

60 inch Telescope Log

Observer: CALKINS

PI: All, Mahdavi

Spectrograph: FAST

Grating: 3000

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Date: 1/21/99

| Number | Object     | R. A. | Dec.  | L/R | Exp  | Comments              |
|--------|------------|-------|-------|-----|------|-----------------------|
| 1-10   | DARK       |       |       |     | 15m  |                       |
| 11-20  | BEAR       |       |       |     | 0s   |                       |
| 21-30  | FLAT       |       |       |     | 6s   |                       |
| 31-40  | BEAR       |       |       |     | 0s   |                       |
| 41-50  | FLAT       |       |       |     | 12s  |                       |
| 51-55  | sky        |       |       | #57 | 2s   |                       |
| 56     | comp       |       |       | ↑   |      |                       |
| 57     | PG0205p134 | 2 08  | 13 36 | #56 | 3.5m |                       |
| 58     | comp       |       |       | ↑   |      |                       |
| 59     | M31        | 00 42 | 41 16 | #57 | 90s  |                       |
| 60     | comp       |       |       | ↑   |      |                       |
| 61     | AKn564     | 22 42 | 29 43 | #6  | 5m   | PA = 21°, bright star |
| 62     | comp       |       |       | ↑   |      | "west"                |
| 63     | N7469      | 23 03 | 8 52  | #6  | 2.5m | PA = 58°              |
| 64     | comp       |       |       | ↑   |      |                       |
| 65     | MRK335     | 00 06 | 20 12 | #6  | 3m   | PA = 64°              |
| 66     | comp       |       |       | ↑   |      |                       |
| 67     | AKn120     | 5 16  | 00 09 | #6  | 3m   | PA = 39°              |
| 68     | comp       |       |       | ↑   |      |                       |
| 69     | sqb145.047 | 2 32  | 00 59 | #59 | 8m   | very hazy due to      |
| 70     | comp       |       |       | ↑   |      | blowing dust          |
| 71     | sqb145.048 | 2 33  | 1 18  | #59 | 15m  |                       |
| 72     | comp       |       |       | ↑   |      |                       |
| 73     | sqb145.049 | 2 33  | 1 23  | #59 | 5m   |                       |
| 74     | comp       |       |       | ↑   |      |                       |
| 75     | sqb145.050 | 2 33  | 1 17  | #59 | 6m   |                       |
| 76     | comp       |       |       | ↑   |      |                       |
| 77     | sqb145.051 | 2 33  | 1 08  | #59 | 5m   |                       |
| 78     | comp       |       |       | ↑   |      |                       |
| 79     | sqb145.052 | 2 33  | 00 55 | #59 | 17m  |                       |

| 60 inch Telescope Log               |             |      |       | Spectrograph: <u>FAST</u> |      |                          |
|-------------------------------------|-------------|------|-------|---------------------------|------|--------------------------|
| Observer: <u>CALKINS</u>            |             |      |       | Grating: <u>700 L</u>     |      | Page: <u>6931</u>        |
| PI: <u>Mohdavi, Rines, Kitchner</u> |             |      |       | Date: <u>1/21/99</u>      |      |                          |
| Number                              | Object      | R.A. | Dec.  | L/R                       | Exp  | Comments                 |
| 80                                  | comp        |      |       | ↑                         |      |                          |
| 81                                  | rsqb145.054 | 2 34 | 1 21  | #59                       | 4m   |                          |
| 82                                  | comp        |      |       | ↑                         |      |                          |
| 83                                  | rsqb145.055 | 2 34 | 1 21  | #59                       | 12m  |                          |
| 84                                  | comp        |      |       | ↑                         |      |                          |
| 85                                  | rsqb145.056 | 2 34 | 00 31 | #59                       | 10m  |                          |
| 86                                  | comp        |      |       | ↑                         |      |                          |
| 87                                  | rsqb145.058 | 2 34 | 1 15  | #59                       | 12m  |                          |
| 88                                  | comp        |      |       | ↑                         |      |                          |
| 89                                  | rsqb145.059 | 2 35 | 1 58  | #59                       | 5m   |                          |
| 90                                  | comp        |      |       | ↑                         |      |                          |
| 91                                  | rsqb145.060 | 2 35 | 1 13  | #59                       | 20m  |                          |
| 92                                  | comp        |      |       | ↑                         |      |                          |
| 93                                  | rs76-228    | 7 33 | 57 53 | #64                       | 12m  |                          |
| 94                                  | comp        |      |       | ↑                         |      |                          |
| 95                                  | rs76-229    | 7 12 | 59 07 | #64                       | 5m   | bright star west         |
| 96                                  | comp        |      |       | ↑                         |      |                          |
| 97                                  | rs76-230    | 7 02 | 58 48 | #64                       | 6m   |                          |
| 98                                  | comp        |      |       | ↑                         |      |                          |
| 99                                  | rs76-231    | 7 38 | 54 41 | #64                       | 10m  |                          |
| 100                                 | comp        |      |       | ↑                         |      |                          |
| 101                                 | rs76-232    | 7 24 | 54 43 | #64                       | 12m  |                          |
| 102                                 | comp        |      |       | ↑                         |      |                          |
| 103                                 | rs76-233    | 7 16 | 53 22 | #64                       | 7m   |                          |
| 104                                 | comp        |      |       | ↑                         |      |                          |
| 105                                 | sm19986a    | 6 42 | 41 25 | #2                        | 20m  | PA = 2°, terrible condit |
| 106                                 | comp        |      |       | ↑                         |      |                          |
| 107                                 | rs76-234    | 7 18 | 58 08 | #64                       | 3.5m |                          |
| 108                                 | comp        |      |       | ↑                         |      |                          |
| 109                                 | rs76-235    | 7 47 | 55 41 | #64                       | 4m   |                          |

60 inch Telescope Log

Observer: CALKIN

PI: Rincey, Mahdavi, Korany.

Spectrograph: FAST

Grating: 20021

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| Number | Object     | R.A.  | Dec.  | L/R | Exp | Comments                        |
|--------|------------|-------|-------|-----|-----|---------------------------------|
| 110    | comp       |       |       | ↑   |     |                                 |
| 111    | AS76-236   | 7 39  | 54 51 | #64 | 6m  |                                 |
| 112    | comp       |       |       | ↑   |     |                                 |
| 113    | AS76-237   | 7 45  | 52 43 | #64 | 7m  |                                 |
| 114    | comp       |       |       | ↑   |     |                                 |
| 115    | AS76-238   | 7 04  | 53 58 | #64 | 7m  |                                 |
| 116    | comp       |       |       | ↑   |     |                                 |
| 117    | AS76-240   | 7 24  | 52 18 | #64 | 8m  |                                 |
| 118    | comp       |       |       | ↑   |     |                                 |
| 119    | ngc038.157 | 9 20  | 22 01 | #59 | 12m | object west                     |
| 120    | comp       |       |       | ↑   |     |                                 |
| 121    | ngc038.159 | 9 20  | 21 44 | #59 | 20m | marginal                        |
| 122    | comp       |       |       | ↑   |     |                                 |
| 123    | ngc038.160 | 9 20  | 21 59 | #59 | 10m |                                 |
| 124    | comp       |       |       | ↑   |     |                                 |
| 125    | ngc038.161 | 9 21  | 21 38 | #59 | 6m  |                                 |
| 126    | comp       |       |       | ↑   |     |                                 |
| 127    | ngc038.164 | 9 22  | 21 44 | #59 | 20m | superposed star but gal has em! |
| 128    | comp       |       |       | ↑   |     |                                 |
| 129    | ngc038.165 | 9 22  | 21 59 | #59 | 12m |                                 |
| 130    | comp       |       |       | ↑   |     |                                 |
| 131    | ngc038.166 | 9 22  | 22 24 | #59 | 11m |                                 |
| 132    | comp       |       |       | ↑   |     |                                 |
| 133    | mkw2-076   | 10 27 | -6 23 | #35 | 15m |                                 |
| 134    | comp       |       |       | ↑   |     |                                 |
| 135    | mkw2-077   | 10 30 | -3 07 | #35 | 13m |                                 |
| 136    | comp       |       |       | ↑   |     |                                 |
| 137    | mkw2-078   | 10 27 | -3 04 | #35 | 15m |                                 |
| 138    | comp       |       |       | ↑   |     |                                 |
| 139    | mkw2-079   | 10 25 | -2 55 | #35 | 20m |                                 |

60 inch Telescope Log

Observer: Calkins

PI: Koranyi, All, Kirshner, Tustin

Spectrograph: FAST

Grating: 300 L

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Date: 1/21/98

| Number  | Object     | R.A.  | Dec.   | L/R | Exp | Comments            |
|---------|------------|-------|--------|-----|-----|---------------------|
| 140     | comp       |       |        | ↑   |     |                     |
| 141     | MRK 421    | 11 04 | 38 12  | #6  | 4m  | PA = 80°            |
| 142     | comp       |       |        | ↑   |     |                     |
| 143     | N4051      | 12 03 | 44 31  | #6  | 2m  | (bad cab shutter    |
| 144     | comp       |       |        | ↑   |     | cable is preventing |
| 145     | N4151      | 12 10 | 39 29  | #6  | 30s | any more relations) |
| 146     | comp       |       |        | ↑   |     |                     |
| 147     | MRK 279    | 13 52 | 69 18  | #6  | 3m  |                     |
| 148     | comp       |       |        | ↑   |     |                     |
| 149     | N5548      | 14 17 | 25 08  | #6  | 3m  |                     |
| 150     | comp       |       |        | ↑   |     |                     |
| 151     | sn1999E    | 13 17 | -18 32 | #2  | 20m |                     |
| 152     | comp       |       |        | ↑   |     |                     |
| 153     | H244       | 13 23 | 36 07  | #56 | 2m  |                     |
| 154     | comp       |       |        | ↑   |     |                     |
| 155     | H244       | 13 23 | 36 07  | #56 | 2m  |                     |
| 156     | comp       |       |        | ↑   |     |                     |
| 157     | A1644DS046 | 12 59 | -17 31 | #81 | 7m  |                     |
| 158     | comp       |       |        | ↑   |     |                     |
| 159-168 | BINS       |       |        |     | 0s  |                     |
| 169-178 | FLAT       |       |        |     | 6s  |                     |
| 179-188 | BINS       |       |        |     | 0s  |                     |
| 189-198 | FLAT       |       |        |     | 16s |                     |
| 199-208 | DARK       |       |        |     | 15m |                     |