:51:42.9	+30:47:19	38	90s	H α
142	COMP			↑		
143	p1314-z	04:52:09.7	+30:57:45	38	10m	strong H α
144	COMP			↑		
145,147	SNI99sa1	09:50:55.9	+33:37:09	2	10m	+2 25,000ents continuum
146,148	COMP			↑		
149	CGCG06p6343	09:20:36	+63:43:60	1	5m	finally a bright galaxy!
150	COMP			↑		aged d' cfa 15.5 mag
151	CG 22C p6278	09:22:36	+62:38:60	1	5m	star
152	CG 257p6246	09:25:42	+62:46:60	1	5m	H α
153	COMP			↑		
154	MRK 421	11:01:40	+38:28:43	6	2m	
155	COMP			↑		
156	NY151	12:08:01.1	+39:41:01	6	1m	
157	COMP			↑		
158,159	Ferguson	10:36:41	+43:21:50	0	30s	
160	COMP			↑		
161-163	DLMon	07:27:59	-03:20:60	12	5,15,30s	
164	COMP			↑		
165-167	UUAur	05:18:23	+32:27:51	12	15,10s	
168	COMP			↑		
169-173	AGKZp14783	07:17:47	+14:58:37	0	5s	def + trl no comp; redo
174-175	Hiltner 600	06:42:37	+02:11:25	0	30s	
176	COMP			↑		
177-181	AGKZp14783	07:17:47	+14:58:37	0	5s	def + trl
182	COMP			↑		
183-192	BIAS				0s	
193-202	FLAT				6s	
203-206	DARK				15m	

60 inch Telescope Log

Observer: E. Barton

PI: Geller/Barton

Spectrograph: FAST

Grating: 3000:3' slit, minor 4 Page: 4078

Date: 11/14/95

the
waders
partly
wrong
with
line

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS				0s	clear!
11-20	FLAT				6s	
21-25	SKY			0	15s	S.SS - counts were too low
26	COMP					
27-36	FLAT				6s	redo (forgot to do COMP offset)
37	COMP					slightly out of focus?
38	COMP					changed focus in 1 increment, most peaks thinner, one is clear (the spot + peak just over 2100)
39	N7331	22:34:46.9	+34		2m	can't find finding chart but coordinates look ok + this is BRIGHT yellow!
40	COMP					
41	BDp284211	21:48:57.1	+28:39:48	0	30s	hard to tell if this is right from finding chart, looks right + I have it is!
42	COMP					
43	BDp284211	21:48:57.1	+28:39:48	0	30s	
44	COMP					
45	S21.035553	22:50:42.4	+11:25:29.6	3	20m	SATURATED - not good
46	COMP			↑		having TV problem - fades out
47	S21.033653	22:50:42.4	+11:25:29.6	3	10m	counts still VERY strong - lost tracking?? still problem w/ TV - probably not usable
48	COMP			↑		
49	a194-gal45	01:27:26.7	-01:48:56.8	33	15m	very low signal to noise, no features
50	COMP			↑		
51	a194-gal46	01:27:26.7	-01:48:56.8	33	10m	
52	COMP			↑		
53	a194-gal47	01:27:26.7	-01:48:56.8	33	20m	
54	COMP			↑		
55	a194-gal48	01:27:26.7	-01:48:56.8	33	20m	little trouble tracking (maybe star)
56	COMP			↑		
57	a194-gal52	01:28:02.15	-00:44:18.6	33	10m	
58	COMP			↑		
59	468.036395	01:46:39.9	+12:10:21.1	3	20m	
60	COMP			↑		

unmatched objects
98-102. SKY

rd noise 9.24
gain 1.20

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>E. Barton</u>		Grating: <u>300, 3" slit, bin by 4</u>			Page: <u>4079</u>	
PI: <u>Geller/Koranyi/Huchra/Gardner</u>		Date: <u>11/14/95</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
61	468.036003	1:46:24.81	12:11:09.5	3	20m	
62	COMP			↑	↑	
63	468.038595	1:42:53.00	12:18:10.7	3	15m	
64	COMP			↑		
65	468.039020	1:37:39.07	12:19:24.3	3	20m	
66	COMP			↑		
67	awm7-2.017	2:50:58.3	41:03:47.8	35	20m	
68	COMP			↑		
69	awm7-2.022	2:51:17.7	41:09:18.4	35	15m	
70	COMP			↑		
71	awm7-2.023	2:51:29.3	41:04:26.8	35	12m	
72	COMP			↑		
73	awm7-2.025	2:51:31.50	41:43:53.4	35	20m	looks like 2 obj., center of slit is on lower one
74	COMP			↑		
75	awm7-2.027	2:51:41.10	42:21:51.88	35	20m	low sig-to-noise faint obj.
76	COMP			↑		
77	awm7-2.035	2:52:00.60	41:27:11.99	35	7m	
78	COMP			↑		
79	03472p3156	03:42:12.3	31:56:33	30	10m	
80	COMP			↑		
81	03473p3159	03:41:44.1	31:59:02	30	10m	Very faint !!! try again
82	COMP			↑		
83	03473p3159	" "	" "	30	20m	Didn't do 2nd comp but is same object anyway.
84	07008p4525	07:04:34.9	45:19:47.8	1	10m	
85	COMP			↑		
86	07028p3915	07:06:14.4	39:10:26	1	15m	pretty faint ... moon nearby
87	COMP			↑	↑	
88	07035p4455	07:07:26	40:21:09.3	1	20m	bright moon nearby...
89	COMP			↑		
90	030123	04:22:29.7	23:16:11	37	10m	

73 extracted bright object
(not lower one)

60 inch Telescope Log

Observer: E. Barton

PI: Geller/Barton

Spectrograph: FAST

Grating: 300, 3'slit, bin by 4

Page: 4081

Date: 11/15/95

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS				0s	
11-20	FLAT				6s	
21	COMP					done w/ dome closed
22	N 7331	22:39:03.4	34:24:28	0	2m	opened @ 7:22PM
23	COMP			↑		
24	BDp284211	21:42:57	28:37:48	0	30s	
25	COMP			↑		
26	S21.035659	22:47:9.64	11:27:51.8	3	20m	very LSB, may not be right on slit
27	COMP			↑		also had guiding problems - not too bad
28	S21.037081a	23:06:10.8	11:25:32	3	17m	also LSB, spec doesn't look good
29	COMP			↑		obj. off slit?
30	S21.037081b	23:06:12.5	11:25:55.2	3	17m	
31	COMP			↑		
32	S21.042750	22:50:20.87	11:44:02.8	3	20m	
33	COMP			↑		
34	S21.043801	22:48:26.87	11:44:06.1	3	20m	
35	COMP			↑		
36	a194-gal 049	01:27:56.13	-01:21:28.3	33	15m	
37	COMP			↑		
38	a194-gal 050	01:29:58.3	-01:53:18.7	33	20m	not very good!
39	COMP			↑		
40	a194-gal 051	01:28:02.34	-01:37:30.6	33	15m	tracking was a little
41	COMP			↑		
42	a194-gal 053	01:28:03.57	-01:45:15	33	20m	bad tracking (a)
43	COMP			↑		reason looks well (b)
44	a194-gal 55	01:28:34.18	-01:53:34.2	33	20m	
45	COMP			↑		
46	a194-gal 56	01:29:03.2	-01:27:15.4	33	10m	
47	COMP			↑		
48	a194-gal 57	01:29:26.43	-01:11:56.8	33	12m	

notes →
we wrong! →

gain 1.16
nd rise 8.98

60 inch Telescope Log
 Observer: E. Barton
 PI: Barton / Karanjy / Gordinan / Helwa / Kishan / Wilkes
 Spectrograph: FAST
 Grating: 3' slit, bin by 4 or 2 Page: 4082
 Date: 11/15/95

Number	Object	R.A.	Dec.	L/R	Exp	Comments
49	COMP			33		
50	al94_gal058	01:29:49.45	-01:05:20.65	33	7m	I think it's a star! yes! skipped some across slit!
51	COMP			↑		
52	al94_gal059	01:29:53.95	-01:11:53.75	33	15m	
53	COMP			↑		
54	awm7-2.019	02:51:12.8	40:59:38.48	35	20m	LSB - extra obj. off road slit!
55	COMP			↑		
56	awm7-2.018	02:51:12.5	41:02:08.8	35	17m	
57	COMP			↑		
58	awm7-2.021	02:51:17.20	42:07:03.8	35	17m	
59	COMP			↑		
60	awm7-2.024	02:51:33.5	40:46:27.1	35	20m	
61	COMP			↑		
62	091085	01:22:30.3	25:30:19	37	15m	looking to guide from
63	COMP			↑		
64	091084	01:22:31.0	25:12:40	37	12m	
65	COMP			↑		
66	091083	01:22:36.5	25:15:57	37	15m	
67	COMP			↑		
68	091081	01:22:34	25:25:32	37	10m	
69	COMP			↑		
70	092090	01:21:18	25:09:57	37	12m	
71	COMP			↑		
72	092087	01:21:26	25:19:49	37	15m	other obj. on edge of slit
73	COMP			↑		
74	07063p123	07:09:55	42:28:50	1	15m	
75	COMP			↑		
76,78	SN199sal	09:50:55.9	33:33:09	2	10m	x2; binned by 2!! header for 0076, SN199sal wrong! COMP binned by 2 also!
77,79	COMP			↑		
header using 80	N4151	12:08:01	39:41:01 (195)	6	1m	binned by 4 again ↑ header using

60 inch Telescope Log

Observer: E. Barton

PI: Wilkes/Celler/Krishnan/Bellri

Spectrograph: FAST

Grating: 300, 2.3" slit, binby 4 Page: 4084

Date: 4/16/95 7or 2

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	clean!
11-20	FLAT			↑	6s	
21-25	SKY			↑	2s	
26	COMP					
27	COMP					focus in to <u>940</u>
28	N7331	23:34:46.9	24:29:43	0	2m	
29	COMP			0		
30	B028421	21:48:59	28:37:48	↑	30s	header is wrong!
31	COMP			↑		
32	MEK 509	20:41:26.0	-10:54:18	6	1m	
33	COMP			↑		
34	SZ1.043216	22:51:46.52	11:45:20.6	3	20m	header is wrong, give sand
35	COMP			↑		ALMOST AS SZ1.043216, but I'm almost sure I moved the telescope!
36	SZ1.043263	22:56:58.26	11:45:19.7	3	20m	
37	COMP			↑		
38	SZ1.044373	22:51:04.1	11:48:44.6	3	20m	nearby obj.
39	COMP			↑		
40	SZ1.044378	22:51:28	11:48:46.7	3	15m	star just above slit!
41	COMP			↑		Header wrong
42	SZ1.044992	22:45:00.32	11:50:18.7	3	20m	
43	COMP			↑		
44	SNZw0045.2p	22:41:00.44	29:56:43.8	2	15m	binned by 2! had trouble guiding!
45	COMP			↑		binned by 2! looks like I just got the guide star
46	SNZw0045.2p	22:41:11	"	2	15m	looks like gal. & SN
47	COMP			↑		looks like gal. & SN
48	SZ1.045277	22:57:19.89	11:51:15.5	3	15m	may be on slit
49	COMP					binned by 4 seeing this. Do I need to redo?
50	SZ1.045852	23:04:15.23	11:52:28.2	3	20m	
51	COMP			↑		

header wrong?

2nd header wrong?

1.16
8.96

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>E. Barton</u>			Grating: <u>300Å, 3" slit, bin by 4</u>		Page: <u>4085</u>	
PI: <u>Geller/Barton/Koranyi</u>			Date: <u>11/16/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
52	521.06072	22:49:13.56	11:53:52.2	3	10m	
53	COMP			↑		
54	gr 904 - gal 10 Z	01:23:16.86	14:39:31.68	33	8m	
55	COMP			↑		
56	gr 904 - gal 10 3	01:23:34.19	13:04:55.24	33	12m	
57	COMP			↑		
58	gr 904 - gal 10 4	01:23:47.58	14:14:33.32	33	12m	
59	COMP			↑		
60	gr 904 - gal 10 5	01:24:02.39	14:25:06.28	33	12m	
61	COMP			↑		
62	gr 904 - gal 10 7	01:24:54.66	14:13:06.56	33	20m	obj. to the side...
63	COMP			↑		
64	gr 904 - gal 10 8	01:25:01.99	14:23:59.02	33	20m	
65	COMP			↑		
66	gr 904 - gal 10 9	01:25:36.48	14:53:36.02	33	15m	
67	COMP			↑		
68	gr 904 - gal 10 10	01:25:34.65	14:58:31.23	33	10m	bad guiding, no reference!!
69	COMP			↑		
70	gr 904 - gal 10 12	01:26:34.05	14:12:02.81	33	8m	
71	COMP			↑		
72	gr 904 - gal 10 13	01:26:39.87	14:12:03.10	33	15m	obj. on center is the galaxy
73	COMP			↑		
74	awm 7 - 2.039	02:52:15.5	41:23:55.1	35	10m	
75	COMP			↑		
76	awm 7 - 2.042	02:52:19.9	42:12:50.62	35	12m	
77	COMP			↑		
78	awm 7 - 2.052	02:52:59	41:58:24.7	35	15m	
79	COMP			↑		
80	awm 7 - 2.053	02:53:00.7	41:06:27	35	20m	
81	COMP			↑		

60 inch Telescope Log
 Observer: E. Barton
 PI: Koranyi
 Spectrograph: FAST
 Grating: 300, 3" slit, bin by 4 Page: 4086
 Date: 11/16/95

Number	Object	R.A.	Dec.	L/R	Exp	Comments
82	awm7-2.057	02:53:07	41:12:37.9	35	12m	worst obj. in center!
83	COMP			↑		
84	awm7-2.058	02:53:07.7	41:25:03.6	35	10m	
85	COMP			↑		
86	092086	04:21:25.2	25:23:43	37	15m	very windy! (20-25 mph)
87	COMP			↑		cloud star in center!
88	092088	04:21:30.8	25:16:35	37	15m	
89	COMP			↑		
90	092089	04:21:22.4	25:11:25	37	20m	still very windy,
91	COMP			↑		clouds in East & moon!
92	091082	04:22:38.2	25:19:52	37	20m	
93	COMP			↑		
94	07084p468	07:09:17.6	45:53:19	1	7m	
95	COMP			↑		
96	07104p465	07:10:29.4	46:05:31	1	7m	
97	COMP			↑		
98	07110p465	07:11:03.0	46:52:40	1	5m	star?
99	COMP			↑		
100	07116p3525	07:11:34.2	35:25:37	1	10m	worst guy on slit,
101	COMP			↑		not star far from center
102	N41S	12:08:01.1	39:41:01	1	1m	bad guiding...
103	COMP			↑		
104	Feig 34	10:36:41.2	47:21:50	0	30s	
105	COMP			↑		
106	07119p4942	07:11:54.6	49:41:09	1	12m	
107	COMP			↑		
108	07130p4958	07:13:03.3	49:57:51	1	5m	reclining down...
109	COMP			↑		sun is rising!!
110-119	BIAS			0	0s	found a door open to dome
120-129	FLAT			0	6s	at end of night -

130-139 FLAT, binned by 2

140-149 BIAS, binned by 2

12s BINNED by 2

0s

open by wind ~ 1/2 hr. ago
 could affect last few spectra?!

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>E. Barton</u>		Grating: <u>3000</u> , 3" slit, bin by 4 or 2 Page: <u>4087</u>				
PI: <u>Geddon/Kirshner/Geller/Barton</u>		Date: <u>11/17/95</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	no clouds; a little hazy.
11-20	FLAT			0	6s	
21	COMP			↑		w/ dome closed.
22-26	SKY			0	2s	
27	COMP			↑		
28	N7331	23:34:46.9	34:09:43	0	2m	not quite dark!
29	COMP			↑		
30	BD284211	22:51:00	28:51:00	0	30s	
31	COMP			↑		
32	S21.046508	22:44:10.05	11:54:41.2	3	12m	
33	COMP			↑		
34	S21.046701	23:06:32.82	11:55:09.4	3	20m	found! big star we don't want on slit
35	COMP			↑		
36	S21.046706	23:06:38.51	11:54:03.3	3	10m	obj. may be slightly off center (off of 46)
37	COMP			↑		
38,40	SN1995ab	23:26:44.96	-04:57:45.9	2	20m	binned by 2!
39,41	COMP			↑		binned by 2!
42	S21.046970	22:50:52.22	11:56:24.8	3	12m	binned by 4 again!
43	COMP			↑		
44	S21.47017	23:08:1.92	11:54:40.9	3	20m	header wrong!
45	COMP			↑		
46	S21.047192	22:44:03.39	11:56:51.2	3	17m	the galaxy put off center of to have guider stars
47	COMP			↑		
48	S21.047714	22:50:46.11	11:58:43.1	3	15m	
49	COMP			↑		
50	gn904_gal14	01:26:48.2	14:30:17	33	20m	very faint!!
51	COMP			↑		
52	gn904_gal15	01:27:23.0	15:33:13	33	10m	
53	COMP			↑		
54	gn904_gal17	01:27:31.13	14:49:10.9	33	8m	

advised 8.69
gain 1.14

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>E. Barton</u>		Grating: <u>200; 3" slit; bin by 4x2</u>			Page: <u>4088</u>	
PI: <u>Barton / Kiehn / Barton / Kovanyi</u>		Date: <u>11/17/95</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
55	COMP			33		
56	gn 904 - gal 18	01:27:38.24	14:21:19.26	33	15m	made object far off slit to have guide star!
57	COMP			7		
58	gn 921 - gal 04	01:18:53.10	33:10:27.62	33	7m	
59	COMP			↑		
60	gn 921 - gal 05	01:19:12.11	33:01:52.01	33	8m	
61	COMP			↑		
62	gn 921 - gal 06	01:19:22.09	32:42:23.4	33	12m	
63	COMP			↑		
64	gn 921 - gal 07	01:19:48.51	32:46:04.2	33	8m	
65	COMP			↑		
66	gn 921 - gal 08	01:20:01.69	33:31:29.21	33	8m	
67	COMP			↑		
68	gn 921 - gal 09	01:20:37.79	33:33:25.71	33	20m	
69	COMP			↑		
70, 72	SN 1995 ak	02:45:48.8	03:13:50	2	15m	binned by 21
71, 73				↑		binned by 2!
74	gn 921 - gal 10	01:20:4.4	33:02:42.2	33	5m	could be star! binned by 4
75	COMP			↑		again
76	gn 921 - gal 12	01:20:56.89	31:59:11.11	33	8m	
77	COMP			↑		
78	awm 7 - 2.067	02:53:16.2	41:29:11.8	35	10m	
79	COMP			↑		
80	awm 7 - 2.067	02:53:29	42:05:06.50	35	17m	seeing suddenly turned awful!
81	COMP			↑		
82	awm 7 - 2.073	02:53:41.0	41:27:15.08	35	10m	
83	COMP			↑		
84	awm 7 - 2.074	02:53:47.1	41:32:49.09	35	17m	seeing is just horrible!
85	COMP			↑		
86	awm 7 - 2.077	02:53:51.5	41:40:25.61	35	20m	seeing still really bad!

60 inch Telescope Log

Observer: E. Barton

PI: Koranyi/Huchra

Spectrograph: FAST

Grating: 300L, 3" slit, binby 4 or 2 Page: 4089

Date: 11/17/95

Number	Object	R.A.	Dec.	L/R	Exp	Comments
87	COMP			35		
88	07137p 4553	07:13:46.15	45:52:44	1	10m	Seeing is really
89	COMP			↑		<u>unbelievably awful!</u>
90	07152p 2705	07:15:06.75	22:08:57	1	15m	↑
91	COMP			7		
92	07148p 2552	07:14:47.65	25:58:23	1	10m	seeing horrible!
93	COMP			↑		
94	07156p 2107	07:15:33.33	21:07:20	1	10m	" "
95	COMP			↑		
96	07165p 2435	07:16:33.5	23:27:47	1	15m	" "
97	COMP			?		
98	07165p 3443	07:16:33.55	34:27:47	1	15m	distorted off slit near the spectrograph end... worth taking a gain now in dark seeing
99	COMP			↑		
100	7178p 2327	07:17:49.9	23:27:47	1	15m	terrible seeing!
101	COMP			↑		
102, 101	SN 1995al	09:50:55.9	33:33:09	2	10m	binby 2 - seeing still quite poor!
103, 106	COMP			↑		
106	M151	12:08:01.1	39:41:01	6	1m	sun is rising; binby 4
107	COMP			↑		
108	Feige 34	10:36:41.2	43:21:50	0	30s	
109	COMP			↑		
110-119	BIAS			0	0s	binby 4
120-129	FLAT			0	6s	binby 4
130-139	FLAT			0	12s	binned by 2
140-149	BIAS				0s	binned by 2

reads wrong?

60 inch Telescope Log
 Observer: F. Barton
 PI: Wilkes/Geller
 Spectrograph: FAST
 Grating: 300, 3" slit; binby 34 Page: 4090
 Date: 11/18/95

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	no clouds! <i>Seeing better than yesterday</i>
11-20	Flat			0	6s	
21-26	sky			0	2s	sky level is ^{won't} down after 1st frame; 12 just use 22-26!
27	COMP			↑		
28	COMP			↑		w/ focus moved in to 920
29	N7331	22:24:56.2	30:50:43	0	2m	sky still a little ^(from 940) bright
30	COMP			↑		
31	BD p284211	21:48:52.1	22:32:42	0	30s	
32	COMP			↑		
33	3C390.3	18:45:37	39:43:37	6	2m	
34	COMP			↑		
35	S21.049080	22:54:18.0	12:02:36.6	3	20m	incredibly faint LSB
36	COMP			↑		(probably shouldn't be trying)
37	S21.048083	22:48:39.41	11:59:42.9	3	15m	
38	COMP			↑		
39	S21.049389	22:45:19.47	12:03:25.2	3	10m	redding, doesn't look ^{good} to ^{me}
40	COMP			↑		
41	S21.049389	"	"	3	20m	OK, maybe this way
42	COMP			↑		too long, ...
43	S21.050117	22:53:42.37	12:05:55.4	3	15m	
44	COMP			↑		
45	S21.053621	22:47:19.24	12:16:39.3	3	15m	unaxi'd star off center
46	COMP			↑		
47	S21.053637	22:43:22.04	12:16:27.1	3	12m	unaxi'd obj off center
48	COMP			↑		
49	S21.053755	22:52:41.83	12:17:11.7	3	15m	
50	COMP			↑		
51	S21.054004	22:54:29.31	12:17:51.2	3	12m	
52	COMP			↑		
53	S21.054310	22:47:05.68	12:18:34.6	3	8m	

*2 lines 8.8
 gain 1.15*

60 inch Telescope Log

Observer: E. Barton

PI: Geller/Barton

Spectrograph: FAST

Grating: 3000; 3" slit, binby 4x2 Page: 4091

Date: 11/18/95

Number	Object	R.A.	Dec.	L/R	Exp	Comments
54	COMP			3		
55	521.060107	22:45:38.3	12:37:35.7	3	17m	
56	COMP			↑		
57	gn 921 - gal 13	01:20:59.88	34:14:55.21	33	3m	
58	COMP			↑		
59	gn 921 - gal 14	01:21:00.03	34:41:46.3	33	5m	I think this is a star!
60	COMP			↑		
61	gn 921 - gal 15	01:21:03.01	33:53:55.4	33	4m	bad star on slit (off center)
62	COMP			↑		
63	gn 921 - gal 16	01:21:05.02	33:27:43.36	33	4m	could be star
64	COMP			↑		
35 65	gn 921 - gal 17	01:21:07.58	33:05:28.8	33	4m	IS A STAR!
66	COMP			↑		
36 67	gn 921 - gal 18	01:21:08.29	33:09:31.18	33	4m	I think this is a star... there's a don't really look like stars or the primary clouds, I don't know what
68	COMP			↑		
37 69	gn 921 - gal 19	01:21:32.34	37:12:52.84	33	8m	this is a galaxy!
70	COMP			↑		(finally...)
38 71	gn 921 - gal 20	01:21:31.28	33:36:01.19	33	8m	galaxy!!
72	COMP			↑		
39 73	gn 921 - gal 21	01:21:32.31	37:36:21.3	33	6m	next obj. at p. 40
74	COMP			↑		
40 75	gn 921 - gal 22	01:21:44.59	33:29:57.46	33	8m	
76	COMP			↑		
42 77	gn 921 - gal 24	01:21:55.56	33:07:51.49	33	17m	
78	COMP			↑		
43 79	gn 921 - gal 25	01:22:00.96	33:30:34.59	33	6m	
80	COMP			↑		
81	gn 921 - gal 26	01:22:11.78	33:26:56.65	33	10m	
82	COMP			↑		
83	gn 921 gal 27	01:22:15.12	33:46:08.88	33	6m	

60 inch Telescope Log				Spectrograph: <u>FAST</u>			
Observer: <u>F. Burton</u>				Grating: <u>300L, 3" slit, binby 4x2</u>		Page: <u>4092</u>	
PI: <u>Burton / Kirchner (Koumji / Mukra)</u>				Date: <u>11/18/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments	
84	COMP			33			
85	gn921 - gal28	01:27:23.51	33:48:55.27	33	10m		
86	COMP			↑			
87	gn921 - gal29	01:22:23.75	35:12:34.93	33	4m	spec. looks good but gal p = S.Sb...?	
88	COMP			↑			
89, 93	SM19956	01:43:42	05:19:00	2	20m	binned by 2; ^{seeing} ^{1.1"}	
90, 92, 94	COMP			↑		" " " ^{work}	
95	awm7-2.166	02:59:15.30	42:21:51.11	35	15m	binby 4 again; star also on slit (w/out gal, obj in center)	
96	COMP			↑			
97	awm7-2.165	02:58:49.8	41:57:12.6	35	12m		
98	COMP			↑			
99	07215 p 4012	07:21:32.6	40:12:31	1	5m		
100	COMP			↑			
101	07217 p 4207	07:21:41.44	42:07:00	1	8m	(star?)	
102	COMP			↑			
103	07219 p 4600	07:21:46.16	45:59:34	1	15m	unwanted star on slit	
104	COMP			↑			
71	105	07238 p 3134	07:23:47.3	31:33:01	1	5m	
	106	COMP		↑			
70	107	07224 p 4007	07:22:21.8	40:47:56	1	15m	
	108	COMP		↑			
72	109	07248 p 4000	07:24:50.8	40:11:12	1	6m	star?
	110	COMP		↑			
74	111	07268 p 4927	07:26:45.1	49:27:20	1	15m	
	112	COMP		↑			
75	113	07270 p 3728	07:27:08.87	37:28:48	1	10m	
	114	COMP		↑			
81	115	07319 p 2484	07:31:57.2	24:33:47	1	5m	
	116	COMP		↑			
	117	07344 p 2857	07:34:24.00	28:57:00	1	15m	


60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>P Berlin</u>		Grating: <u>3000, 3'Slit binby 4</u>			Page: <u>4094</u>	
PI: <u>Geller</u>		Date: <u>11/19/95</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BTAS				0s	clear skies!
11-20	FLAT				6s	
21-22	COMP	test				960
23-27	sky				2s	
28	COMP				5s	
29-34	spec standards				5s	
35-36	N7331	22:34	+34:09	0	2m	
37	COMP			↑		
38	MRK509	20:41:26	-10:54:18	6	1m	
39	COMP			↑		
40-41	Fergello	23:17:23	-05:26:22	0	30s	
42	COMP			↑		
43	MRK335	00:03:45.1	+19:56:27	6	1m	
44	COMP			↑		
45,47	158m23	00:40:02	+40:50:55	0	5m	
46,48	COMP			↑		problems w/ TV
49	SZ1.062818	23:01:36	+12:44:34	3	15m	
50	COMP			↑		
51	SZ1.06466	22:49:3583	+17:51:04.9	3	15m	
52	COMP			↑		
53	SZ1.065074	22:59:236	+12:51:49	3	10m	
54	COMP			↑		
55	SZ1.066430	22:54:38.71	+12:46:37	3	12m	
56	COMP			↑		
57	SZ1.066772	22:47:5506	+12:57:09	3	15m	
58	COMP			↑		
59	SZ1.066714	22:57:53	+12:57:32	3	12m	
60	COMP			↑		
61	SZ1.070247	23:00:5339	+13:06:16.3	3	20m	Ha = pix 2110
62	COMP			↑		

m

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>4095</u>		
Observer: <u>P. Berlin</u>		Grating: <u>300L</u>		Date: <u>11/11/85</u>		
PI: <u>Geller</u>						
Number	Object	R.A.	Dec.	L/R.	Exp	Comments
6365 6466	S21.068667 COMP	22:43:2240	+13:07:27	3 ↑	15m	20m x2 H α pr 2486
6773 6874	S21.072096 COMP	23:07:0672	+13:13:018	3 ↑	20m	x2 good luck Susan!
69 70	S21.074600 COMP	22:59:3643	+13:22:099	3 ↑	5m	
71 72	S21.076739 COMP	22:42:362	+13:28:433	3 ↑	20m	weak features
75 76	S21.077108 COMP	22:59:0072	+13:29:527	3 ↑	5m	finishes the plate!
77 78	468.042319 COMP	01:42:4877	+12:31:47	3 ↑	15m	H α
79 80	468.044429 COMP	01:55:3913	+12:38:352	3 ↑	10m	
81 82	468.044585 COMP	01:45:2125	+12:40:118	3 ↑	10m	
83 84	468.044959 COMP	01:47:5529	+12:41:29	3 ↑	20m	H α
85 86	468.047277 COMP	01:48:422	+12:49:514	3 ↑	10m	
87 88	468.037658 COMP	01:51:0216	+12:47:784	3 ↑	20m	H α
89 90	468.035752 COMP	01:31:4566	+12:07:05	3 ↑	15m	H α
91 92	468.048695 COMP	01:47:789	+12:55:121	3 ↑	12m	* on slit
93 94	468.047392 COMP	01:47:56	+12:50:256	3 ↑	12m	
95 96	468.050695 COMP	01:54:5798	+13:01:293	3 ↑	15m	

6796

602-234-2660

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4096</u>	
Observer: <u>PB</u>			Grating: <u>300L</u>			
PI: <u>Koranyi/Huchra</u>			Date: <u>11/19/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
97	468.052030	01:50:36.96	+13:06:39.1	3	15m	Weak H α @ slit 2056
98	COMP			↑		
99	02m7-2.015	02:50:52.8	+41:45:52.7	35	15m	* on slit
100	COMP			↑		
101	02m7-2.011	02:50:35.8	+41:52:45.3	35	20m	
102	COMP			↑		
103,105	0439p35	04:39:20.3	+35:36:07	1	5m	10m x2 "red" galaxy
104,106	COMP			↑		welcome to the 
107	0443p27	04:43:07.6	+27:55:54	1	8m	<u>Place</u>
108	COMP			↑		
109	0445p28	04:45:37.7	+28:40:03	1	8m	
110	COMP			↑		
111	0503p30	05:03:11.4	+30:27:37	1	8m	* on slit
112	COMP			↑		
113	0505p31	05:05:32	+31:12:31	1	8m	
114	COMP			↑		
115	0513p30	05:13:22.1	+30:39:57	1	7m	* slit
116	COMP			↑		
117	0506p23	05:06:21	+23:43:41	1	15m	sup er *
118	COMP			↑		
119	0508p31	05:08:37.7	+31:28:05	1	7m	
120	COMP			↑		star
121	0513p19	05:13:25.5	+19:23:57	1	10m	spiral H α
122	COMP			↑		
123	0513p16	05:13:35.7	+16:57:59	1	6m	
124	COMP			↑		
125	0513p18	05:13:16.6	+18:45:05	1	6m	
126	COMP			↑		
127	0517p19	05:17:41.5	+19:40:16	1	5m	H α
128	COMP			↑		

60 inch Telescope Log

Observer: PS
 PI: Hucha

Spectrograph: FAST
 Grating: 7002
 Date: 11/19/95

Page: 4097

Number	Object	R.A.	Dec.	L/R	Exp	Comments
129	0518p17	05-18-20.3	+17-03-45	1	10m	00 star to E Ha
130	COMP			↑		
131	0523p17	05-23-25.7	+17-25-19	1	5m	
132	COMP			↑		
133	U03591	66-54-47.4	+34-45-28	1	7m	aka 0614p3456
134	COMP			↑		Ha UGC coords wrong-394
135	07004p2746	07-00-22.8	+27-45-15	1	8m	Ha
136	COMP			↑		
137	U03693	07-05-18	+44-55-40	1	10m	Ha
138	COMP			↑		
139	07057p2930	07-05-42	+29-22-10	1	5m	
140	COMP			↑		
141	IC2178	07-04-23	+32-35-29	1	5m	
142	COMP			↑		
143	U03686	07-04-42	+46-44-40	1	10m	Ha
144	COMP			↑		
145	07047p4812	07-04-42	+48-12-10	1	10m	Ha
146	COMP			↑		
147-156	BIAS			0	0s	
157-166	FLAT			0	6s	
						nice night

60 inch Telescope Log

Observer: P. Berline

PI: Geller

Spectrograph: FAST

Grating: 3500, 30 slit, 1000 Å

Date: 11/20/95

Page: 4098

Number	Object	R.A.	Dec.	L/R	Exp	Comments
10	BTAS			0	0s	
11-20	FLAT			0	6s	
21-26	SK ₂			0	3s	
27	COMP			↑	5s	
28,29	N7331	22:31:46.9	+34:09:43	0	2m	
30	COMP			↑		
31,32	BDP48211	21:48:57	+28:37:48	0		
33	COMP			↑		
34	MRK 335	00:23:45.1	+19:55:27	0	1m	
35	COMP			↑		
36,38	163m 217	00:40:32.7	+41:11:20	0	5m	
37,39	COMP			↑		
40	S20.019183	22:29:01.3	+10:30:38.3	3	10m	H α
41	COMP			↑		
42	S20.024511	22:44:21.74	+10:42:52	3	10m	
43	COMP			↑		
44	S19.010297	22:13:40.63	+12:42:12.2	3	15m	
45	COMP			↑		
46	S19.106877	22:17:51.47	+12:48:52.5	3	15m	
47	COMP			↑		
48	S19.107067	22:14:58.48	+12:49:27.5	3	20m	nice dust lane; H α
49	COMP			↑		
50	S19.0110311	22:07:35.72	+12:55:01.7	3	15m	
51	COMP			↑		
52	S19.122501	22:59:31	+13:16:06.7	3	20m	H α
53	COMP			↑		
54	S19.125862	22:15:57.13	+13:23:31.1	3	15m	
55	COMP			↑		
56	S20.02452	22:41:56	+10:43:44.9	3	10m	H α ; 2 dots on slit
57	COMP			↑		

959-9707

gain 1.2
 advise 9.3

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4099</u>	
Observer: <u>PB/Ale</u>			Grating: <u>700L</u>			
PI: <u>Geller</u>			Date: <u>11/20/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
58	520.025117	22:25:58.72	+10:45:29	3	10m	
59	COMP			↑		
60	520.029275	22:24:05.43	+10:54:42	3	15m	
61	COMP			↑		
62	520.031722	22:40:44.38	+11:01:35.5	3	15m	
63	COMP			↑		
64	464.036413	23:55:58.45	+11:39:13.3	3	15m	
65	COMP			↑		
66	464.036907	00:10:11.55	+11:40:52.6	3	10m	
67	COMP			↑		
68	464.037102	23:56:02.11	+11:41:17.9	3	10m	
69	COMP			↑		
70	464.037103	23:56:34.16	+11:41:19.4	3	12m	
71	COMP			↑		
72	464.037619	23:56:05.15	+11:42:40.7	3	10m	
73	COMP			↑		
74	468.052597	01:33:20.55	+13:07:33	3	15m	
75	COMP			↑		
76	468.052661	01:48:29.27	+13:09:6.6	3	15m	
77	COMP			↑		
78	468.052940	01:33:38.45	+13:09:25.6	3	15m	
79	COMP			↑		
80	468.054688	01:48:28.37	+13:23:19	3	12m	
81	COMP			↑		
82	468.054057	01:45:03.23	+13:24:50.1	3	15m	H _α
83	COMP			↑		
84	468.058427	01:34:06.77	+13:28:34.2	3	15m	* mask
85	COMP			↑		
86	468.058228	01:54:55.55	+13:28:02.1	3	20m	finishes the plate! H _α
87	COMP			↑		(green dots)

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>3002</u>		Page: <u>4100</u>	
PI: <u>Koranyi/Kirshner/Huck</u>			Date: <u>11/20/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
88	awm7-2.050	02:51-51.1	+41:53-21	35	15m	
89	COMP			↑		
90	awm7-2.032	02:51	+41:45	35	2m	star
91	COMP			↑		
92	awm7-2.034	02:52	+40:42	35	15m	
93	COMP			↑		
94	awm7-2.062	02:53-16.8	+41:27-58.2	35	15m	
95	COMP			↑		
96	awm7-2.066	02:53-27.9	+40:42-25	35	10m	
97	COMP			↑		
98	awm7-2.079	02:53-59.5	+41:47-35	35	8m	
99	COMP			↑		
100	awm7-2.081	02:54-06.7	+42:01-14.8	35	15m	
101	COMP			↑		
102	awm7-2.083	02:54-15	+41:22-58.5	35	4m	
103	COMP			↑		
104	0526 p17	05:26-45	+17:02-50	1	7m	
105	COMP			↑		
106	0529 p09	05:29-20.5	+09:14-26	1	7m	
107	COMP			↑		
108	0529 p17	05:29-21.5	+7:09-44	1	10m	
109	COMP			↑		
110,112	SN1993al	09:50-55.9	+57:53-69	2	10m	bin by 2 ↓ ×2
111,113	COMP			↑		
114,116,118	SN1993J	09:51-19	+69:15-25	2	30m	3×30mm nice!
115,117,119	COMP			↑		
120	09226 p6238	09:22-36	+62:58-60	1	3m	bin by 4 ↓
121	COMP			↑		
122	07050 p2035	07:05-60	+20:38-60	1	4m	
123	COMP			↑		

50.62

3:30

0.4 = 6MST

60 inch Telescope Log

Observer: PB/SkenyonPI: Wilkes/GellerSpectrograph: FASTGrating: 3002Page: 4102Date: 11/21/95

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BTAS			0	0s	some cirrus
11-20	FLAT			0	6s	fast focus = 960
21-25	SKY			0	2s	5:31
26	COMP			↑		
27-31	HDM8858	20:49:50.7	+47:51:07	0	5s	
32	COMP			↑		
33-34	N7331	22:34:46.9	+34:09:13	0	2m	
35	COMP			↑		
36	3C390.3	18:45:37	+79:43:07	6	3m	
37	COMP			↑		
38-39	BDP284211	21:48:57.1	+28:37:48	0	30s	
40	COMP			↑		
41	MPK335	20:03:45.1	+19:55:27	6	90s	
42	COMP			↑		thin cloud
43	S20-033139	22:36:44.9	+11:05:42.7	3	20m	H _α
44	COMP			↑		
45	S22-015774	23:08:38.34	+10:30:40.1	3	20m	
46	COMP			↑		
47	S23-022580	23:54:20.26	+10:55:49.1	3	20m	increasing clouds; red
48	COMP			↑		
49	IC5146041	21:47	+47:38	30	30s	
50	COMP			↑		
51	IC5146.027	21:47:19.7	+47:32:50	30	10m	
52	IC5146.039	21:47:24.7	+47:31:01	30	5m	
53	IC5146.035	21:45:20.2	+47:31:12	30	4m	
54	COMP			↑		
55	IC5146.038	21:46:28.8	+47:31:12	30	3m	
56	IC5146.045	21:45:27.4	+47:31:09	30	1m	
57	COMP			↑		
58	S23-015200	23:35:20.97	+10:31:46.9	3	10m	

9.13
1.19

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4/03</u>	
Observer: <u>PS/SK</u>			Grating: <u>700R</u>			
PI: <u>Geller</u>			Date: <u>11/21/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
59	COMP			↑		
60	523.016197	23:41:36.7	10:35:18	3	900 ^s	
61	COMP			↑		
62	523.016260	23:51:36.4	10:35:14	3	1200 ^s	
63	COMP			↑		
64	523.025148	23:42:13.6	11:04:32	3	900 ^s	
65	COMP			↑		
66	523.035260	23:53:14.6	11:36:53	3	1200 ^s	
67	COMP			↑		
68	523.036185	23:55:45.4	11:39:11.5	3	300 ^s	
69	COMP			↑		
70	523.036286	23:44:29.8	11:40:46.5	3	350 ^s	
71	COMP			↑		
72	523.037525	23:56:01.3	11:43:24.5	3	400 ^s	
73	COMP			↑		maybe less cirrus now
74	523.061322	23:32:16.8	12:57:11.1	3	600 ^s	galaxy + star 2 mag
75	COMP			↑		both spectra visible
76	523.037278	23:56:05.1	11:42:40.1	3	720 ^s	
77	COMP			↑		
78	523.036333	23:52:30	11:40:16.9	3	720 ^s	
79	COMP			↑		
80	523.036951	23:30:55.8	11:41:57.9	3	600 ^s	
81	COMP			↑		
82	469.016689	02:05:01.57	+10:33:22.5	3	10m	
83	COMP			↑		
84	469.017006	02:07:17.64	+10:34:34	3	15m	* on slit + W H ₂
85	COMP			↑		
86	469.018718	02:04:46.8	+10:40:24	3	15m	H ₂
87	COMP			↑		
88	469.020140	02:15:14.4	+10:43:52.8	3	15m	

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>1104</u>	
Observer: <u>PB/SK</u>			Grating: <u>3002</u>			
PI: <u>Geller</u>			Date: <u>11/21/85</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
89	COMP			↑		
90	469.022687	02:05:04.7	+10:51:46.7	3	8m	
91	COMP			↑		
92	469.022659	02:11:31.46	+11:02:49	3	10m	
93	COMP			↑		
94	469.026767	02:10:02.35	+11:01:58.1	3	8m	
95	COMP			↑		nice sky
96	469.027583	02:10:06.5	+11:01:34.1	3	7m	
97	COMP			↑		
98	469.031387	02:10:34.2	+11:14:16.2	3	12m	H ₂
99	COMP			↑		
100	469.032678	02:19:11.59	+11:22:17	3	8m	H ₂
101	COMP			↑		
102	469.032936	02:01:24	+11:23:39	3	15m	
103	COMP			↑		
104	469.034119	02:36:12.74	+11:26:43	3	10m	
105	COMP			↑		
106	469.035807	02:19:40.9	+11:32:13.4	3	5m	- star
107	COMP			↑		
108	AWH7.2.103	2:54:44	41:29:18	35	240 ^s	
109	COMP			↑		
110	AWH7.2.104	2:54:47.6	41:18:50	35	240 ^s	supposed star?? found with 5904
111	COMP			↑		
112	AWH7.2.101	2:54:40	41:34:31	35	900 ^s	
113	COMP			↑		
114	AWH7.2.126	2:55:24	41:36:13	35	480 ^s	
115	COMP			↑		
116	AWH7.2.127	2:55:27	41:48:23	35	360 ^s	star
117	COMP			↑		
118	AWH7.2.119	2:55:08	41:29:17	35	120 ^s	star NO, NOT A STAR

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB/SK</u>			Grating: <u>300 μmm⁻¹</u>		Page: <u>4105</u>	
PI: <u>Geller</u>			Date: <u>11/21/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
119	COMP			↑		
120	AWM7_2.121	2:55:14	41:47:30	35	300 ^s	
121	COMP			↑		
122	AWM7_2.120	2:55:14	41:24:31	35	600 ^s	
123	COMP			↑		
124	AWM7_2.94	2:54:30	41:36:36	35	300 ^s	
125	COMP			↑		
126	AWM7_2.084	2:54:16	41:29:29	35	600 ^s	
127	COMP			↑		
128	AWM7_2.089	2:54:24	41:36:19	35	300 ^s	
129	COMP			↑		
130	311.000166	8:24:32.5	26:28:19	3	600 ^s	A-type spectrum
131	COMP			↑		
132	311.004321	8:30:13	26:37:38	3	300 ^s	
133	COMP			↑		
134	311.004744	8:30:21	26:38:44	3	600 ^s	
135	COMP			↑		
136	311.004898	8:29:23	26:39:24	3	360 ^s	
137	COMP			↑		
138	311.005617	8:26:29	26:41:48	3	360 ^s	
139	COMP			↑		
140	311.010184	8:30:10	26:63:05	3	360 ^s	← NO CHART!
141	COMP			↑		
142	311.014886	8:08:41	27:03:47	3	400 ^s	
143	COMP			↑		
144	311.019687	8:25:02	27:18:05	3	360 ^s	
145	COMP			↑		
146	311.020277	8:11:35	27:18:21	3	450 ^s	
147	COMP			↑		
148	311.021767	8:36:47	27:19:56	3	900 ^s	H ₂

60 inch Telescope Log

Observer: PB/SK
 PI: Geller

Spectrograph: FAST

Grating: 30R

Page: 4106

Date: 11/21/95

Number	Object	R. A.	Dec.	L/R	Exp	Comments
149	COMP			↑		
150	311.024088	08:19:125	+27:29:13	3	10m	
151	COMP			↑		
152	311.027992	08:32:01.44	+27:37:352	3	10m	
153	COMP			↑		
154	311.042362	08:27:4584	+28:14:124	3	12m	weak...
155	COMP			↑		
156	311.043103	08:28:0166	+28:15:49	3	7m	near cluster!, *mslt
157	COMP			↑		
158	311.045094	08:17:327	+28:21:26	3	8m	*burst
159	COMP			↑		
160	311.054165	08:10:54.34	+28:42:048	3	6m	
161	COMP			↑		
162/163	N4151	12:08:011	+39:41:01	6	30s	
164	COMP			↑		
165/166	Fer 34	10:16:462	+43:21:50	0	45s	
167	COMP			↑		
168-177	BIAS			0	0s	
178-187	FLAT			0	6s	
						see ya next week!

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>4107</u>		
Observer: <u>S. Kenyon</u>		Grating: <u>300 gpm</u>		Date: <u>11/22/95</u>		
PI: <u>Wilkes / Geller</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0 ^s	clear @ sunset
11-20	FLAT			0	6 ^s	
21-25	SKY			0	3 ^s	should be sky (lower one)
26	COMP			↑		
27,28	N7331	22:35	34:09	0	2 ^{min}	
29	COMP			↑		
30,31	HD 198858	20:49:51	47:31:07	0	5 ^s	
32	COMP			↑		
33	Mik 509	20:41:26	-10:51:18	6	1 ^{min}	
34	COMP			↑		
35,36	BD+28°4211	21:48:57	28:37:48	0	30 ^s	
37	COMP			↑		
38	Mik 335	0:03:45	19:55:77	6	60 ^s	
39	COMP			↑		
40	520.038730	22:27:57	11:19:53	3	750 ^s	
41	COMP			↑		
42	519.124581	22:04:37	13:20:39	3	1200 ^s	
43	COMP			↑		
44	519.127029	22:05:04	13:25:13	3	1260 ^s	519 all finished
45	COMP			↑		
46	520.036634	22:25:17	11:14:38	3	900 ^s	
47	COMP			↑		
48	520.037802	22:30:41	11:18:00	3	900 ^s	
49	COMP			↑		
50	520.038179	22:35:39	11:18:57	3	900 ^s	
51	COMP			↑		
52	520.039014	22:42:14	11:20:34	3	900 ^s	
53	COMP			↑		
54	520.039112	22:37:19	11:21:15	3	900 ^s	
55	COMP			↑		

gain 1.14
noise 8.8

60 inch Telescope Log

Observer: S KenyonPI: GellerSpectrograph: FASTGrating: 300 gpmDate: 11/22/95Page: 4108

Number	Object	R.A.	Dec.	L/R	Exp	Comments
56	520.039328	22 24 27	11 21 33	3	900 ^s	
57	COMP			↑		
58	520.041697	22 28 36	11 27 49	3	600 ^s	
59	COMP			↑		
60	520.044380	22 38 13	11 34 26	3	900 ^s	
61	COMP			↑		
62	523.015218	23 52 25	10 31 36	3	450 ^s	many emission lines!
63	COMP			↑		
64	523.018434	23 43 59	10 42 59	3	300 ^s	
65	COMP			↑		
66	523.018507	23 52 59	10 42 33	3	450 ^s	
67	COMP			↑		
68	523.018560	23 54 01	10 42 37	3	750 ^s	
69	COMP			↑		
70	523.019033	23 45 59	10 44 50	3	1000 ^s	maybe too weak
71	COMP			↑		
72	523.020459	23 52 45	10 49 02	3	1200 ^s	
73	COMP			↑		
74	523.029302	23 41 48	11 18 17	3	750 ^s	
75	COMP			↑		
76	469.038561	2 09 17	11 42 08	3	300 ^s	
77	COMP			↑		
78	469.040859	1 54 19	11 48 37	3	450 ^s	
79	COMP			↑		
80	469.067266	2 05 20	13 15 29	3	300 ^s	
81	COMP			↑		
82	469.059310	1 54 06	12 47 56	3	600 ^s	
83	COMP			↑		
84	469.046385	2 02 20	12 06 52	3	900 ^s	
85	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>4109</u>
Observer: <u>S Kenyon</u>				Grating: <u>300 gpm</u>		
PI: <u>Geller/Kirshner/Koronyi</u>				Date: <u>11/22/95</u>		
Number	Object	R.A.	Dec.	I/R	Exp	Comments
86	469.017613	2 00 38	12 10 38	3	900 ^s	
87	COMP			↑		
88	469.051070	1 57 45	12 21 59	3	750 ^s	
89	COMP			↑		
90	469.053727	2 06 35	12 31 11	3	750 ^s	
91	COMP			↑		
92	469.062061	1 57 06	12 57 34	3	600 ^s	
93	COMP			↑		
94	469.067784	2 00 09	13 17 14	3	600 ^s	
95	COMP			↑		
96-97	SN 1995ak	2:45:49	3 13 50	2	900 ^s	bin by 2 <small>grading error on 96 due to head lights</small>
98	COMP			↑		
99	AWM7.2.106	2 54 50	41 37 25	35	750 ^s	bin by 4
100	COMP			↑		
101	AWM7.2.099	2 54 36	41 53 25	35	600 ^s	
102	COMP			↑		
103	AWM7.2.102	2 54 41	41 33 49	35	450 ^s	
104	COMP			↑		
105	AWM7.2.091	2 54 27	41 30 47	35	450 ^s	
106	COMP			↑		
107	AWM7.2.108	2 54 55	41 24 15	35	600 ^s	
108	COMP			↑		
109	311.054604	8 25 55	28 43 55	3	900 ^s	
110	COMP			↑		
111	311.055940	8 35 14	28 45 10	3	900 ^s	
112	COMP			↑		
113	311.062165	8 13 29	29 02 12	3	600 ^s	
114	COMP			↑		
115	311.062480	8 34 35	29 01 24	3	600 ^s	
116	COMP			↑		

60 Inch Telescope Log			Spectrograph: <u>FAST</u>			Page: <u>4110</u>
Observer: <u>S Kenyon</u>			Grating: <u>300 gpm</u>			Date: <u>11/22/95</u>
PI: <u>Geller</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
117	311.071510	8 9 12	29 23 53	3	600 ^s	
118	COMP			↑		
119	311.076132	8 12 43	29 36 13	3	600 ^s	
120	COMP			↑		
121	311.081135	8 10 14	29 47 55	3	600 ^s	
122	COMP			↑		
123	311.085398	8 35 52	29 57 15	3	600 ^s	pretty starburst Ha!!
124	COMP			↑		
125	311.094915	8 32 39	30 21 43	3	600 ^s	
126	COMP			↑		
127	311.094948	8 13 30	30 22 51	3	600 ^s	
128	COMP			↑		
129	311.095327	8 29 23	30 23 41	3	600 ^s	
130	COMP			↑		
131	311.096907	8 28 59	30 27 27	3	600 ^s	
132	COMP			↑		
133	SN 1995al	9 50 56	33 33 09	2	600 ^s	bin by 2
134	COMP			↑		
135	SN 1995al	9 50 56	33 33 09	2	600 ^s	bin by 2 again
136	COMP			↑		
137	311.107176	8 37 31	30 49 14	3	500 ^s	bin by 4
138	COMP			↑		
139	N4151	12 08 01	39 41 01	6	30 ^s	
140	COMP			↑		
141-142	Feige 34	10:36:41	43:21:50	0	30 ^s	
143	COMP			↑		
144-153	BIAS			0	0 ^s	
154-163	FLAT			0	6 ^s	

60 inch Telescope Log

Observer: S. KenyonPI: Wilkes/GetlerSpectrograph: FASTGrating: 300 gpmPage: 4/11Date: 11/23/95

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0 ^s	clear @ sunset
11-20	FLAT			0	6 ^s	10 ⁴ counts
21-25	SKY			0	2 ^s	8000 counts @ peak
26	COMP			↑		
27,28	N7331	22 34 47	31 09 43	0	120 ^s	
29	COMP			↑		
30,31	HD 198858	20 49 51	47 31 07	0	5 ^s	
32	COMP			↑		
33	Mrk 335	0 03 45	19 55 27	6	60 ^s	
34	COMP			↑		
35,36	BD+28°4211	21 48 57	28 37 48	0	30 ^s	
37	COMP			↑		
38	520.045984	22 25 40	11 38 26	3	900 ^s	
39	COMP			↑		
40	520.049018	22 21 48	11 45 10	3	750 ^s	
41	COMP			↑		
42	520.049444	22 43 58	11 46 01	3	750 ^s	
43	COMP			↑		
44	520.049036	22 39 28	11 45 38	3	1000 ^s	
45	COMP			↑		
46	520.048858	22 19 43	11 44 28	3	900 ^s	
47	COMP			↑		
48	520.047202	22 21 59.8	11 40 56	3	900 ^s	
49	COMP			↑		
50	520.043684	22 30 08	11 32 48	3	750 ^s	
51	COMP			↑		
52	520.043775	22 39 28	11 32 51	3	750 ^s	
53	COMP			↑		
54	520.045559	22 35 30	11 39 35	3	750 ^s	
55	COMP			↑		

1.16

8.89

60 inch Telescope Log		Spectrograph: <u>FAST</u>		Page: <u>4112</u>		
Observer: <u>Kenyon</u>		Grating: <u>300 gpm</u>				
PI: <u>Geller</u>		Date: <u>11/23/95</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
56	520.049783	22 23 16	11 47 16	3	600 ^s	
57	COMP			↑		
58	520.050658	22 29 17	11 49 49	3	750 ^s	
59	COMP			↑		
60	520.051078	22 35 29	11 50 49	3	600 ^s	H absorption in blue?
61	COMP			↑		
62	520.051293	22 25 49	11 51 09	3	750 ^s	
63	COMP			↑		
64	520.051353	22 26 39	11 51 10	3	900 ^s	2 for 1 - star + galaxy
65	COMP			↑		↳ too weak?
66	520.052715	22 23 21	11 54 25	3	600 ^s	
67	COMP			↑		
68	464.037894	23 56 01	11 43 25	3	450 ^s	
69	COMP			↑		
70	464.039554	23 56 08	11 48 22	3	900 ^s	
71	COMP			↑		
72	464.039776	23 59 15	11 49 20	3	600 ^s	extra star on slit
73	COMP			↑		
74	464.042583	23 58 07	11 57 33	3	750 ^s	forgot "comment" named incorrectly
75	COMP			↑		
76	464.045915	23 58 19	12 06 42	3	900 ^s	
77	COMP			↑		
78	464.049643	23 54 41	12 16 16	3	900 ^s	
79	COMP			↑		
80	464.044287	00 18 38	12 01 11	3	600 ^s	
81	COMP			↑		
82	464.065195	00 15 22	12 59 06	3	900 ^s	a bit weak bad guiding
83	COMP			↑		
84	469.042016	1 58 24	11 52 55	3	600 ^s	
85	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>4113</u>	
Observer: <u>Kenyon</u>		Grating: <u>300 gpm</u>		Date: <u>11/23/1995</u>			
PI: <u>Geller</u>							
Number	Object	R.A.	Dec.	L/R	Exp	Comments	
86	469.043834	2:06:38	11 59 11	3	750		
87	COMP			↑			
88	469.054822	1:56:07	12 34 01	3	900		
89	COMP			↑			
90	469.057117	2 03 02	12 42 16	3	800	seeing worse	
91	COMP			↑			
92	469.061101	2 10 36	12 55 02	3	900		
93	COMP			↑			
94	469.067876	1 56 35	13 17 09	3	900		
95	COMP			↑			
96	469.068007	2 03 11	13 18 14	3	900		
97	COMP			↑			
98	311.118081	8 10 37	31 17 39	3	750		
99	COMP			↑			
100	311.099273	8 28 53	30 33 04	3	750		
101	COMP			↑			
102	311.107678	8 37 20	30 50 30	3	750		
103	COMP			↑			
104	311.107855	8 32 51	30 52 44	3	750		
105	COMP			↑			
106	311.108013	8 19 45	30 54 55	3	750		
107	COMP			↑			
108	311.108050	8 31 09	30 53 42	3	750	emission lines!	
109	COMP			↑			
110	311.109080	8 26 08	30 57 20	3	750		
111	COMP			↑			
112	311.112001	8 33 18	31 02 37	3	600	off center to avoid bright *	
113	COMP			↑			
114	311.114541	8 37 29	31 06 48	3	750		
115	COMP			↑			

60 inch Telescope Log				Spectrograph: <u>FAST</u>		Page: <u>4114</u>
Observer: <u>Kenyon</u>				Grating: <u>300 gpm</u>		
PI: <u>Geller/Kirshner/Huchra</u>				Date: <u>11/23/1995</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
116	311.117393	8 12 45	31 16 32	3	750	
117	COMP			↑		
118	311.117751	8 37 43	31 14 43	3	750	
119	COMP			↑		
120	311.125563	8 34 39	31 35 04	3	600	
121	COMP			↑		
122	311.136649	8 27 35	32 05 48	3	600	
123	COMP			↑		
124	311.133952	8 20 43	31 59 00	3	600	close to bright * both detected
125	COMP			↑		
126	311.148123	8 33 14	32 31 56	3	600	Plate 311 completed
127	COMP			↑		
128	SN 1995a1	9 50 56	33 33 09	2	600	bin by two
129	COMP			↑		
130	SN 1995a1	9 50 56	33 33 09	2	600	bin by two
131	COMP			↑		
132,133	Feige 34	10 36 41	43 21 50	0	30	back to bin by four
134	COMP			↑		
135	N4151	12 08 01	39 41 01	6	30	
136	COMP			↑		
137	1031+4453	10 34 41	44 37 30	1	300	
138	COMP			↑		
139	1035+4506	10 35 12	45 06 00	1	200	
140	COMP			↑		
141-150	BIAS			0	0	
151-160	FLAT			0	6 ⁺	

60 inch Telescope Log

Observer: Kenyon/MilonePI: Wilkes/GellerSpectrograph: FASTGrating: 300 gpmPage: 4115Date: 11/24/1995

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0 ^s	Cirrus @ sunset
11-20	FLAT			0	6 ^s	
21-25	SKY			0	2 ^s	10 ⁴ counts or less
26	COMP			↑		
27	Mrk 335	00 03 45	19 55 27	6	60 ^s	
28	COMP			↑		
29, 30	N7331	22 34 47	34 09 43	0	120 ^s	
31	COMP			↑		
32, 33	HD 198858	20 49 51	47 31 07	0	5 ^s	out of focus, trailed
34	COMP			↑		
35, 36	B0428 ^o 4211	21 48 57	28 37 48	0	30 ^s	
37	COMP			↑		
38	520.054309	22 23 43	11 58 27	3	900 ^s	maybe too wide Ha emission
39	COMP			↑		
40	520.051879	22 41 39	11 52 13	3	1000 ^s	better! good seeing now
41	COMP			↑		
42	520.056207	22 36 04	12 03 22	3	1000 ^s	
43	COMP			↑		
44	520.057006	22 31 34	12 05 28	3	800 ^s	
45	COMP			↑		
46	520.057149	22 31 51	12 05 46	3	800 ^s	
47	COMP			↑		
48	520.057311	22 30 26	12 06 18	3	800 ^s	
49	COMP			↑		
50	520.059117	22 39 50	12 10 24	3	800 ^s	
51	COMP			↑		
52	520.059253	22 40 14	12 10 38	3	600 ^s	
53	COMP			↑		
54	520.059467	22 40 02	12 10 55	3	800 ^s	
55	COMP			↑		

em
11/24/95

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>Kenyon/Milone</u>			Grating: <u>300 gpm</u>		Page: <u>4116</u>	
PI: <u>Geller</u>			Date: <u>11/24/1995</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
56	520.060212	22 22 14	12 12 45	3	800 ^s	lots of cute faint galaxies only
57	COMP			↑		
58	520.060782	22 35 29	12 14 50	3	800 ^s	
59	COMP			↑		
60	520.061699	22 37 19	12 16 54	3	800 ^s	
61	COMP			↑		
62	520.063660	22 18 46	12 20 24	3	800 ^s	
63	COMP			↑		
64	520.064145	22 32 14	12 22 55	3	1000 ^s	
65	COMP			↑		
66	520.065585	22 43 25	12 25 26	3	900 ^s	
67	COMP			↑		
68	464.060187	23 55 35	12 45 31	3	900	
69	COMP			↑		
70	464.061223	23 55 05	12 48 11	3	800	
71	COMP			↑		
72	464.052006	23 58 56	12 23 28	3	800	
73	COMP			↑		
74	464.045783	00 09 59	12 6 23	3	800	
75	COMP			↑		
76	464.046688	00 06 12	12 09 03	3	800	
77	COMP			↑		
78	464.048910	0 19 05	12 13 24	3	900	$v = 50,000 \text{ km s}^{-1} ! ?!$
79	COMP			↑		
80	468.022220	1 54 05	11 15 43	3	750	
81	COMP			↑		
82	468.022228	1 37 24	11 15 57	3	750	
83	COMP			↑		
84	468.046800	1 35 06	12 47 56	3	600	v bright star - more cts than galaxy
85	COMP			↑		

60 inch Telescope Log				Spectrograph: <u>FAST</u>		
Observer: <u>Kenyon/Milone</u>				Grating: <u>300 gpm</u>		Page: <u>4117</u>
PI: <u>Geller/Koranyi/Huchra</u>				Date: <u>11/24/1995</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
86	468.048343	1 37 35	12 53 50	3	750	
87	COMP			↑		
88	468.049892	1 54 15	12 58 45	3	750	weak continuum; emission lines
89	COMP			↑		$C \approx 50,000$!; weak though
90	468.050944	1 36 28	13 02 55	3	900	black dots finished
91	COMP			↑		good seeing; cirrus
92	awm7-2.147	2 56 56	40 48 14	35	1000	too weak re do
93	COMP			↑		too much cirrus here
94	312 007842	8 41 51	26 42 46	3	1200	thick cirrus from West
95	COMP			↑		
96	UV Aur	5 18 33	32 27 51	12	15	thick cirrus
97	COMP			↑		
98	P1228-1	4 56 19	33 03 48	38	120	
99	COMP			↑		
100	P1228-2a	4 39 38	31 55 18	38	120	Mira
101	COMP			↑		
102	P1228-2bc	4 39 38	31 55 18	38	600	B+C at once A stars
103	COMP			↑		
104	HCL2NW-4b	4 38 37	26 11 47	38	600	H α absorption
105	HCL2NW-4a	"	"	38	600	no H α
106	COMP			↑		
107	HCL2NW-3c	4 39 26	26 15 50	38	600	heavy cirrus
108	COMP			↑		
109	09224+6135	9 22 16	61 35	1	600	weak
110	COMP			↑		
111	09534+5323N	9 53 16	53 23	1	600	north component
112	COMP			↑		
113	09534+5323S	9 53 16	53 23	1	600	South component
114	COMP			↑		
115	09545+5205	9 54 30	52 05	1	600	starburst

19:23:33.5
-16:50:42

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>AAEM</u>			Grating: <u>300</u>		Page: <u>419</u>	
PI: <u>WILKES & GELLER</u>			Date: <u>11/25-26/1995</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments <u>BINNED BY 4</u>
1-10	BIAS	STOW		0		<u>THIN CLOUDS</u>
11-20	FLAT	STOW		0	6s	
21-25	SKY	STOW		0	3s	
26	COMP			↑		<u>FWHM < 3.3 → KEEPING SAME SPECT FOCUS (=940)</u>
27	MRK335	00:03:45.1	+19:55:27	6	1m	
28	COMP			↑		
29-30	N7331	22:34:46.9	+34:09:43	0	2m	
31	COMP			↑		
32-33	HD19885B	20:49:50.7	+47:31:07	0	5s	<u>OUT OF FOCUS, TRAILED</u>
34	COMP			↑		
35-36	BD+284211	21:48:57.1	+28:37:48	0	30s	
37	COMP			↑		
38	520.069111	22:43:15.4	+12:34:09	3	20m	<u>WITH MOON & THIN CLOUDS HAD TROUBLE FINDING A GX</u>
39	COMP			↑		
40	520.064772	22:42:56.1	+12:23:39	3	20m	
41	COMP			↑		<u>FWHM ~ 3.3 @ Pix 2000</u>
42	520.064176	22:40:35.5	+12:22:28	3	20m	
43	COMP			↑		
44	520.070098	22:43:11.0	+12:36:32	3	15m	
45	COMP			↑		
46	520.072491	22:41:33.0	+12:42:36	3	20m	<u>MOON SETTING - STILL</u>
47	COMP			↑		<u>THIN CLOUDS</u>
48	520.076674	22:28:23.8	+12:52:44	3	20m	
49	COMP			↑		
50	464.037994	00:15:09.2	+11:43:27	3	15m	
51	COMP			↑		
52	464.044625	00:14:27.2	+12:02:53	3	20m	
53	COMP			↑		
54	464.045256	00:07:33.5	+12:05:04	3	15m	
55	COMP			↑		

MOON TOO CLOSE TO MRK509: CAN'T DO IT

nd Nov 9.0
Jan 1.17

60 inch Telescope Log				Spectrograph: <u>FAST</u>		
Observer: <u>AAEM</u>				Grating: <u>300</u>		Page: <u>4120</u>
PI: <u>GELLER/KORANYI/JPH/RPK</u>				Date: <u>11/25-26/1995</u>		
Number	Object	R.A.	Dec.	L/R	Exp	Comments
56	464.047238	00:07:47.0	+12:10:32	3	20m	CAN SEE FAINT GX TO
57	COMP			↑		THE SW
58	464.050471	00:05:14.5	+12:19:20	3	15m	
59	COMP			↑		
60	469.024908	02:02:38.8	+10:58:54	3	20m	
61	COMP			↑		
62	469.026382	02:13:54.1	+11:03:08	3	20m	
63	COMP			↑		
64	469.037344	02:04:32.9	+11:38:12	3	20m	
65	COMP			↑		
66	469.059693	02:09:23.3	+12:50:28	3	20m	KIND OF WEAK... hd??
67	COMP			↑		
68	AKM7.2.090	02:54:25.3	+4:34:36	35	10m	NE GX OF PAIR CLOUDS GETTING THICKER.
69	COMP			↑		⊙
70	CG54p12	06:54:21.8	+12:21:20	1	15m	RESTARTING @ 320AM
71	COMP			↑		
72	SN1995AL	09:50:55.9	+33:33:09	2	10m	BINNED BY 2
73	COMP			↑		
74	SN1995AL	09:50:56.9	+33:33:09	2	10m	⊙ ⊙
75	COMP			↑		
76-77	FEIGE34	10:36:41.2	+43:21:50	0	30s	BACK TO BINNED BY 4 DON'T KNOW IF THIS IS ANY GOOD - CLOUDS
78	COMP			↑		
79-88	BIAS	STOW				GIVING UP
89-98	FLAT	STOW			6s	
99-108	BIAS	STOW				BINNED BY 2
109-118	FLAT	STOW			10s	

⊙ STOPPING @ 145AM - CLOUDS TOO THICK FOR AN 11TH MAGNITUDE STAR

⊙ ⊙ CLOUDED OUT MOST OF THE TIME

C → 20:23:02.3
-14:07:11

60 inch Telescope Log Observer: <u>AAEM</u> PI: <u>WILKES/GELLER</u>	Spectrograph: <u>FAST</u> Grating: <u>300</u> Date: <u>11/26.27/1995</u>
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Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS	STOW		0		BINNED BY 4 THIN CLOUDS
11-20	FLAT	STOW		0	6s	
21-25	SKY	STOW		0	2s	FWHM ~ 2.8 ⇒ KEEPING SAME SPECTROG. FOCUS (940)
26	COMP			↑		
27	MRK335	00:03:45.1	+19:55:27	6	1m	
28	COMP			↑		
29-30	H7331	22:34:46.9	+34:09:43	0	2m	
31	COMP			↑		
32-33	HD190858	20:49:50.7	+47:31:07	0	5s	OUT OF FOCUS TRAILED
34	COMP			↑		
35-36	BD+284211	21:48:57.1	+28:37:48	0	30s	
37	COMP			↑		
38	520.079693	22:21:59.3	+13:00:07	3	20m	LOOKS CLEAR. WINDY.
39	COMP			↑		MOON UP.
40	520.079705	22:36:05.9	+13:00:44	3	20m	
41	COMP			↑		
42	520.080389	22:25:47.1	+13:02:16	3	20m	
43	COMP			↑		
44	520.080875	22:31:37.7	+13:03:41	3	20m	NICE SPIRAL SPIRAL
45	COMP			↑		
46	520.080908	22:32:34.6	+13:03:53	3	20m	VERY BRIGHT STAR IN THE FIELD - TV DOWN - GUIDING MANUALLY
47	COMP			↑		
48	520.083240	22:43:44.8	+13:08:49	3	20m	THIN CLOUDS?
49	COMP			↑		
50	520.083793	22:24:48.0	+13:10:31	3	20m	
51	COMP			↑		
52	46A.040541	00:07:53.2	+11:51:40	3	20m	CAN BARELY SEE IT
53	COMP			↑		
54	46A.049988	00:07:44.2	+12:18:00	3	20m	GUIDE STAR COMES & GOES ⇒ CLOUDS
55	COMP			↑		

MOON IS ALMOST ON TOP OF MRK509

gain = 1.17
noise 8.9

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>AAEM</u>			Grating: <u>300</u>		Page: <u>4122</u>	
PI: <u>KIRSNER/GELLER/KORANYI/HUCHRA</u>			Date: <u>11/26-27/1995</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
56-57	SN1995AK	02:45:48.8	+03:13:50	2	15m	BINNED BY 2
58	COMP			↑		
59	469.029258	01:59:48.7	+11:12:27	3	20m	BACK TO BIN BY 4
60	COMP			↑		
61	469.039686	02:17:53.6	+11:45:13	3	20m	
62	COMP			↑		
63	469.049436	01:58:53.6	+12:16:29	3	20m	WIND UP TO 25mph
64	COMP			↑		
65	469.049674	02:09:44.6	+12:18:06	3	20m	
66	COMP			↑		
67	469.061191	02:11:18.2	+12:55:18	3	20m	
68	COMP			↑		SPECT. FOCUS STILL GOOD
69	AWM7-2.096	02:54:32.2	+41:26:12	35	20m	WOULD NEED TO ROTATE SLIT - PROBABLY CONTAMINATED BY CLOSE STAR
70	COMP			↑		
71	AWM7-2.100	02:54:38.3	+41:35:18	35	20m	
72	COMP			↑		
73	0537+16	05:37:56.2	+16:05:08	1	15m	
74	COMP			↑		
75	0536+20	05:36:03.7	+20:18:42	1	10m	
76	COMP			↑		
77	0543+18	05:43:43.1	+18:57:41	1	10m	TWO STARS ALSO FALL ON THE SLIT
78	COMP			↑		
79	0638+21	06:38:30.4	+21:16:40	1	10m	
80	COMP			↑		
81	312.030201	08:36:52.0	+27:50:42	3	20m	
82	COMP			↑		
83	31205431	08:37:59.8	+26:33:25	3	10m	VERY BRIGHT STAR NEARBY - TV DOWN - NOT GUIDING
84	COMP			↑		↳ HUGE EMISSION
85	312.005195	08:39:49.0	+26:34:02	3	20m	
86	COMP			↑		

21:19:33.3
 -10:36:16

60 inch Telescope Log

Observer: AAEM

PI: WILKES/GELLER

Spectrograph: FAST


Grating: 300

Page: 424

Date: 11/27-28/1995

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS	STOW		0		CLEAR - LOW CLOUDS
11-20	FLAT	STOW		0	6s	TO THE S AND W - WINDY
21-25	SKY	STOW		0	3s	
26	COMP			↑		FWHM ~ 2.8 @ PIXEL 2000 => SAME SPECT. FOCUS (940)
27	MRK509	20:41:26.0	-10:54:18	6	1m	
28	COMP			↑		
29	MRK335	00:03:45.1	+19:55:27	6	1m	
30	COMP			↑		
31-32	N7331	22:34:46.9	+34:09:43	0	2m	BAD SEEING
33	COMP			↑		
34-35	HD198858	20:49:50.7	+47:31:07	0	5s	OUT OF FOCUS, TRAILED
36	COMP			↑		
37-38	BD+284211	21:48:57.1	+28:37:48	0	30s	
39	COMP			↑		
40	520.084082	22:39:30.8	+13:11:24	3	20m	OBJECT TO THE W OF SK IS ALSO ON THE SLIT
41	COMP			↑		
42	520.085503	22:37:22.0	+13:14:52	3	20m	VERY FAINT
43	COMP			↑		
44	520.086720	22:37:12.3	+13:17:49	3	20m	
45	COMP			↑		
46	520.087670	22:39:11.7	+13:19:52	3	20m	SPARKY CRASHED - HAD TO RESTART
47	COMP			↑		
48	520.087759	22:39:24.2	+13:20:05	3	20m	
49	COMP			↑		
50	46A.042903	00:18:59.0	+11:57:53	3	20m	
51	COMP			↑		
52	46A.060198	00:03:54.0	+12:45:59	3	10m	
53	COMP			↑		
54	46A.070147	00:01:52.5	+13:14:43	3	20m	
55	COMP			↑		

40: Star ^{superficial??} - object to west on 8.97
 slit IS Star also 1.18

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>AAEM</u>		Grating: <u>300</u>			Page: <u>4125</u>	
PI: <u>GELLER/KORANYI/HUCHRA</u>		Date: <u>11/27/28/1995</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
56	464.073630	00:02:53.5	+13:25:12	3	20m	SEEING ~ 2" - CAN'T WORK
57	COMP			↑		FURTHER W
58	469.026764	01:56:29.8	+11:04:12	3	20m	
59	COMP			↑		
60	469.059187	01:57:58.7	+12:48:07	3	20m	MOON IS SET - CAN'T SEE ANY CLOUDS
61	COMP			↑		
62	469.061979	02:02:46.2	+12:57:55	3	20m	
63	COMP			↑		
64	469.063401	02:00:44.8	+13:02:22	3	20m	
65	COMP			↑		
66	AWM7.2.164	02:58:37.6	+40:52:06	35	10m	STAR? LOTS OF EMISSION
67	COMP			↑		
68	AWM7.2.135	02:55:49.9	+41:56:52	35	15m	A STAR ON SCREEN'S EDGE MAY BE ON SLIT TOO
69	COMP			↑		
70	AWM7.2.115	02:55:01.8	+41:26:51	35	20m	
71	COMP			↑		
72	AWM7.2.114	02:55:00.6	+42:08:32	35	10m	
73	COMP			↑		
74	AWM7.2.116	02:55:02.0	+41:31:30	35	15m	 EMISSIONS
75	COMP			↑		
76	0547+23	05:47:10.4	+23:51:26	1	3m	HUGE HX
77	COMP			↑		
78	0535+16	05:35:09.0	+16:13:51	1	2m	DITTO
79	COMP			↑		
80	0558+10	05:58:38.1	+10:18:18	1	3m	
81	COMP			↑		
82	0612+25	06:12:05.1	+25:23:39	1	5m	
83	COMP			↑		
84	0613+07	06:13:38.2	+07:19:03	1	3m	
85	COMP			↑		

60 inch Telescope Log

Spectrograph: FASTObserver: AAEMGrating: 300Page: 4126PI: HUCHRA/SELLER/WILKESDate: 11/27-28/1995

Number	Object	R.A.	Dec.	L/R	Exp	Comments
86	07053+4839	07:05:17.4	+48:39:13	1	20m	LOT FAINTER THAN I THOUGHT FROM CHART
87	COMP			↑		
88	312.032539	08:35:14.1	+27:57:31	3	20m	STAR TO THE W ALSO ON SLIT
89	COMP			↑		
90	312.096866	08:36:11.7	+31:19:27	3	20m	HX
91	COMP			↑		
92	312.069454	08:36:47.7	+29:53:09	3	20m	
93	COMP			↑		FWHM STILL < 3
94	312.045498	08:39:06.1	+28:39:41	3	20m	VERY BRIGHT STAR IN THE FIELD - TV DOWN - NOT GUIDING
95	COMP			↑		
96	312.031515	09:00:08.0	+27:54:31	3	15m	DITTO STAR ON THE SLIT TOP
97	COMP			↑		
98	312.030492	08:40:36.4	+27:52:34	3	20m	
99	COMP			↑		
100-101	FEIGE 34	10:36:41.2	+43:21:50	0	30s	
102	COMP			↑		
103	MRK 421	11:01:40.6	+38:28:43	6	2m	
104	COMP			↑		
105	N4151	12:08:01.1	+39:41:01	6	30s	
106	COMP			↑		
107	07583+2623	07:58:19.0	+26:24:25	1	3m	
108	COMP			↑		
109-118	BIAS	STOW				
119-128	FLAT	STOW			6s	

TOTAL P.04

60 inch Telescope Log		Spectrograph: <u>FAST</u>				
Observer: <u>P. Berlin</u>		Grating: <u>3002; 3" slit; bobby</u>			Page: <u>4127</u>	
PI: <u>Kenyon</u>		Date: <u>11/28/95</u>				
Number	Object	R. A.	Dec.	L/R	Exp	Comments
1-10	BIAS	Star		0	0s	
11-20	FLAT	"		0	6s	circus all over
21	COMP	"		0	5s	bright moon
22-26	sky	"		0	3s	
27	COMP	"		↑		
28-32	HD198858	20:49:50.1	+47:31:07	0	5s	de-foc + trailed
33	COMP			↑		
34-38	HD192281	20:50:46.8	+40:07:01	0	5s	
39	COMP			↑		
40,41	N7331	22:31:46.9	+34:09:43	0	2m	
42	COMP			↑		
43,44	B0p484211	21:48:57.1	+27:37:48	0	30s	
45	COMP			↑		
46-48	V4Her	18:12	+20:58	12	5s, 15s, 3m	
49	COMP			↑		
51-52	V443Her	18:20	+23:25	12	1s, 5s, 3m	
53	COMP			↑		
54-56	BFCyg	19:21	+29:34	12	1s, 5s, 2m	
57	COMP			↑		
58, 59, 60	CHCyg	19:23	+50:08	12	1s, 3s, 5s	
61	COMP			↑		
62-64	HMSge	19:39	+16:37	12	1s, 3s, 30s	
65				↑		
66-68	CSCyg	19:44	+35:37	12	6s, 3s, 90s	
69	COMP			↑		
70-72	V1016Cyg	19:55	+39:41	12	1s, 5s, 15s	
73	COMP			↑		
74-76	Pulhal	20:19	+21:24	12	1s, 3s, 90s	
77	COMP			↑		
78-80	V1329Cyg	20:49:02.6	+35:23:37	12	1s, 3s, 3m	

1.17
 8.89
 Main 22:25 - 05

dark non: 039

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>PB</u>			Grating: <u>300L</u>		Page: <u>4128</u>	
PI: <u>Kenyon/Wilkes/Geller</u>			Date: <u>11/24/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
81	COMP			↑		some thin cloud
82	V11057 Cyg	20:57:06.2	+44:03:46	12	3m	
83	COMP			↑		
84-86	AG Per	21:48:36.2	+12:23:27	12	0.5, 1.5s	
87	COMP			↑		
88-90	PAgr	23:43:49.4	+5:17:04	12	0.5, 1/4s	
91	COMP			↑		
92-94	Z And	23:31	+48:32	12	1s, 2s, 3s	
95	COMP			↑		
96-98	EG And	00:41	40:24	12	0.5, 1/4s	
99				↑		
100-102	AX Per	01:33	+54:00	12	1s, 5s, 3m	
103	COMP			↑		
104	V1515 Cyg	21:45:27	+47:18:08	12	15m	clouds increasing
105	COMP			↑		
106	MRK 335	00:03:45.1	+19:55:27	6	3m	
107	COMP			↑		
108, 109	Faye 110	23:17:33.5	+05:26	0	1m	
110	COMP			↑		
111	467.012525	01:25:10.22	+10:30:10.4	3	15m	
112	COMP			↑		
113	467.015637	01:26:30.68	+10:43:12.3	3	15m	H+
114	COMP			↑		
115	467.016116	01:14:29.73	+10:45:45.7	3	10m	
116	COMP			↑		
117	464.053408	00:10:59.48	+12:27:15.5	3	15m	bright sky
118	COMP			↑		
119	464.056230	00:11:03	+12:31:59	3	15m	to on slit to W
120	COMP			↑		increasing clouds again
121	464.057005	00:05:11.28	+12:37:32	3	15m	H+

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4/29</u>	
Observer: <u>PS</u>			Grating: <u>300L</u>			
PI: <u>Geller</u>			Date: <u>11/28/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
122	COMP			↑		
123	467.016177	01:24:0819	+10:45:38.9	3	10m	
124	COMP			↑		
125	467.016574	01:24:4219	+10:47:28.2	3	10m	
126	COMP			↑		
127	464.058678	00:19:4272	+12:40:22.6	3	15m	
128	COMP			↑		
129	464.058736	00:02:52.9	+12:45:15.1	3	15m	
130	COMP			↑		
131	464.062893	00:02:04.12	+12:53:27.3	3	12m	Had! @ PIX 2022
132	COMP			↑		
133	464.064841	00:03:51.72	+12:59:06	3	15m	Ha
134	COMP			↑		
135	464.066249	00:04:38.85	+13:03:5.2	3	15m	
136	COMP			↑		
137	464.067514	00:06:45.67	+13:06:49.3	3	15m	
138	COMP			↑		
139	464.071386	00:11:45.54	+13:18:22.7	3	15m	
140	COMP			↑		
141	467.022852	01:24:35.68	+11:10:49.3	3	8m	Ha
142	COMP			↑		moon sat; still some clouds
143	467.023723	01:24:52.89	+11:17:22.4	3	10m	2x on slit to W
144	COMP			↑		
145	467.015233	01:12:46.16	+10:54:56.1	3	10m	
146	COMP			↑		
147	467.024743	01:20:59.78	+11:21:54.5	3	7m	
148	COMP			↑		
149	467.025114	01:22:01.62	+11:26:29.1	3	8m	
150	COMP			↑		
151	467.026907	01:22:22.76	+11:29:55.5	3	8m	

60 inch Telescope Log		Spectrograph: <u>FAST</u>				Page: <u>4130</u>	
Observer: <u>P. Berland</u>		Grating: <u>300R</u>					
PI: <u>Briceno/Goodman</u>		Date: <u>11/28/95</u>					
Number	Object	R.A.	Dec.	L/R	Exp	Comments	
152	COMP			↑			
153	HCLZNW-2C	04:40:19.2	+26:41:16	38	2m	Reset H α Candidate #'s	
154	COMP			↑			
155	HCLZNW10	04:40:49	+25:52:05	38	90s	H α	
156	COMP			↑			
157	HCLZNW-1c	04:41:43	+26:55:53	38	2m		
158	HCLZNW-1a	47	22	38	12m	weak; no H α	
159	HCLZNW-1b	48	06	38	12m		
160	COMP			↑			
161	L1537-4	04:46	+24:35	38	4m	H α	
162	COMP			↑			
163	HCLZNW-7b	04:39:49	+26:01:52	38	4a	H α	
164	HCLZNW-9a	04:40:03.6	+25:53:53	38	3m		
165	HCLZNW-9b	06.3	25	38	10m		
166	COMP			↑			
167	L1537-2b	04:47:41.6	+25:04:35	38	7m		
168	L1537-5	04:47:22	+24:54:34	38	4m		
169	L1537-14b	14:47:41.6	+25:04:35	38	4m		
170	COMP			↑			
171	L153713a	04:47:10.6	+24:57:01	38	15m	H α	
172	L153713b	10.7	17	38	6m		
173	COMP			↑			
174	L153710b	04:47:42.2	+24:42:28	38	15m		
175	COMP			↑			
176	L1537-12	04:48:23.3	+24:39:33	38	4m	H α & faint comp to NW	
177	L1538-1	04:47:55.5	+25:34:49	38	3m	H α (not in slit)	
178	COMP			↑			
179	021014	04:22:06.2	+22:53:01	37	4m	extra * on slit	
180	021015	04:22:35.5	+22:58:02	37	7m		
181	COMP			↑			

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4131</u>	
Observer: <u>PBerlind</u>			Grating: <u>700R</u>			
PI: <u>Goodman/Huchra/Geller</u>			Date: <u>11/28/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
182	031021	04:22:26.9	+23:24:28	37	6m	thin clouds
183	031022	04:22:29.9	+23:19:32	37	5m	fuzzy comp to N
184	031024	04:22:29.7	+23:12:54	37	3m	} stars selected to be } brighter than given } 2 stars on slit
185	031025	04:22:33.4	+23:10:38	37	4m	
186	COMP			↑		
187	011001	04:22:35.5	+22:45:39	37	4m	
188	011004	04:22:37.5	+22:33:11	37	3m	
189	COMP			↑		
190, 191	2M4	08:51:00.4	+12:02:10.9	1	20m	non-stellar x2
191, 192	COMP			↑		
192	0710Sp2253	07:10:30	+22:53:60	1	8m	H _α
193	COMP			↑		
194	07104p2511	07:10:24	+25:11:60	1	8m	H _α
195	COMP			↑		
196	07070p3949	07:07:60	+35:49:60	1	15m	- weak =#
197	COMP			↑		
200	312.025374	08:55:23.9	+27:37:03.5	3	7m	H _α
201	COMP			↑		
202	312.026122	08:41:16.97	+27:35:32	3	7m	
203	COMP			↑		
204	312.026280	08:46:06.03	+27:40:27	3	7m	
205	COMP			↑		
206	312.028286	08:44:45.78	+27:46:26.9	3	7m	
207	COMP			↑		
208	312.026319	08:47:46.99	+27:40:48.8	3	8m	
209	COMP			↑		
210	312.028289	08:45:23.58	+27:44:20.2	3	8m	
211	COMP			↑		
212	AS127	08:32	+19:11	38	90s	
213	COMP					

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4/2</u>	
Observer: <u>PB</u>			Grating: <u>3002</u>		Date: <u>11/28/95</u>	
PI: <u>Brizeno/Kenyon/Wilks</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
214	AS196	08:37:42.5	+19:35:57	38	90s	
215	COMP			↑		
216	AS254	08:38:53.6	+19:34:16	38	3m	
217	AS332	08:40	+19:47	38	1m	
218	AS342	08:40	+19:37	38	1m	
219	AS378	08:40:42.6	+19:33:57	38	30s	
220	COMP			↓		
221	AS435	08:41:28	+19:44	38	30s	
222	N4151	12:06	+39:41	6	30s	
227	COMP			↑		
224-225	Fer234	10:24	+43:21	0	30s	
226	COMP			↑		
227-229	TKCUN	12:42:17.9	+37:02:14	12	5s/5s	
230	COMP			↑		
231-240	ISAS			0	0s	
241-250	FLAT			0	6s	
251-257	DARK				15m	
						a few scattered clouds @ dawn

11, 20

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4136</u>	
Observer: <u>RB</u>			Grating: <u>300R</u>		Date: <u>11/29/95</u>	
PI: <u>Goodman/Brizeno</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
122	COMP			↑		
123	021011	04:22	+23:05	37	4m	
124	COMP			↑		
125	041031	04:22	23:45	37	4m	
126	041032	04:22	23:41	37	3m	
127	041033	04:22	23:37	37	4m	
128	041034	04:22	23:31	37	4m	
129	041035	04:22	23:28	37	3m	
130	COMP			↑		
131	051041	04:22	23:03	37	3m	
132	051042	04:22	23:59	37	3m	
133	051043	04:22	23:55	37	5m	
134	051044	04:22	23:52	37	3m	
135	051045	04:22	23:47	37	4m	
136	COMP			↑		
137	061051	04:22	+24:24	37	3m	
138	061052	04:22	+24:21	37	3m	
139	061053	04:22	+24:19	37	3m	
140	061054	04:22	+24:15	37	4m	
141	061055	04:22	+24:12	37	8m	
142	COMP			↑		
143	L153711a	04:48:364	+24:42:17	38	7m	
144	COMP			↑		
145	L1538-4	04:48	+25:27	38	12m	
146	COMP			↑		
147	L1538-26S	04:51	+25:28	38	12m	South comp
148	L1538-26N	"	"	38	15m	North
149	COMP			↑		
150	L1544A-1	05:03:436	+25:58:31	38	9m	
151	COMP			↑		

60 inch Telescope Log

Observer: PBSpectrograph: FASTGrating: 300LPage: 4/36PI: Huchra/GellerDate: 11/29/95

Number	Object	R.A.	Dec.	L/R	Exp	Comments
152	0545p21	05:48:07	+21:40:41	1	10m	
153	COMP			↑		
154	0549p32	05:49:41	+32:51:11	1	8m	
155	COMP			↑		
156	0550p31	05:50:51.1	+31:06:49	1	7m	
157	COMP			↑		
158	312.042218	08:47:18.72	+28:30:49	3	10m	
159	COMP			↑		
160	312.042219	08:47:45.4	+28:31:17	3	10m	
161	COMP			↑		
162,163	N3115	10:02:44.4	-07:29:30	0	90s	
164	COMP			↑		
165,166	N3379	10:45:11.4	+12:50:48	0	90s	
167	COMP			↑		
168	N4151	12:09	+39:41	6	30s	seeing -1.5"
169	COMP			↑		
170-174	H244	13:21:19	+36:27:39	0	1m, 2m	5" Slit is in!
175	COMP			↑		
176-185	FLAT			0	4s	5" Slit
186-195	BIAS			0	0s	
196-205	FLAT			0	6s	3" Slit
						clear @ dawn

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4133</u>	
Observer: <u>P. Berling</u>			Grating: <u>300</u>			
PI: <u>Wilkes/Geller</u>			Date: <u>11/29/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	clouds to south
11-20	FLAT			0	6s	
21-25	sky			0	2s	
26-27	COMP			↑	5s	fast foc = 960
28,29	PRLog	19:25	+42:47	0	2s	
30	COMP			↑		
31,32	N7311			1	2m	
33	COMP			↑		
34,35,36	BD028424	21:49:57	+29:57	0	30s	dome moved during *37
37	COMP			↑		
38	3C390.3	19:45	+79:43	6	2m	
39	COMP			↑		
40	MRK335	00:03:41	+19:55:27	6	1m	
41	COMP			↑		
42,43	225m280	00:41:45.1	+41:05:12	0	5m	id checked
44	COMP			↑		
45,46	163m217	00:40:33.3	+41:11:20	0	5m	"
47	COMP			↑		bright mean
48	464.048486	00:18:31.5	+12:12:33.8	3	15m	H _α @ pit 2340
49	COMP			↑		
50	464.052089	00:16:17.64	+12:24:37.1	3	15m	H _α
51	COMP			↑		
52	464.078559	00:02:02.81	+13:29:25	3	15m	finishes the green dots from the plate!
53	COMP			↑		
54	467.025376	01:12:41.68	+11:24:16.2	3	10m	
55	COMP			↑		
56	467.025450	01:18:26.17	+11:36:10.1	3	10m	
57	COMP			↑		
58	467.025459	01:24:40.54	+11:37:03.4	3	10m	H _α
59	COMP			↑		



Mon 23:16 - 01

9.09

1.21

60 inch Telescope Log
 Observer: PB
 PI: Geller

Spectrograph: FAST
 Grating: 300R
 Date: 11/29/95

Page: 4/134

Number	Object	R.A.	Dec.	L/R	Exp	Comments
60,64	467.029662w	01:26:43.92	+11:40:00.7	3	10m, 5m	2 galaxies on slit Ha
61,65	COMP			↑		#2 is 467.029616
62	467.032350	01:20:06.98	+11:51:42	3	15m	superposed gals w/
63	COMP			↑		gal 1 = 11,000 km/s
66	467.032359	01:22:46	+11:51:27	3	8m	gal 2 = 18,900 km/s!
67	COMP			↑		Ha
69	467.034762w	01:26:55.06	+12:00:23.7	3	12m	2 galaxies on slit
69	COMP			↑		#2 is 467.34762
70	467.635521	01:27:31.87	+12:10:31.9	3	7m	
71	COMP			↑		
72	467.038296	01:27:41.01	+12:12:52.1	3	6m	
73	COMP			↑		
74	467.040484	01:28:46.28	+12:21:26.7	3	5m	
75	COMP			↑		
76	467.041939	01:19:52.62	+12:54:46.5	3	10m	
77	COMP			↑		
78	467.044551	01:20:02.57	+12:57:58.4	3	7m	
79	COMP			↑		
80	467.045009	01:20:24.62	+12:59:44.2	3	8m	
81	COMP			↑		
82	469.068535	01:57:02.86	+13:19:29.5	3	10m	Ha
83	COMP			↑		
84	469.071302	01:58:22.82	+13:21:29.5	3	10m	seeing 2-3"
85	COMP			↑		
86	469.071581	02:19:13.4	+13:28:52.6	3	2m	*
87	COMP			↑		
88	469.070112	02:08:56.7	+10:44:16.5	3	15m	Ha; bright star @ E end of slit
89	COMP			↑		
90	03289p 3105 A	03:25:57.9	+31:05:50	30	10m	star on slit 5" to E Ha
91	COMP			↑		

file 90 both objects on slit appear to be stars. there does seem to be emission but it is above both objects on slit. not associated with a continuum

nebulaosity bridge w/ Ha emission + N+S

emission lines @ not 2w

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4/35</u>	
Observer: <u>PB</u>			Grating: <u>302</u>		Date: <u>11/29/95</u>	
PI: <u>Kenyon/Karanyi</u>						
Number	Object	R.A.	Dec.	L/R	Exp	Comments
92	03276p302Z	03:27:40.3	+30:22:36	30	5m	F Tauri *! H α emission
93	COMP			↑		H α , H β
94	03380p3135A	03:38:41.6	+31:35:02	30	4m	•-A
95	03380p3135B	"	"	30	8m	•-B
96	COMP			↑		
97	03388p3139A	03:38:50.5	+33:19:12	30	5m	H α NE • very close double
98	03388p3139B	"	"	30	6m	H α SW •
99	COMP			↑		
100	03245p300Z	03:24:34.9	+30:02:36	30	15m	H α nebulosity to South of α *
101	COMP			↑		
102	03385p3109	03:38:31.9	+31:09:30	30	15m	E+W comps
103	COMP			↑		
104	03390p3158A	03:39:00.9	03:39:02.9	30	32s	
105	03390p3158B	"		30	15m	
106	COMP			↑		
107	awm7-2.134	02:55	+41:59	35	10m	
108	COMP			↑		
109	awm7-2.136	02:55	+41:32	35	5m	other *'s on slit
110	COMP			↑		
111	awm7-2.137	02:55	+40:49	35	8m	
112	COMP			↑		
113	awm7-2.142	02:56:25	+41:07:56	35	10m	
114	COMP			↑		
115	aw7-2.143	02:56	+41:16	35	10m	
116	COMP			↑		
117	awm7-2.144	02:56	+41:47	35	8m	H α
118	COMP			↑		
119	awm7-2.145	02:56	+41:34	35	7m	
120	COMP			↑		
121	awm7-2.146	02:56	+41:39	35	10m	

97 + 98 - both stars -
 dont see any H α -
 why? what
 is wrong here ???

60 inch Telescope Log
 Observer: P. Berling
 PI: Geller
 Spectrograph: FAST
 Grating: 300A
 Date: 11/30/95
 Page: 4137

Number	Object	R.A.	Dec.	L/R	Exp	Comments
1-10	BIAS			0	0s	clear!
11-20	FLAT			0	6s	bright moon
21-25	sky			0	2s	
26-27	COMP			↑		FAST fix = 940
28-32	HD198858	20:49	+47:31	0	5s	def + trailed
33	COMP			↑		
34-38	HD198858			-		test for Nelson + Amato
39-40	M731	22:21	+34	0	2m	
41	COMP			↑		42-44 = BD 284211
45	MRK335	00:03:45	+19:55:27	6	1m	
46	COMP			↑		
47-49	M31	00:40	+40:59	0	30s	
50	COMP			↑		
51-53	M31 sky	nearby		0	30s	
54	COMP			↑		
55-57	M32	00:39:56	+40:35:30	0	30s	
58	COMP			↑		
59,60	225m280	00:41	+41:05	0	5m	Ouch I just smashed
61	COMP			↑		my finger, Susan if
62-63	158m213	00:40	+41		5m	my handwriting looks worse
64	COMP			↑		than usual tonight
65	520.054661	22:30:12.5	+13:25:04	3	10m	HL epik 2311
66	COMP			↑		Susan: I don't like these
67	520.03576	22:34:26.84	+11:15:151	3	10m	3 exposures any more than
68	COMP			↑		you do; but they are the
69	467.045021	01:18:59.01	+12:39:44.2	3	8m	last of the plate left over
70	COMP			↑		from last week.
71	467.045044	01:14:13	+12:40:03	3	10m	HL bright sky!!
72	COMP			↑		
73	467.045267	01:19:29	+12:40:44	3	7m	* to W

sky's too much; greener
 protein's
 elsewhere

Moon W +2

1.17
 8.9

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4138</u>	
Observer: <u>PB</u>			Grating: <u>3028</u>			
PI: <u>Berton</u>			Date: <u>11/30/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
74	COMP			↑		
75	gal 921 gal 30	01:22	+32:41	33	7m	H α
76	COMP			↑		
77	gal 32	01:22	+34:26	33	3m	H α
78	COMP			↑		
79	gal 33	01:22	+33:58	33	8m	
80	COMP			↑		
81	gal 34	01:22	+33:24	33	8m	
82	COMP			↑		
83	gal 35	01:22	+33:11	33	15m	
84	COMP			↑		
85	gal 36	01:23	+33:31	33	10m	H α
86	COMP			↑		
87	gal 37	01:23	+33:33	33	10m	
88	COMP			↑		
89	gal 38	01:23	+33:22	33	8m	
90	COMP			↑		
91	gal 39	01:23	+33:12	33	2m	
92	COMP			↑		
93	gal 40	01:23	+33:04	33	6m	
94	COMP			↑		
95	gal 43	01:23	+32:37	33	8m	H α @ pix 2083.42
96	COMP			↑		
97	gal 44	01:33	+31:34	33	10m	
98	COMP			↑		
99	gal 45	01:23	+33:24	33	8m	
100	COMP			↑		
101	gal 46	01:23	+33:35	33	5m	
102	COMP			↑		
103	gal 47	01:23	+22:39	33	5m	

1

60 inch Telescope Log			Spectrograph: <u>FAST</u>			
Observer: <u>FB</u>			Grating: <u>3002</u>		Page: <u>4139</u>	
PI: <u>Barton/Goodman</u>			Date: <u>11/30/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
104	COMP			↑		bright main
105	gal 49	01:23.58	+33-18-48	33	4m	
106	COMP			↑		
107	gal 50	01-23	+33-19	33	15m	
108	COMP			↑		
109	gal 51	01-24	+33-23	33	10m	
110	COMP			↑		
111	gal 52	01-24	+33-46	33	10m	
112	COMP			↓		
113, 114	gal 54	01-24	+33-47	33	4m	Ho nice rot curve
115	071061	04-22	24-45	37	2m	
116	071062	04-22	24-41	37	3m	
117	071063	04-22	24-37	37	2m	
118	071064	04-22	24-34	37	4m	
119	071065	04-22	24-29	37	5m	
120	COMP			↑		
121	071071	04-22	25-04	37	5m	
122	071072	04-22	25-02	37	6m	
123	071073	04-22	24-57	37	7m	
124	071074	04-22	24-53	37	7m	
125	071075	04-22	24-49	37	5m	
126	COMP			↑		
127	101091	04-22	25-44	37	3m	
128	101092	"	25-42	37	5m	
129	101093	"	25-36	37	8m	
130	101094	"	25-32	37	90s	
131	101095	"	25-27	37	3m	
132	COMP			↑		
133	111101	04-22	+26-02	37	1m	
134	111102	04-22	+25-58	37	4m	

60 inch Telescope Log			Spectrograph: <u>FAST</u>		Page: <u>4140</u>	
Observer: <u>PB</u>			Grating: <u>302</u>			
PI: <u>Goodman/Broad</u>			Date: <u>11/30/95</u>			
Number	Object	R.A.	Dec.	L/R	Exp	Comments
135	111103	07:27	25:55	37	5m	
136	111104	"	25:51	37	5m	
137	111105	"	25:48	37	10m	
138	COMP			↑		
139	121111	04:22	26:25	37	2m	
140	121112	04:22	26:21	37	6m	
141	121113	04:22	26:15	37	6m	
142	121114	04:22	26:11	37	2m	
143	121115	04:22	26:08	37	2m	
144	COMP			↑		
145	L1544B.9	05:06:49	+24:24:55	38	1m	
146	COMP			↑		
147	L1544B.4g	05:02:27.6	+24:45:22	38	12m	Flu - broad
148	COMP			↑		
149	L1544B.7g	05:04:03	+24:35:36	38	5m	H _γ , Ca emission
150	COMP			↑		
151	L1544A9e	05:02	+24:46	38	9m	
152	L1544A9d	"	"	38	10m	extra * slit - no Ha
153	COMP			↑		
154	L1544A9f	05:02	+24:46	38	6m	
155	L1544A-9a	"	"	38	6m	
156	L1544A-9c	"	"	38	12m	
157	L1544A-9b	"	"	38	10m	
158	COMP			↑		
159	L1544A.5b	05:01	+25:14	38	12m	
160	COMP			↑		
161	0531p15	05:27:26	+15:06:15	1	5m	
162	COMP			↑		
163/167	0531p17	05:30	+17:12	1	5m	7m x 2
164/168	COMP			↑		

60 inch Telescope Log		Spectrograph: <u>EAST</u>				
Observer: <u>PB</u>		Grating: <u>3000</u>			Page: <u>4141</u>	
PI: <u>Huchra/Celler</u>		Date: <u>11/30/95</u>				
Number	Object	R.A.	Dec.	L/R	Exp	Comments
165	0531p20	5:31	+20:12	1	7m	Main set
166	COMP			↑		
169	0533p15	05:33	+15:27	1	7m	Hk pri 2070
170	COMP			↑		
171	0533p09	05:33	+07:02	1	5m	
172	COMP			↑		
173	0534p16	05:34	+16:13	1	5m	
174	COMP			↑		
175	0534p14	05:34	+14:38	1	10m	
176	COMP			↑		
177	0555p08	05:55	+08:23	1	7m	
178	COMP			↑		
179	0556p35	05:56	+35:45	1	10m	Hk
180	COMP			↑		
181	0557p30	05:57	+30:40	1	10m	
182	COMP			↑		
183	312.042920	08:40:39	+28:34:47	3	10m	
184	COMP			↑		
185	312.043558	08:58:35	+28:33:03	3	10m	
186	COMP			↑		
187	312.046870	09:03:20.51	+28:41:43	3	8m	
188	COMP			↑		
189	312.068822	09:46:34	+29:53:07	3	8m	
190	COMP			↑		
191	312.072284	08:46	+30:03	3	8m	
192	COMP			↑		
193	312.084831	08:41	+30:42	3	10m	Hk
194	COMP			↑		
195	312.090335	08:57	+30:58	3	10m	
196	COMP			↑		

60 inch Telescope Log

Observer: PDPI: Geller/Wilkes/BrianoSpectrograph: FASTGrating: 300RPage: 4/12Date: 11/30/95

Number	Object	R.A.	Dec.	L/R	Exp	Comments
197	312.09217	08:44.3	+31:08:16	3	10m	
198	COMP			↑		
199	312.093121	08:47.11	+31:08:58	3	10m	
200	COMP			↑		
201,202	Feige 34	10:31	+43:21	0	30s	
203	COMP			↑		
204	NY61	17:08	+59:41	6	30s	
205	COMP			↑		
206	AS355	08:40:26	+19:13:09	38	90s	
207	COMP			↑		
208	AS455	08:41:47	+19:27:31	38	2m	
209	COMP			↑		
210,211	AS463	08:41:54.5	+19:15:26	38	30s	
212	COMP			↑		
213,214	AS486	08:42:22	+19:27:46	38	30s	
215	COMP			↑		
216,217	AS531	08:43:20	+19:46:09	38	30s	
218	COMP			↑		
219-228	BIAS			0	0s	
229-238	FLAT			0	6s	
						clear @ dawn
						END OF FAST RUN