

FAX: to Susan Lorenz pg 101 u

60 inch Telescope Log  
 Observer: PBerlind  
 PI: Geller  
 Spectrograph: FAST  
 Grating: 302L, 3" slit  
 Date: 2/6/97  
 Page: 5239

| Number | Object     | R.A.  | Dec.   | L/R | Exp      | Comments     |
|--------|------------|-------|--------|-----|----------|--------------|
| 1-10   | BIAS       |       |        | 0   | 0s       | bin by 4     |
| 11-20  | FLAT       |       |        | 0   | 6s       | "            |
| 21-30  | BIAS       |       |        | 0   | 0s       | bin by 2     |
| 31-40  | FLAT       |       |        | 0   | 12s      | "            |
| 41-45  | sky        |       |        | 0   | 2s       |              |
| 46     | COMP       |       |        | ↑   | 5s       | clear skies! |
| 47-48  | ZAd        | 23:33 | +48:49 | 12  | 3, 9s    |              |
| 49     | COMP       |       |        | ↑   |          | poor seeing  |
| 50-51  | AKR        | 01:26 | +41:15 | 12  | 5s, 150s |              |
| 52     | COMP       |       |        | ↑   |          |              |
| 53-54  | DL Tau     | 04:33 | +05:20 | 12  | 20, 4m   |              |
| 55     | COMP       |       |        | ↑   |          |              |
| 56-57  | DR Tau     | 04:47 | +16:55 | 12  | 10, 3m   |              |
| 58     | COMP       |       |        | ↑   |          |              |
| 59     | MRK 335    | 02:03 | +49:55 | 6   | 2m       |              |
| 60     | COMP       |       |        | ↑   |          |              |
| 61     | 531.053210 | 02:26 | +07:59 | 55  | 7m       | wk           |
| 62     | COMP       |       |        | ↑   |          |              |
| 63     | 531.054365 | 02:50 | +08:06 | 55  | 8m       | em           |
| 64     | COMP       |       |        | ↑   |          |              |
| 65     | 531.055711 | 02:50 | +08:13 | 55  | 8m       |              |
| 66     | COMP       |       |        | ↑   |          |              |
| 67     | 531.055767 | 02:55 | +08:13 | 55  | 12m      | em           |
| 68     | COMP       |       |        | ↑   |          |              |
| 69     | 531.055757 | 02:48 | +08:21 | 55  | 10m      | em           |
| 70     | COMP       |       |        | ↑   |          |              |
| 71     | 531.060177 | 02:53 | +08:39 | 55  | 6m       |              |
| 72     | COMP       |       |        | ↑   |          |              |
| 73     | 531.064999 | 02:55 | +08:06 | 55  | 8m       |              |
| 74     | COMP       |       |        | ↑   |          |              |

## 60 inch Telescope Log

Observer: PJB + Jeff MaderPI: Greller & MahdaviSpectrograph: FASTGrating: 3002Page: 5240Date: 2/6/97

| Number | Object        | R.A.  | Dec.   | L/R | Exp | Comments                            |
|--------|---------------|-------|--------|-----|-----|-------------------------------------|
| 75     | S31.065035    | 03:04 | +06:05 | SS  | 8m  |                                     |
| 76     | COMP          |       |        | ↑   |     |                                     |
| 77     | S31.067771    | 02:54 | +09:21 | SS  | 12m | Seemg - 3-5"<br>oxide #'s disappear |
| 78     | COMP          |       |        | ↑   |     |                                     |
| 79     | S31.068118    | 02:56 | +09:23 | SS  | 10m |                                     |
| 80     | COMP          |       |        | ↑   |     |                                     |
| 81     | S31.071310    | 02:48 | +09:39 | SS  | 8m  |                                     |
| 82     | COMP          |       |        | ↑   |     |                                     |
| 83     | S31.068594    | 02:53 | +09:25 | SS  | 15m |                                     |
| 84     | COMP          |       |        | ↑   |     |                                     |
| 85     | Z005037-14.80 | 02:04 | 32:42  | 3   | 3m  |                                     |
| 86     | COMP          |       |        | ↑   |     |                                     |
| 87     | Z014920-15.50 | 02:08 | 25:34  | 33  | 5m  |                                     |
| 88     | COMP          |       |        | ↑   |     |                                     |
| 89     | Z006842-15.00 | 02:09 | 31:21  | 3   | 5m  |                                     |
| 90     | COMP          |       |        | ↑   |     |                                     |
| 91     | N000216-14.00 | 02:15 | +37:49 | 3   | 7m  |                                     |
| 92     | COMP          |       |        | ↑   |     |                                     |
| 93     | Z004162       | 02:21 | 25:20  | 3   | 3m  | wk                                  |
| 94     | COMP          |       |        | ↑   |     |                                     |
| 95     | Z014855       | 02:10 | +16:51 | 3   | 6m  | em                                  |
| 96     | COMP          |       |        | ↑   |     |                                     |
| 97-98  | Hiltner 600   | 06:42 | +02:08 | 56  | 45s |                                     |
| 99     | COMP          |       |        | ↑   |     |                                     |
| 100    | 10001.G.14    | 08:53 | +37:06 | 59  | 8m  | em                                  |
| 101    | COMP          |       |        | ↑   |     |                                     |
| 102    | 10001.G.15    | 08:53 | +36:20 | 59  | 7m  | em                                  |
| 103    | COMP          |       |        | ↑   |     |                                     |
| 104    | 10001.G.16    | 08:53 | +36:40 | 59  | 15m |                                     |
| 105    | COMP          |       |        | ↑   |     |                                     |

## 60 inch Telescope Log

Observer: RSPI: MahdaviSpectrograph: FABGrating: 3002Page: 5241Date: 2/6/97

| Number | Object       | R. A. | Dec.   | L/R | Exp | Comments                 |
|--------|--------------|-------|--------|-----|-----|--------------------------|
| 106    | rool. Ct. 17 | 08:53 | +36:15 | S9  | 15m |                          |
| 107    | COMP         |       |        | ↑   |     | Seeing much improved     |
| 108    | rool. Ct. 01 | 08:45 | +36:31 | S9  | 15m | close E-D pair; bin by 2 |
| 109    | COMP         |       |        | ↑   | 10s | em++ both comps          |
| 110    | rool. Ct. 19 | 08:54 | +37:02 | S9  | 15m |                          |
| 111    | COMP         |       |        | ↑   |     |                          |
| 112    | rool. Ct. 18 | 08:53 | +36:23 | S9  | 12m |                          |
| 113    | COMP         |       |        | ↑   |     |                          |
| 114    | 012. Ct. 01  | 09:30 | +34:13 | S9  | 8m  |                          |
| 115    | COMP         |       |        | ↑   |     |                          |
| 116    | 012. Ct. 02  | 09:30 | +34:39 | S9  | 35m | em+                      |
| 117    | COMP         |       |        | ↑   |     |                          |
| 118    | 012. Ct. 03  | 09:31 | +33:26 | S9  | 8m  | EM                       |
| 119    | COMP         |       |        | ↑   |     |                          |
| 120    | 012. Ct. 04  | 09:31 | +33:35 | S9  | 7m  |                          |
| 121    | COMP         |       |        | ↑   |     |                          |
| 122    | 012. Ct. 05  | 09:32 | +34:16 | S9  | 15m |                          |
| 123    | COMP         |       |        | ↑   |     |                          |
| 124    | 012. Ct. 07  | 09:32 | +34:13 | S9  | 8m  |                          |
| 125    | COMP         |       |        | ↑   |     |                          |
| 126    | 012. Ct. 06  | 09:32 | +33:38 | S9  | 10m | em                       |
| 127    | COMP         |       |        | ↑   |     |                          |
| 128    | 012. Ct. 09  | 09:33 | +33:42 | S9  | 8m  |                          |
| 129    | COMP         |       |        | ↑   |     |                          |
| 130    | 012. Ct. 10  | 09:33 | +34:57 | S9  | 10m | em                       |
| 131    | COMP         |       |        | ↑   |     |                          |
| 132    | 012. Ct. 13  | 09:34 | +34:55 | S9  | 10m | EM                       |
| 133    | COMP         |       |        | ↑   |     |                          |
| 134    | 012. Ct. 11  | 09:33 | +34:58 | S9  | 8m  |                          |
| 135    | COMP         |       |        | ↑   |     |                          |

60 inch Telescope Log

Observer: PB  
 PI: Mahdavi Huchra & Geller

Spectrograph: FAST

Grating: 300

Date: 2/6/97

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| Number  | Object      | R.A.  | Dec.   | L/R | Exp     | Comments                                     |
|---------|-------------|-------|--------|-----|---------|--|
| 136     | 012.Ft.12   | 09:34 | +34:42 | S9  | 7m      |  |
| 137     | COMP        |       |        | ↑   |         |  |
| 138     | 012.Ft.14   | 09:35 | +34:20 | S9  | 5m      | wk em  |
| 139     | COMP        |       |        | ↑   |         |  |
| 140     | 012.Ft.15   | 09:36 | +37:57 | S9  | 5m      |  |
| 141     | COMP        |       |        | ↑   |         |  |
| 142     | 012.Ft.16   | 09:36 | +33:10 | S9  | 5m      |  |
| 143     | COMP        |       |        | ↑   |         |  |
| 144     | 012.Ft.17   | 09:36 | +33:20 | S9  | 7m      | wk H <sub>α</sub> pix LET7 blue side of core |
| 145     | COMP        |       |        | ↑   |         |  |
| 146     | 012.Ft.18   | 09:36 | +34:18 | S9  | 5m      |  |
| 147     | COMP        |       |        | ↑   |         |  |
| 148     | 012.Ft.19   | 09:38 | +34:20 | S9  | 6m      |  |
| 149     | COMP        |       |        | ↑   |         |  |
| 150     | F0234       | 10:39 | +43:06 | S6  | 2m      |  |
| 151     | COMP        |       |        | T   |         |  |
| 152     | A1173A      | 11:09 | +41:34 | I   | 11m     |  |
| 153     | COMP        |       |        | T   |         |  |
| 154     | A1173B      | 11:09 | +41:34 | I   | 11m     |  |
| 155     | COMP        |       |        | ↑   |         | #157: all galaxy                             |
| 156-157 | 11559p0100A | 11:58 | +10:42 | 60  | 4m, 12m | S bin by 2 close EW pair for                 |
| 158     | COMP        |       |        | ↑   | 10s     | W object is a star                           |
| 159     | 11559p0100B | 11:58 | +10:42 | 60  | 8m      | M  |
| 160     | 11559p0100C | 11:58 | +10:42 | 60  | 6m      | N seeing worse                               |
| 161     | COMP        |       |        | ↑   |         |  |
| 162     | 12023m0130  | 12:02 | -01:46 | 60  | 4.5m    |  |
| 163     | COMP        |       |        | ↑   |         |  |
| 164     | 12024m0255  | 12:04 | -03:11 | 60  | 4.5m    | em   |
| 165     | COMP        |       |        | ↑   |         |  |

## 60 inch Telescope Log

Observer: PBPI: GellerSpectrograph: FASTGrating: 300Date: 2/6/97Page: 5243

| Number | Object      | R.A.  | Dec.   | L/R | Exp  | Comments                        |
|--------|-------------|-------|--------|-----|------|---------------------------------|
| 166    | 12157p0653  | 12:18 | +06:36 | 60  | 8m   |                                 |
| 167    | COMP        |       |        | ↑   |      |                                 |
| 168    | 12320p0617  | 12:34 | +06:00 | 60  | 10m  | em                              |
| 169    | COMP        |       |        | ↑   |      |                                 |
| 170    | 12325m0319N | 12:35 | -03:35 | 60  | 9m   |                                 |
| 171    | 12325m0319S | 12:35 | -03:35 | 60  | 7m   |                                 |
| 172    | COMP        |       |        | ↑   |      |                                 |
| 173    | 12369p0433  | 12:39 | +04:16 | 60  | 10m  |                                 |
| 174    | COMP        |       |        | ↑   |      |                                 |
| 175    | 12379p0519  | 12:40 | +05:01 | 60  | 12m  |                                 |
| 176    | COMP        |       |        | ↑   |      |                                 |
| 177    | 12380p0538  | 12:40 | +05:21 | 60  | 6m   |                                 |
| 178    | COMP        |       |        | ↑   |      |                                 |
| 179    | 12460m0511  | 12:48 | -03:28 | 60  | 8m   | em +                            |
| 180    | COMP        |       |        | ↑   |      |                                 |
| 181    | 12481m0233  | 12:50 | -02:49 | 60  | 8m   | pec em - steep rotation curve   |
| 182    | COMP        |       |        | ↑   |      |                                 |
| 183    | 12517p0104  | 12:54 | +00:48 | 60  | 8m   | blue; em                        |
| 184    | COMP        |       |        | ↑   |      |                                 |
| 185    | 12544p0625  | 12:56 | +06:09 | 60  | 15m  | wk em pix 2016 ⇒ H <sub>α</sub> |
| 186    | COMP        |       |        | ↑   |      |                                 |
| 187    | 12571p0330  | 12:59 | +03:14 | 60  | 12m  | em                              |
| 188    | COMP        |       |        | ↑   |      |                                 |
| 189    | 13021p0359N | 13:04 | +03:43 | 60  | 4.5m |                                 |
| 190    | 13021p0359S | 13:04 | +03:43 | 60  | 10m  | wkam                            |
| 191    | COMP        |       |        | ↑   |      |                                 |
| 192    | N4151       | 12:06 | +39:41 | 6   | 30s  |                                 |
| 193    | COMP        |       |        | ↑   |      |                                 |
| 194    | N4258       | 12:16 | +47:34 | 6   | 2m   |                                 |
| 195    | COMP        |       |        | ↑   |      |                                 |

60 inch Telescope Log

Observer: PB  
 PI: Geller

Spectrograph: FAST  
 Grating: 3000  
 Date: 2/6/97

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| Number  | Object  | R.A.  | Dec.   | L/R | Exp | Comments       |
|---------|---------|-------|--------|-----|-----|----------------|
| 196     | MRK219  | 13:51 | +69:33 | 6   | 2m  |                |
| 197     | WMP     |       |        | ↑   |     |                |
| 198     | N5518   | 14:15 | +75:22 | 6   | 3m  |                |
| 199     | WMP     |       |        | ↑   |     |                |
| 200     | N000221 | 14:28 | +13:46 | 60  | 5m  | wk cam         |
| 201     | WMP     |       |        | ↑   |     |                |
| 202     | Z002961 | 14:28 | +7:55  | 60  | 2m  |                |
| 203     | WMP     |       |        | ↑   |     |                |
| 204     | Z011297 | 14:18 | +11:12 | 60  | 4m  | wk             |
| 205     | WMP     |       |        | ↑   |     |                |
| 206     | N002889 | 13:51 | +21:59 | 60  | 3m  |                |
| 207     | WMP     |       |        | ↑   |     | clear & clean! |
| 208-209 | H244    | 13:21 | +6:23  | 56  | 2m  |                |
| 210     | WMP     |       |        | ↑   |     |                |
| 211-220 | BIAS    |       |        | 0   | 0s  |                |
| 221-230 | FLAT    |       |        | 0   | 6s  |                |
| 231-240 | BIAS    |       |        | 0   | 0s  | bin by Z       |
| 241-250 | FLAT    |       |        | 0   | 12s | "              |
| 251-259 | DARK    |       |        | 0   | 15m |                |
|         |         |       |        |     |     |                |
|         |         |       |        |     |     |                |
|         |         |       |        |     |     |                |
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|         |         |       |        |     |     |                |