


|             |              |    |   |    |  |  |                                     |  |
|-------------|--------------|----|---|----|--|--|-------------------------------------|--|
| UT Date     | 2005 July 9  |    | University of Maryland / Kitt Peak National Observatory |    |  |  | Weather, Moon, Notes                |  |
| Page #      | 1            | 4  | Observing Log   |    |  |  | Some clouds around during the day   |  |
| Night #     | B            |    | CCD Characteristics                                     |    |  |  | Clouds low around horizon @ sunset. |  |
| Telescope   | KAND 4-m     |    | GAIN: 3e/ADU  |    |  |  | Pixel Scale                         |  |
| Observer    | FARNHAM      |    | READ NOISE: 6e N  |    |  |  | 0.26"                               |  |
| Assistant   | HAL HALBEDEL |    | LINEAR TD: 20K  |    |  |  |                                     |  |
| Inst. / CCD | MOA1C        |    | READ TIME: 156.5μs E                                    |    |  |  |                                     |  |
|             |              |    | Filters   |    |  |  |                                     |  |
|             | 1            | V  | 5   | CN |  |  |                                     |  |
|             | 2            | R  | 6   | C3 |  |  |                                     |  |
|             | 3            | OH | 7   | BC |  |  |                                     |  |
|             | 4            | HC | 8   | C2 |  |  |                                     |  |

| Frame # | Object           | R.A.     | Dec.      | Epoch | Start UT | Airmass | Exp.       | Filter           | Comments   |
|---------|------------------|----------|-----------|-------|----------|---------|------------|------------------|--|
| 1-5     | BIAS             | : : :    | : : :     |       | : : :    |         |            |                  |  |
| 6-7     | DOME FLAT R      | : : }    | : : }     |       | : : }    |         | 12         | R                | Leave some structures when driving by                    |
| 8-9     | DOME FLAT V      | : : }    | : : }     |       | : : }    |         | 12         | V                | Person's night flat. → Same thing happens every night    |
| 10-11   | DOME FLAT CN     | : : }    | : : }     |       | : : }    |         | 20         | CN               | → Photo didn't do a good job without the sky flat counts |
| 12-13   | DOME FLAT BC     | : : }    | : : }     |       | : : }    |         | 5          | BC               | 4.8 pix  |
| 14      | FOCUS NARROWBAND | : : }    | : : }     |       | : : }    |         | 9 x 20     | BC               | Best @ 10750   |
| 15      | FOCUS BROADBAND  | : : }    | : : }     |       | : : }    |         | 9 x 10 sec | R                | 5.5" seeing 1.4"   |
| 16      | COMET TEMPEL 1   | 13:47:17 | -11:30:26 | 2000  | 3:48:39  | 1.558   | 120        | R                | Star near nucleus  |
| 17      | "                | : : :    | : : :     |       | 3:55:29  | 1.587   | 120        | R                | muddy image  |
| 18      | "                | : : :    | : : :     |       | 4:01:51  | 1.615   | 600        | <del>BC</del> BC | guiding on the primary star HST!                         |
| 19      | "                | : : :    | : : :     |       | 4:16:51  | 1.690   | 600        | BC               |  |
| 20      | "                | : : :    | : : :     |       | 4:31:56  | 1.786   | 120        | R                |  |
| 21      | "                | : : :    | : : :     |       | 4:37:09  | 1.824   | 120        | R                |  |
| 22      | "                | : : :    | : : :     |       | 4:42:20  | 1.863   | 600        | CN               |  |
| 23      | "                | : : :    | : : :     |       | 4:55:26  | 1.977   | 600        | BC               |  |

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|-------------|--------------|---|--|---|---|---|-------------------------------------|---|---|---|---|---|---|--|----|--|--|---|---|--|----|--|--|---|----|--|----|--|--|---|----|--|----|--|--|
| Page #      | 2 / 4        |   | Observing Log  |   |   |   | <i>clear?</i><br><i>poor seeing</i> |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |
| Night #     | B            |   | CCD Characteristics  |   |   | Pixel Scale   |                                     |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |
| Telescope   | KPN0 4-M     |   | GAIN: 3 e <sup>-</sup> /ADU  |   |   | 0.26"   |                                     |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |
| Observer    | FARNHAM      |   | READ NOISE: 6 e <sup>-</sup>   |   |   |  |                                     |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |
| Assistant   | HAL HALBEDEL |   | LINEAR TD: 20K   |   |   |   |                                     |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |
| Inst. / CCD | MOSAIC       |   | READ TIME: 156 Sec   |   |   |   |                                     |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |
|             |              |   | E  |   |   |   |                                     |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |
|             |              |   | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">Filters</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> </tr> <tr> <td>1</td> <td>V</td> <td></td> <td>CN</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>R</td> <td></td> <td>C3</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>DH</td> <td></td> <td>BC</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>HC</td> <td></td> <td>CZ</td> <td></td> <td></td> </tr> </table> |   |   | Filters   |                                     | 5 | 6 | 7 | 8 | 1 | V |  | CN |  |  | 2 | R |  | C3 |  |  | 3 | DH |  | BC |  |  | 4 | HC |  | CZ |  |  |
| Filters     |              | 5 | 6  | 7 | 8 |   |                                     |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |
| 1           | V            |   | CN   |   |   |   |                                     |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |
| 2           | R            |   | C3   |   |   |   |                                     |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |
| 3           | DH           |   | BC   |   |   |   |                                     |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |
| 4           | HC           |   | CZ   |   |   |   |                                     |   |   |   |   |   |   |  |    |  |  |   |   |  |    |  |  |   |    |  |    |  |  |   |    |  |    |  |  |

| Frame # | Object                             | R.A.     | Dec.      | Epoch | Start UT | Airmass | Exp. | Filter | Comments                                   |
|---------|------------------------------------|----------|-----------|-------|----------|---------|------|--------|--|
| 24      | COMET TEMPEL 1                     | 13:47:12 | -11:30:25 | 2000  | 5:10:53  | 2.145   | 120  | R      |  |
| 25      | "                                  | :        | :         |       | 5:15:46  | 2.207   | 120  | R      |  |
| 26      | "                                  | :        | :         |       | 5:24:05  | 2.321   | 600  | CN     | lost guiding @ end.<br>RESUMED GUIDING     |
| 27      | "                                  | :        | :         |       | 5:39:38  | 2.582   | 600  | CN     |  |
| 28      | "                                  | :        | :         |       | 5:52:30  | 2.872   | 600  | BC     | guiding probe?                             |
| 29      | "                                  | :        | :         |       | 6:05:59  | 3.262   | 180  | R      | guiding probe?                             |
| 30      | "                                  | :        | :         |       | 6:12:45  | 3.492   | 180  | R      | guiding probe?                             |
| 31      | "                                  | :        | :         |       | 6:18:21  | 3.733   | 120  | R      | guiding problems!                          |
| 32      | ASTEROID <sup>1991 RB9</sup> 10783 | 21:23:27 | -13:00:45 | 2000  | 6:32:05  | 2.249   | 600  | R      |  |
| 33      | "                                  | :        | :         |       | 6:46:21  | 2.081   | 600  | V      |  |
| 34      | "                                  | :        | :         |       | 6:03:27  | 1.917   | 600  | R      |  |
| 35      | "                                  | :        | :         |       | 7:17:01  | 1.814   | 600  | V      |  |
| 36      | "                                  | :        | :         |       | 7:30:16  | 1.730   | 600  | R      |  |
| 37      | LANDILT PG1525-071                 | 15:28:13 | -7:15:54  | 2000  | 7:56:53  | 3.35    | 40   | R      |  |
| 38      | "                                  | :        | :         |       | 8:05:10  | 3.443   | 4.0  | V      | X R filter - didn't change for some reason |

|             |              |   |                               |                      |
|-------------|--------------|---|-------------------------------|----------------------|
| UT Date     | 2005 July 9  | University of Maryland / Kitt Peak National Observatory |                               | Weather, Moon, Notes |
| Page #      | 3 / 4        | Observing Log   |                               | clear? Hazy down low |
| Night #     | B            | CCD Characteristics                                     |                               | Pixel Scale          |
| Telescope   | KPNO 4-M     | Filters   | GAIN: 3 e/APM                 | 0.26                 |
| Observer    | FARNHAM      | 1 V   | READ NOISE: 6e <sup>-</sup> N |                      |
| Assistant   | HAL HALBERAL | 2 R   | LINEAR TD: 20K                |                      |
| Inst. / CCD | MDSAIC       | 3 OH  | READ TIME: 156 Sec            |                      |
|             |              | 4 UC  |                               | E                    |
|             |              | 5 CN  |                               |                      |
|             |              | 6 C3  |                               |                      |
|             |              | 7 BC  |                               |                      |
|             |              | 8 C2  |                               |                      |

| Frame # | Object                      | R.A.     | Dec.      | Epoch | Start UT | Airmass | Exp. | Filter | Comments             |
|---------|-----------------------------|----------|-----------|-------|----------|---------|------|--------|----------------------|
| 39      | LANDOLT 111-2088            | 19:38:23 | 0:31:13   | 2000  | 8:12:07  | 1.176   | 1.5  | R      |                      |
| 40      | "                           | :        | :         |       | 8:19:38  | 1.179   | 2    | V      |                      |
| 41      | HD 170783                   | 18:31:04 | 4:37:37   | 2000  | 8:25:10  | 1.230   | 3.0  | CN     | DEFOCUSSED<br>-11300 |
| 42      | "                           | :        | :         |       | 8:30:    | 1.25    | 1.5  | BC     | "                    |
| 43      | HD 149363                   | 16:34:28 | -6:08:09  | 2000  | 8:37:15  | 2.441   | 1.5  | BC     | "                    |
| 44      | "                           | :        | :         |       | 8:40:12  | 2.492   | 3.0  | CN     | "                    |
| 45      | LANDOLT PG 1653+099         | 16:35:34 | 9:47:04   | 2000  | 8:49:33  | 1.93    | 2    | R      | -10400               |
| 46      | "                           | :        | :         |       | 8:53:22  | 1.980   | 2    | V      |                      |
| 47      | HD 149363                   | 16:34:28 | -6:08:09  | 2000  | 9:06:06  | 3.143   | 2    | BC     | DEFOCUSSED<br>-11300 |
| 48      | "                           | :        | :         |       | 9:10:05  | 3.275   | 2    | CN     |                      |
| 49      | ASTEROID 2001 TZ66<br>55434 | 21:51:28 | -11:19:19 | 2000  | 9:26:10  | 1.407   | 600  | R      |                      |
| 50      | "                           | :        | :         |       | 9:34:28  | 1.390   | 600  | V      |                      |
| 51      | "                           | :        | :         |       | 9:48:51  | 1.379   | 600  | R      |                      |
| 52      | COMET NEAT 2001 Q4          | 05:05    | 60:27:02  | 2000  | 10:05:55 | 1.552   | 600  | R      |                      |
| 53      | "                           | :        | :         |       | 10:18:   | 1.55    | 600  | R      |                      |
| 54      | "                           | :        | :         |       | 10:52:04 | 1.458   | 600  | R      |                      |

