







Spectr. Temp

Focus .....

Spectr. Temp

Exp. No.





pg #1 (5)

Date 1995... May 31 / Jun 1 Observers [K.K.] Tn. / Sent.....

Emulsion Batches:

30 c9ain

| Plate No.    | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|--------------|------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 331 93/94 | inbound/outbound | HARTMANN     |                     |                         |                       |                   |             | FeNe<br>clear             | 15/30 |
| 95           | BIAS(4)          |              |                     | 21 10                   |                       |                   |             |                           |       |
| 96           | comp             |              |                     |                         |                       |                   |             | FeNe<br>clear             | 20s   |
| 97           | HD97603          | 11 0847      | +21 0418            | 21 1625                 |                       | 2 23 W            |             |                           | 120s  |
| 98           | comp             |              |                     |                         |                       |                   |             | "                         | 20    |
| 99           | comp             |              |                     |                         |                       |                   |             | "                         | "     |
| CC 33200     | HD87696          | 10 01 32     | +35 43 56           | 21 2820                 |                       | 3 55 W            |             |                           | 900   |
| 01           | COMP             |              |                     |                         |                       |                   |             | FeNe<br>clear             | 20    |
| 02           | HD87696          |              |                     | 21 48 06                |                       | 4 13 W            |             |                           | 800   |
| 03           | COMP             |              |                     |                         |                       |                   |             | "                         | 20    |
| 04           | BIAS(4)          |              |                     | 22 04                   |                       |                   |             | "                         | 20    |
| 05           | comp             |              |                     |                         |                       |                   |             | "                         | 20    |
| 06           | HD102647         | 11 4358      | +15 07 52           | 22 0947                 |                       | 2 41 W            |             |                           | 84    |
| 07           | comp             |              |                     |                         |                       |                   |             |                           |       |
| 08           | HD102647         |              |                     | 22 1729                 |                       | 2 46 W            |             |                           | 93    |
| 09           | comp             |              |                     |                         |                       | <del>2 46 W</del> |             | FeNe<br>clear             | 20    |

CC  
Spectr. Tem

Focus... 6:

Spectr. Tem

Exp. Mir.

5539

FeNe

9180

1000

8900

8635

8900

8900



CCD Spectr. Temp. .... Dome Temp./Hum. +21.0°C 50.784 Transparency Conditions ... Very hazy.....

Focus ... 6.74.....

300 Gain

(6)

Spectr. Temp. ....

Dome Temp./Hum. .... e Laimbly

435 0 50 1024 4 1 CCD Em.

| Exp. Mtr.                | Seeing | Ptg. Mag. | Sp. | Inst.    | Grating/Tilt       | Slit | Emulsion | P.H.                | Program    | Remarks                                              | Quality |
|--------------------------|--------|-----------|-----|----------|--------------------|------|----------|---------------------|------------|------------------------------------------------------|---------|
| BG 39<br>Filter          |        |           |     | CASS CCD | 600 W/mm<br>G-2634 | 2304 | 4160A    | 3/4                 | focus test |                                                      |         |
|                          |        |           |     |          |                    |      |          | 1/2<br><del>5</del> |            |                                                      |         |
| 9180                     |        | B<br>2.68 | A4V |          |                    |      |          | 6                   | KK A*      |                                                      | 12.1K   |
|                          |        |           |     |          |                    |      |          | 7                   |            |                                                      |         |
|                          |        |           |     |          |                    |      |          | 8                   |            |                                                      |         |
| 10100                    | 3"     | B<br>4.66 | A7V |          |                    |      |          | 9                   | KK A*      | slight saturation at red end on 2 <sup>nd</sup> col. | 16585   |
|                          |        |           |     |          |                    |      |          | 10                  |            |                                                      |         |
| 8900                     |        |           |     |          |                    |      |          | 9                   | KK A*      | focus was a bit better.                              | 12.5K   |
|                          |        |           |     |          |                    |      |          | 10                  |            |                                                      |         |
|                          |        |           |     |          |                    |      |          | 11                  |            |                                                      |         |
| 8635                     |        | 2.23      | A3V |          |                    |      |          | 11                  | KK A*      |                                                      | 10K     |
|                          |        |           |     |          |                    |      |          | 12                  |            |                                                      |         |
| 8900<br><del>16000</del> |        | "         | "   |          |                    |      |          | 13                  | KK A*      | first attempt saturated trailed                      | 7.0K    |
|                          |        |           |     |          |                    |      |          | 14                  |            |                                                      |         |





Spectr. Temp. ... 100 .....

Dome Temp./Hum. 19.7°C/61.5%

Transparency Conditions 4/10 cloud → clearing

Focus ..... 6.74 .....

Spectr. Temp. ....

Dome Temp./Hum. .... 4/10 cloud

435 0 50 1024 4 1 red MAX

| Exp. Mtr.    | Seeing | Ptg. Mag.         | Sp. | Inst.   | Grating/Tilt       | Slit | Emulsion | P.H. | Program | Remarks                                     | Quality |
|--------------|--------|-------------------|-----|---------|--------------------|------|----------|------|---------|---------------------------------------------|---------|
| BG 39 Filter |        |                   |     | CASS CD | 600 h/mm<br>G=2634 | 230u | 4160A    | 15   |         |                                             |         |
| 4,800        | 3.4    | <sup>B</sup> 6.06 | A2m |         |                    |      |          | 16   | KK A*   |                                             | 5.2k    |
|              |        |                   |     |         |                    |      |          | 17   |         |                                             |         |
|              |        |                   |     |         |                    |      |          | 18   |         |                                             |         |
| 6,000        |        | <sup>B</sup> 3.39 | A3V |         |                    |      |          | 19   | KK A*   |                                             | 5.3k    |
|              |        |                   |     |         |                    |      |          | 20   |         |                                             |         |
| 6,800        |        | <sup>B</sup> 3.31 | A3V |         |                    |      |          | 19   | "       |                                             | 12.5k   |
|              |        |                   |     |         |                    |      |          | 21   |         |                                             |         |
|              |        |                   |     |         |                    |      |          | 1    |         |                                             |         |
|              |        |                   |     |         |                    |      |          | 22   |         |                                             |         |
| 8280         |        | <sup>✓</sup> 4.75 | A7V |         |                    |      |          | 23   | KK A*   | saturated at red end yet again in 23rd col. |         |
|              |        |                   |     |         |                    |      |          | 22   |         |                                             |         |
| 7500         |        | "                 | "   |         |                    |      |          | 23   | "       |                                             | 4.0k    |
|              |        |                   |     |         |                    |      |          | 24   |         |                                             |         |
|              |        |                   |     |         |                    |      |          | 25   |         |                                             |         |

pg # 3 (9)

Date 1995 May 31 / Jun 1 Observers [KK] Tn / Smt

Emulsion Batches:

30 c9ain

| Plate No. | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| cc 33225  | HD 25162  | 14 12 35     | +46 32 51           | 23 51 38                |                       | 1 59 W            |             |                           | 240  |
| 26        | COMP      |              |                     |                         |                       |                   |             | FeNe<br>clear             | 20   |
| 27        | BIAS(4)   |              |                     | 23 59                   |                       |                   |             |                           | —    |
| 28        | COMP      |              |                     |                         |                       |                   |             | "                         | 20   |
| 29        | HD 141795 | 15 45 50     | +4 46 43            | 0 05 13                 |                       | 0 37 W            |             |                           | 200  |
| 30        | COMP      |              |                     |                         |                       |                   |             | "                         | 20   |
| 31        | COMP      |              |                     |                         |                       |                   |             | "                         | "    |
| 32        | HD 130841 | 14 45 21     | -15 37 34           | 0 14 26                 |                       | 1 46 W            |             |                           | 150  |
| 33        | COMP      |              |                     |                         |                       |                   |             | "                         | 20   |
| 34        | HD 130841 |              |                     | 0 19 23                 |                       | 1 52 W            |             |                           | 200  |
| 35        | COMP      |              |                     |                         |                       |                   |             | "                         | 20   |
| 36        | COMP      |              |                     |                         |                       |                   |             | "                         | "    |
| 37        | HD 155125 | 17 04 39     | -15 36 04           | 0 29 52                 |                       | 0 16 E            |             |                           | 150  |
| 38        | COMP      |              |                     |                         |                       |                   |             | "                         | 20   |
| 39        | HD 155125 |              |                     | 0 36 24                 |                       | 0 11 E            |             |                           | 151  |
| 40        | COMP      |              |                     |                         |                       |                   |             | "                         | 20   |

Spectr. Tem

Focus.....

Spectr. Tem

Exp. Mir.  
#638

6380

700

7350

9500

12500

12400



Spectr. Temp.  $\sim 100^{\circ}\text{C}$ .....Dome Temp./Hum.  $18.0^{\circ}\text{C}/66.9\%$ Transparency Conditions *clear*.....Focus  $6.74$ .....

FANS OFF

(10)

Spectr. Temp. ....

Dome Temp./Hum. ....

430 0 50 1024 4 1 calibrat

| Exp. Mtr.<br>BG 39 | Seeing | Ptg.<br>Mag.         | Sp.  | Inst.       | Grating/<br>Tilt                           | Slit      | Emulsion | P.H. | Program | Remarks        | max<br>Quality<br>ABU |
|--------------------|--------|----------------------|------|-------------|--------------------------------------------|-----------|----------|------|---------|----------------|-----------------------|
| 240<br>6380        |        | $\checkmark$<br>4.25 | A0p  | CASS<br>CCD | 600 $\text{\AA}/\text{mm}$ (C)<br>G = 2634 | 230 $\mu$ | 4160A    | 26   | KK A*   |                | 9.6K                  |
| 20                 |        |                      |      |             |                                            |           |          | 27   |         |                |                       |
| -                  |        |                      |      |             |                                            |           |          | 1    |         |                |                       |
| 20                 |        |                      |      |             |                                            |           |          | 28   |         |                |                       |
| 226<br>7000        |        | $\checkmark$<br>3.73 | A2m  |             |                                            |           |          | 29   | KK A*   |                | 9.6K                  |
| 20                 |        |                      |      |             |                                            |           |          | 30   |         |                |                       |
| "                  |        |                      |      |             |                                            |           |          | 5    |         |                |                       |
| 150<br>7350        |        | $\text{B}$<br>2.90   | A3IV |             |                                            |           |          | 6    | "       | trailed a bit  | 8.0K                  |
| 20                 |        |                      |      |             |                                            |           |          | 7    |         |                |                       |
| 200<br>9500        |        | "                    | "    |             |                                            |           |          | 6    | "       | trailed a lot. | 5.0K                  |
| 20                 |        |                      |      |             |                                            |           |          | 7    |         |                |                       |
| "                  |        |                      |      |             |                                            |           |          | 8    |         |                |                       |
| 150<br>12500       |        | $\text{B}$<br>2.49   | A1V  |             |                                            |           |          | 9    | "       | trailed wide   | 4.4K                  |
| 20                 |        |                      |      |             |                                            |           |          | 10   |         |                |                       |
| 151<br>12400       |        | "                    | "    |             |                                            |           |          | 9    | "       | trailed        | 8.5K                  |
| 20                 |        |                      |      |             |                                            |           |          | 10   |         |                |                       |

pg# 1 (11) Wed / Thurs  
 Date 1995. MAY 31. / June 1. Observers [K.K.] J.n. / Smt.....

Emulsion Batches:

30 c.gain.....

| Plate No.  | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.      | Exp. Mr. |
|------------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-----------|----------|
| cc 33241   | Comp      |              |                     |                         |                       |                   |             |                           | 20.       | 6639     |
| 42         | HD 156164 |              |                     | 00 48 08                |                       | 00 05 E           |             |                           | 87s       | 8,400    |
| 43         | Comp      |              |                     |                         |                       |                   |             |                           | 20s       |          |
| 44         | HD 156164 |              |                     | 00 55 22                |                       |                   |             |                           | 78        | 6100     |
| 45         | Comp      |              |                     |                         |                       |                   |             | FeNe<br>cheap             | 20s       |          |
| 46         | "         |              |                     |                         |                       |                   |             | "                         | "         |          |
| 47         | HD 159561 | 17 30 18     | +12 37 58           | 01 02 42                |                       | 00 11 E           |             |                           | 45        | 7500     |
| 48         | Comp      |              |                     |                         |                       |                   |             |                           | 20        |          |
| 49         | BIAS (4)  |              |                     | 01 06                   |                       |                   |             |                           |           |          |
| 50         | Comp      |              |                     |                         |                       |                   |             |                           |           |          |
| 51         | HD 172167 | 18 35 15     | +38 44 12           | 01 13 01                |                       | 01 04 E           |             |                           | 16        |          |
| 52         | "         |              |                     | 01 15 02                |                       |                   |             |                           | 13        |          |
| 53         | Comp      |              |                     |                         |                       |                   |             |                           |           |          |
| CGA1004/07 | HD 163075 | 17 49 15     | +46 40 10           | 01 30                   |                       |                   |             |                           | ↑ x 67ms  |          |
| 08/09      | "         | "            | "                   |                         |                       |                   |             |                           | ⊗ x 133ms |          |



Dome Temp./Hum. .... *Leimble* 435 0 50 1024 41 cdfat <sup>max</sup>

|               | Exp. Mtr. | Seeing | Ptg.<br>Mag. | Sp. | Inst.             | Grating/<br>Tilt      | Slit               | Emulsion | P.H. | Program              | Remarks     | Quality |
|---------------|-----------|--------|--------------|-----|-------------------|-----------------------|--------------------|----------|------|----------------------|-------------|---------|
| BG 39         |           |        |              |     | CHSS CCD          | 600 l/m<br>$G = 2634$ | 230 $\mu$          | 4160A    | 18   |                      |             |         |
| 8,400         |           |        |              |     |                   |                       |                    |          | 11   |                      |             | 15K     |
|               |           |        |              |     |                   |                       |                    |          | 12C  |                      |             |         |
| B 6100        |           |        |              |     |                   |                       |                    |          | 13   |                      |             | 9.1K    |
|               |           |        |              |     |                   |                       |                    |          | 14   |                      |             |         |
|               |           |        |              |     |                   |                       |                    |          | 15   |                      |             |         |
| 7500          | 23'       |        |              |     |                   |                       |                    |          | 16   |                      |             | 10      |
| '             |           |        |              |     |                   |                       |                    |          | 17   |                      |             |         |
|               |           |        |              |     |                   |                       |                    |          | 1    |                      |             |         |
|               |           |        |              |     |                   |                       |                    |          | 18   |                      |             |         |
|               |           | 0.09   |              |     |                   |                       |                    |          | 19   | Vega for fast swivel | Std vel use | 10K     |
|               |           |        |              |     |                   |                       |                    |          | 20   | " "                  |             | 14K     |
|               |           |        |              |     |                   |                       |                    |          | 20   |                      |             | 2.4K    |
| 3-4" V<br>646 | KOMI      |        |              |     | DEV CCO TV GUIDER |                       | above<br>230 $\mu$ | -        | -    | Seeing test No wind  | No Fans     |         |
|               |           |        |              |     |                   |                       |                    |          |      | Dome NW              |             |         |

30 gain for [KK]  
90 gain for [RR]

Spectr. Ter.  
Focus....  
C.C.  
Spectr. Ter.  
Exp. Mr.  
8639.  
6700  
5500  
5300  
90  
für



Spectr. Temp. ....

Dome Temp./Hum. *FL* .....Transparency Conditions *Slightly hazy* .....Focus ..... *6.74* .....<sup>CEL</sup>  
Spectr. Temp. *-100.8°C* .....Dome Temp./Hum. *17.0°C* .....

FANS OFF

*435 0 50 1024 4 1 cdhnt*

(14)

Comparison  
Exp.

| Exp. Mtr.                   | Seeing                                            | Ptg.<br>Mag.            | Sp.         | Inst. | Grating/<br>Tilt                 | Slit        | Emulsion     | P.H.       | Program                        | Remarks | Quality     |
|-----------------------------|---------------------------------------------------|-------------------------|-------------|-------|----------------------------------|-------------|--------------|------------|--------------------------------|---------|-------------|
| <i>23</i><br>8639           |                                                   | <i>30</i>               | <i>Cgem</i> |       | <i>600h/m</i>                    | <i>230u</i> | <i>4160A</i> | <i>21</i>  |                                |         |             |
| <i>85</i><br>6,700          |                                                   | <i>2.99</i>             | <i>AOVh</i> |       |                                  |             |              | <i>22</i>  | <i>KK A*</i>                   |         | <i>11K</i>  |
| <i>72</i><br>5500           |                                                   |                         |             |       |                                  |             |              | <i>22</i>  |                                |         | <i>7.3K</i> |
| <i>6</i>                    |                                                   |                         |             |       |                                  |             |              | <i>24</i>  |                                |         |             |
| <i>20</i>                   |                                                   |                         |             |       |                                  |             |              | <i>23</i>  |                                |         |             |
| <i>25</i>                   |                                                   |                         |             |       |                                  |             |              | <i>25</i>  | <i>KK A*</i>                   |         |             |
| <i>26</i>                   |                                                   |                         |             |       |                                  |             |              | <i>26</i>  |                                |         |             |
| <i>-</i>                    |                                                   |                         |             |       |                                  |             |              | <i>1</i>   |                                |         |             |
| <i>20</i>                   |                                                   |                         |             |       |                                  |             |              | <i>27</i>  |                                |         |             |
| <i>649</i><br>5300          |                                                   | <i>✓</i><br><i>5.41</i> | <i>F8V</i>  |       |                                  |             |              | <i>28</i>  | <i>Std vel</i>                 |         | <i>6.K</i>  |
| <i>20</i>                   |                                                   |                         |             |       |                                  |             |              | <i>2</i>   |                                |         | <i>14K</i>  |
| <i>1/50</i><br><i>60/10</i> | <i>90 CGAIN now</i>                               |                         |             |       | <i>1800 h/m</i><br><i>G=5930</i> | <i>306u</i> | <i>6400A</i> | <i>3/4</i> | <i>focus test T = +17.1°C</i>  |         |             |
|                             | <i>focus setting of 6.74 didn't need changing</i> |                         |             |       |                                  |             |              | <i>1/2</i> | <i>410 0 50 1024 4 1 cdhnt</i> |         |             |



15

Spectr. Temp. ... -101.7 °C Dome Temp./Hum. 117.2°/61.5% Transparency Conditions ... clear

Focus ... 6:7.4

Spectr. Temp. ... Dome Temp./Hum. ...

410 0 50 1024 4 1 ccd/mnt

16

| Exp. Mtr.                       | Seeing | Ptg. Mag.          | Sp.      | Inst.    | Grating/Tilt       | Slit | Emission | P.H. | Program              | Remarks               | Quality |
|---------------------------------|--------|--------------------|----------|----------|--------------------|------|----------|------|----------------------|-----------------------|---------|
| no filter                       |        |                    |          | CASS CCD | 1800 l/m<br>G=5930 | 30µm | 6400 Å   | 5    |                      |                       |         |
| 2222                            | 4"     | <V><br>7.48        | ~G0 Ib   |          |                    |      |          | 6    | Rm                   | V350 Sgr              | 3.9K    |
|                                 |        |                    |          |          |                    |      |          | 7    |                      |                       |         |
|                                 |        |                    |          |          |                    |      |          | 1    |                      |                       |         |
|                                 |        |                    |          |          |                    |      |          | 8    |                      |                       |         |
| 3290                            | 4"     | <V><br>6.19        | F6 I-IIb |          |                    |      |          | 9    | Rm                   | V473 Lyr              | 5.4K    |
|                                 |        |                    |          |          |                    |      |          | 10   |                      |                       |         |
|                                 |        |                    |          |          |                    |      |          | 12   |                      |                       |         |
| 3540                            | 4"     | <V><br>5.8<br>-5.9 | F2       |          |                    |      |          | 13   | Rm                   | V1334 Cyg             | 5.5K    |
|                                 |        |                    |          |          |                    |      |          | 14   |                      |                       |         |
|                                 |        |                    |          |          |                    |      |          | 15   |                      |                       |         |
| 3650                            |        | <V><br>5.11        | F8 I     |          |                    |      |          | 16   | <del>S/d.</del> Vel. | sky getting brighter. | 6.4K    |
|                                 |        |                    |          |          |                    |      |          | 17   |                      |                       |         |
|                                 |        |                    |          |          |                    |      |          | 18   |                      |                       | 12.3K   |
| All backed up to Perseus & WORM |        |                    |          |          |                    |      |          | 1    |                      |                       |         |



Pg #1 SAT/Sun

(17)

Date 1995 June 3/4... Observers Zhu, J. Tn.....

Emulsion Batches:

No observing

For Tours - cloudy then.....

| Plate No.                  | Object                            | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.        | Exp. Nr.       |
|----------------------------|-----------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------------|----------------|
| CC332 <sup>99</sup><br>300 | in board / out board              |              |                     |                         |                       |                   |             | Felt<br>Clear             | 60/20s      | 8639<br>Filter |
| 301                        | BIAS (4)                          |              |                     |                         |                       |                   |             |                           |             |                |
| 302                        | Comp                              |              |                     |                         |                       |                   |             | FeNe<br>Clear             | 60s<br>FeNe |                |
| 303                        | Ganymede                          | 16 3440      | -21 11              | 00 26 15                |                       | 00 36W            |             |                           | 68f         | 2800           |
| 304                        | Comp                              |              |                     |                         |                       |                   |             | FeNe<br>Clear             | 60s         |                |
| 305                        | Comp (intended source this time.) |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s         |                |
| 306                        | Ganymede                          |              |                     | 00 45 50                |                       | 00 55W            |             |                           | 79f         | 910            |
| 307                        | Comp                              |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60          |                |
| 308                        | Jupiter (center)                  |              |                     | 01 02 25                |                       |                   |             |                           | 67          | 17200          |
| 309                        | Jupiter (NORTH AREA)              |              |                     | 01 05 33                |                       |                   |             |                           | 175         | 18000          |
| 310                        | Comp                              |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s         |                |
| 311                        | Callisto                          |              |                     | 01 12 09                |                       | 01 27W            |             |                           |             | 500            |
| 312                        | Comp                              |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s         |                |
| 313                        | BIAS (4)                          |              |                     |                         |                       |                   |             |                           | 80s         |                |
| 314                        | HD167965                          | 18 1232      | +42 0730            | 01 43 24                |                       |                   |             |                           | 80          |                |
| 315                        | Comp                              |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s         |                |



CCD Spectr. Temp.  $-101.0^{\circ}\text{C}$  ..... Dome Temp./Hum.  $17.0^{\circ}\text{C}$  84% H Transparency Conditions ... Hazy ... f. 994 .....

Focus  $6.77$  .....

Spectr. Temp. ....

Dome Temp./Hum.  $15.5^{\circ}\text{C}$  84.7% H

Clearing well after focus

18

CCD FWHM  
435 0 50 1024 4 1

191K  
100

| Exp. Mtr.   | Seeing | Ptg. Mag. | Sp.   | Inst. | Grating/Tilt      | Slit      | Emulsion | P.H. | Program                         | Remarks            | Quality |
|-------------|--------|-----------|-------|-------|-------------------|-----------|----------|------|---------------------------------|--------------------|---------|
| B639 Filter |        |           |       | CH55  | 600 $\mu\text{m}$ | 250 $\mu$ | 4300A    | 3/4  |                                 |                    |         |
|             |        |           |       |       |                   |           |          | 1/2  |                                 |                    |         |
|             |        |           |       |       |                   |           |          | 5    |                                 |                    | 4.5     |
| 800         |        | B<br>5.44 |       |       |                   |           |          | 6    |                                 |                    |         |
|             |        |           |       |       |                   |           |          | 7    |                                 |                    | 2K      |
|             |        |           |       |       |                   |           |          | 8    |                                 |                    |         |
| 960         |        |           |       |       |                   |           |          | 9    |                                 |                    |         |
|             |        |           |       |       |                   |           |          | 10   |                                 |                    |         |
| 12000       |        |           |       |       |                   |           |          | 11   |                                 |                    | 33K     |
| 18000       |        |           |       |       |                   |           |          | 12   |                                 |                    | 58K     |
|             |        |           |       |       |                   |           |          | 13   |                                 |                    |         |
| 500         |        | B<br>6.5  |       |       |                   |           |          | 14   |                                 |                    |         |
|             |        |           |       |       |                   |           |          | 15   |                                 |                    |         |
|             |        | V<br>5.59 |       |       |                   |           |          | 1/2  |                                 |                    |         |
|             |        |           | B7 IV |       |                   |           |          | 16   | encoder                         | [No beginning cap] |         |
|             |        |           |       |       |                   |           |          | 17   | Normalization stop, but observe | normal it anyway   |         |

pg #1

pg #2

(19)

SAT/SUN

Date ./.

Date 1995 June 3/4

## Observers

Zhu / 19

### Emulsion Batches:

[illegible]



ctr. Temp. .... Dome Temp./Hum. +15.4°C. 84.7% H Transparency Conditions ... Hazy .....

is ..... 6.7 F .....

ctr. Temp. .... Dome Temp./Hum. ....

(20) max

| Compar Filter | Mtr. | Seeing      | Ptg. Mag. | Sp. | Inst.   | Grating/Tilt | Slit | Emulsion | P.H.  | Program | Remarks            | Quality |
|---------------|------|-------------|-----------|-----|---------|--------------|------|----------|-------|---------|--------------------|---------|
| 63            | 8639 | Back seeing |           |     | CASS CD | 600 l/mm     | 250μ | 4300h    | 18    |         |                    |         |
| 5             | 5650 | 7"          | B=4.89    | KOV |         | G=2670       |      |          | 19    | Zhu pgn | 70 oph [300/1 SIN] | 11.0K   |
| 60s           |      |             |           |     |         |              |      |          | 20    |         |                    |         |
| 5             | 4800 | B           | 4.89      | KOV |         |              |      |          | 21... |         |                    | 75K     |
| 60            |      |             |           |     |         |              |      |          | 22    |         |                    |         |
|               |      |             |           |     |         |              |      |          | 1/2.  |         |                    |         |
|               |      |             |           |     |         |              |      |          | 23    |         |                    |         |
| 97            | 4300 | B=5.47      |           | KOV |         |              |      |          | 24    | Zhu pgn |                    | 14K     |
| Ar            |      |             |           |     |         |              |      |          | 25    |         |                    |         |
|               |      |             |           |     |         |              |      |          | 26    |         |                    |         |
| 99            | 3500 | B=4.86      |           | F4V |         |              |      |          | 27    |         |                    | 8.8K    |
| Se            |      |             |           |     |         |              |      |          | 28    |         |                    |         |
|               | 3500 |             |           |     |         |              |      |          | 27    |         |                    | 10K     |
|               |      |             |           |     |         |              |      |          | 28    |         |                    |         |
|               |      |             |           |     |         |              |      |          | 1/2   |         |                    |         |

SAT/SUN

(21)

### Emulsion Batches:

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.....

[illegible]



22

[illegible]

Pg#1

Sun / Mon

(23)

Date 1995... June 4/5... Observers {Vys}/Tn.....

Emulsion Batches:

.....

.....

CSS 386 Time OK.....

| Plate No.               | Object                     | R.A.<br>1900    | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-------------------------|----------------------------|-----------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 333 <sup>47/48</sup> | in board / outboard hutman |                 |                     |                         |                       | 00 18 E           | +41°        | Felt<br>Clear             | 24/37 |
| 49                      | BIAS x 4                   | Sym of 4 biases |                     |                         |                       |                   |             |                           |       |
| 50                      | Comp                       |                 |                     |                         |                       |                   |             | Felt<br>Clear             | 25    |
| 51                      | Ceres                      | 09 53 35        | +23 14 00           | 20 58 05                |                       | 03 51 W           |             |                           | 676   |
| 52                      | Comp                       |                 |                     |                         |                       |                   |             | Felt<br>Clear             | 25    |
| 53                      | Ceres                      |                 |                     | 21 14 35                |                       | 04 09 W           |             |                           | 805   |
| 54                      | Comp                       |                 |                     |                         |                       |                   |             | Felt<br>Clear             | 25    |
| 55                      | Comp                       |                 |                     |                         |                       |                   |             | "                         | 25    |
| 56                      | AC+56 45927                | 13 00 34        | +56 26 19           | 21 36 43                |                       | 01 31 W           |             |                           | 1484  |
| 57                      | Comp                       |                 |                     |                         |                       |                   |             | Felt<br>Clear             | 25    |
| 58                      | AC+56 45927                | 13 00 34        | +56 26 19           | 22 04 47                |                       | 02 11 W           |             |                           | 2171  |
| 59                      | Comp                       |                 |                     |                         |                       |                   |             | Felt<br>Clear             | 25    |
| 60                      | BIAS x 4                   |                 |                     | 22 44                   |                       |                   |             |                           |       |
| 61                      | Comp                       |                 |                     |                         |                       |                   |             | Felt<br>Clear             | 25    |
| 62                      | HQ 119850                  | 13 40 36        | +15 27              | 22 53 19                |                       | 01 56 W           |             |                           | 1260  |
| 63                      | Comp                       |                 |                     |                         |                       |                   |             | Felt<br>Clear             | 25    |

Exp. Mr.

Spectr. Ten

Focus...6

Spectr. T

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

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Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.

Exp. Mr.



CCD  
Spectr. Temp.  $-100^{\circ}\text{C}$  .....

Dome Temp./Hum.  $+19.0^{\circ}\text{C}$   $45\% \text{ H}$

Transparency Conditions ... *slightly hazy* ... (24)

Focus ...  $6.73$  .....

Spectr. Temp. ....

Dome Temp./Hum.  $+17.6^{\circ}\text{C}$   $48\% \text{ H}$

90 again

*c. 60 min*

410 0 50 1024 4 1 CCD FWHM

Comparison  
Mtr. Exp.

| Exp. Mtr.                     | Seeing | P. Mag. | Sp. | Inst.    | Grating/<br>Tilt        | Slit | Emulsion | P.H. | Program         | Remarks                                              | Quality      |
|-------------------------------|--------|---------|-----|----------|-------------------------|------|----------|------|-----------------|------------------------------------------------------|--------------|
| <i>no filter</i>              |        |         |     | Cuss CCD | 1800 lines/mm<br>G=5140 | 306  | 5303A    | 3/4  | Focus test      |                                                      |              |
|                               |        |         |     |          |                         |      |          | 1/2  |                 |                                                      |              |
|                               |        |         |     |          |                         |      |          | 5    |                 | 4 53 38 cores from<br>+23 14 53 megaster<br>program. |              |
| 8639 filter by mistake<br>340 | 2"     | 8.7     | G2  |          |                         |      |          | 6    | Std vel use     |                                                      | 860          |
|                               |        |         |     |          |                         |      |          | 7    |                 | spectrograph control interrupt                       |              |
| no filter<br>now<br>750       |        |         |     |          |                         |      |          | 8    | Std vel Repeat  | Field checks OK<br>with "Megaster"                   | 820          |
|                               |        |         |     |          |                         |      |          | 9    |                 |                                                      |              |
|                               |        |         |     |          |                         |      |          | 10   |                 |                                                      |              |
| 260                           | *1.2"  | 10.7    | M0  |          |                         |      |          | 11   | Vys pgrm        | The fainter South component<br>Vys 684AB             | 730/1<br>S/N |
| (Exp meter well balanced too) |        |         |     |          |                         |      |          | 12   |                 | * Close Pair well separated                          |              |
| 450                           | 2"     | 10.7    | M0  |          |                         |      |          | 13   | Vys pgrm        | Brighter one and<br>NW component                     | 250/1        |
|                               |        |         |     |          |                         |      |          | 14   |                 |                                                      |              |
|                               |        |         |     |          |                         |      |          | 1/2  |                 |                                                      |              |
|                               |        |         |     |          |                         |      |          | 15   |                 |                                                      | 8.2K         |
| 1260                          | 2"     | 8.48    | M1  |          |                         |      |          | 16   | Std vel (marcy) |                                                      | 900 max      |

9942

(25)

Sun / Mon

Date 1995 June 4/5 Observers {Vys} T4

Emulsion Batches:

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| Plate No.               | Object      | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-------------------------|-------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 33364                | Comp        |              |                     |                         |                       |                   |             | FeNe<br>Clear             | 255   |
| 65                      | HD 144579   | 16 01 30     | +39 24 00           | 23 13 36                |                       | 00 11 E           |             |                           | 322   |
| 66                      | Comp        |              |                     |                         |                       |                   |             | FeNe<br>Clear             | 255   |
| GC 410 <sup>10/13</sup> | HD 144579   | 16 01 30     | +39 24 00           | 23 23                   |                       | 00 04 E           |             | 4x                        | 67ms  |
| GC 410 <sup>14/15</sup> | "           |              |                     |                         |                       |                   |             | 2x                        | 133ms |
| CC 33367                | Comp        |              |                     |                         |                       |                   |             | FeNe<br>Clear             | 25    |
| 68                      | BD+47 2415B | 16 55 06     | +47 30 55           | 23 36 10                |                       | 00 09 E           |             |                           | 2241  |
| 69                      | Comp        |              |                     |                         |                       |                   |             | FeNe<br>Clear             | 25    |
| 70                      | B1115x4     |              |                     | 00 16                   |                       |                   |             |                           |       |
| 71                      | BD+47 2415A | 16 55 06     | +47 30 55           | 00 17 32                |                       | 00 09 W           |             |                           | 843   |
| 72                      | Comp        |              |                     |                         |                       |                   |             | FeNe<br>Clear             | 25    |
| 73                      | BP+47 2415B | 16 55 06     | +47 30 55           | 00 34 31                |                       | 00 46 W           |             |                           | 2031  |
| 74                      | Comp        |              |                     |                         |                       |                   |             | FeNe<br>Clear             | 25    |
| 75                      | Vys 886     | 16 55 08     | +47 31              | 01 12 20                |                       | 01 12 W           |             |                           | 1290  |
| 76                      | Comp        |              |                     |                         |                       |                   |             | FeNe<br>Clear             | 255   |

CCD Spectr. Temp

Focus...

Spectr. Temp

Exp. Mtr.

2110

630

1950

570

2400



CCD Spectr. Temp.  $-100.5^{\circ}\text{C}$ ... Dome Temp./Hum.  $+17.5^{\circ}\text{C}$  47.9% Transparency Conditions ... Hazy (good at zenith).

Focus ... G.7.3.....

Spectr. Temp. ....

Dome Temp./Hum.  $+16.5^{\circ}\text{C}$  47.7% H

No wind at all

26

| Exp. Mtr. | Seeing | Pl. Mag.       | Sp.  | Inst.    | Grating/Tilt                            | Slit      | Emulsion | P.H.     | Program     | Remarks                        | Quality     |
|-----------|--------|----------------|------|----------|-----------------------------------------|-----------|----------|----------|-------------|--------------------------------|-------------|
| 25        |        |                |      | CASS CCD | 1800 $\lambda/\text{mm}$<br>G=5140      | 306 $\mu$ | 5303A    | 18 $\mu$ |             |                                |             |
| 322       | 2110   | <2"            | 6-66 | G8V      |                                         |           |          | 19       | Std vel     |                                | MAX<br>19K  |
| 25        |        |                |      |          |                                         |           |          | 20       |             |                                |             |
| 170       |        |                | 666  | G8V      | ABOVE SLIT                              |           |          |          | seeing test | NE fan only now                |             |
| 133       |        |                |      |          |                                         |           |          |          |             |                                |             |
| 25        |        |                |      |          |                                         |           |          | 21       |             |                                |             |
| 2241      | 630    | <2"            | 11.2 | K8       | nice separation from brighter component |           |          | 22       | Vys pgm     | Vys 887B<br>Faint one to NE    | MAX<br>450  |
| 25        |        |                |      |          |                                         |           |          | 23       | (close)     | Hand guiding)                  |             |
|           |        |                |      |          |                                         |           |          | 1/2      |             |                                |             |
| 843       | 1950   | 1.2"           | 29.5 |          |                                         |           |          | 24       | Vys pgm     | Brighter of two                | MAX<br>2.5K |
| 25        |        |                |      |          |                                         |           |          | 25       |             |                                | 91K         |
| 203       | 570    | 2"             | 11.2 | K8       |                                         |           |          | 26       | Vys pgm     | faint one again                |             |
| 25        |        |                |      |          |                                         |           |          | 27       | (hand)      | guiding not so good this time) |             |
| 1290      | 2400   | = 10           | K?   |          |                                         |           |          | 28       | Vys 886     | SBIG guided                    | MAX<br>3.4m |
| 25        |        | <del>5.0</del> |      |          |                                         |           |          | 29       |             |                                | 95K         |





CCD  
Spectr. Temp.  $-100.3^{\circ}\text{C}$

Dome Temp./Hum. ....

Transparency Conditions *slightly hazy*

Focus *6.73*

CCD  
Spectr. Temp.  $-100.4^{\circ}\text{C}$

Dome Temp./Hum.  $7/6.3^{\circ}\text{C}$  *52.28/11*  
*c Lumbale*

28

Comparison  
len Exp

| Exp. Mtr. | Seeing | P.C.<br>Mag. | Sp.  | Inst.       | Grating/<br>Tilt               | Slit      | Emulston | P.H.  | Program | Remarks                                     | Quality    |
|-----------|--------|--------------|------|-------------|--------------------------------|-----------|----------|-------|---------|---------------------------------------------|------------|
|           |        |              |      | CHSS<br>CCD | 1800 $\text{ln/m}$<br>$G=5740$ | 306 $\mu$ | 5303A    | 1/2   |         |                                             |            |
|           |        |              |      |             |                                |           |          | 5c    |         |                                             |            |
| 25<br>452 | 385    | 2"           | 11.8 | mop         |                                |           |          | 6     | Vys pgm | The faint ENE one<br>Vys 795C S/H 730/1     |            |
| 28        |        |              |      |             |                                |           |          | 7     |         |                                             |            |
| 25        | 900    | 2"-3"        | 210  | K?          |                                |           |          | 13    | Vys pgm | Bright one [AB?]                            | max<br>670 |
|           |        |              |      |             |                                |           |          | 14    |         |                                             |            |
|           |        |              |      |             |                                |           |          | 1/2   |         |                                             |            |
| 23        |        |              |      |             |                                |           |          | 15    |         |                                             |            |
| 16/1      | 790    | 3"           | 9.95 | MIVe        |                                |           |          | 16/13 | Vys pgm | Vys 62C. <sup>*</sup> where are<br>A and B? |            |
| 23        |        |              |      |             |                                |           |          | 17    |         |                                             |            |
| 25        |        |              |      |             |                                |           |          | 18    |         |                                             |            |
| 43        | 8500   |              | 2.72 | K3II        |                                |           |          | 19    | std vel |                                             | 85K        |
| 25        |        |              |      |             |                                |           |          | 20    |         |                                             |            |
| 53        |        |              |      |             |                                |           |          | 30    |         |                                             | 13K        |
|           |        |              |      |             |                                |           |          | 1/2   |         |                                             |            |

pg #1

Mon / Tues

(29)

Date 1995 June 5/6 .... Observers Bln./Tn. ....

Emulsion Batches:

| Plate No.   | Object                      | R.A.<br>1900     | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-------------|-----------------------------|------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC33400/01  | Inboard / out BOARD HARTMAN |                  |                     |                         |                       | 00 15W            | +41°        | FELN<br>clear             | 25/35 |
| 02          | BIAS x 4 Sum of 4 biases    |                  |                     |                         |                       |                   |             |                           |       |
| 03          | Comp                        |                  |                     |                         |                       |                   |             | FELN<br>clear             | 25s   |
| 04          | HD 84441                    | 09 40 12         | +24 14              | 21 06 48                |                       | 04 01W            |             |                           | 55    |
| 05          | Comp                        |                  |                     |                         |                       |                   |             | FELN<br>clear             | 25s   |
| 06          | Comp                        |                  |                     |                         |                       |                   |             | "                         | "     |
| 07          | Ceres                       | 5200<br>09 55 00 | +23 00              | 21 13 35                |                       | 04 13 W           |             |                           | .     |
| 08          | Comp                        |                  |                     |                         |                       |                   |             | FELN<br>clear             | 25    |
| 09 / 14     | FLATS x 6                   |                  |                     |                         |                       | 04 16W            | +23 07      | Tung<br>Ap/2              | 5s    |
| CC33415     | BIAS x 4 Sum of 4 Biases    |                  |                     |                         |                       |                   |             |                           |       |
| CC410 16/19 | HD 128 718                  | 14 33 24         | +48 39              | 21 42                   |                       |                   |             | 4 x                       | 67ms  |
| CC410 20/21 | "                           | "                |                     |                         |                       | 06 15 E           |             | 2 x                       | 133ms |
| CC33416/17  | Inboard / out BOARD HARTMAN |                  |                     |                         |                       | 00 06 E           | +48°        | FELN<br>clear             | 40/60 |
| CC33418     | BIAS (4)                    |                  |                     |                         |                       |                   |             |                           |       |
| 19          | Comp                        |                  |                     |                         |                       |                   |             | FELN<br>clear             | 40    |

 CCD  
Spectr. Te.  
Focus .. 6.  
Spectr. Te.

Exp. Mtr.

No. f/Her

8400

850



CCD Spectr. Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+21.1^{\circ}\text{C}$   $48.7\% \text{RH}$  Transparency Conditions  $\dots$  Hazy  $\dots$  25

Focus  $\dots$  6.70 for 1800h/m. Good For 600h/m 90 c/gain

Spectr. Temp. .... Dome Temp./Hum. ....

CCDFMT for 1800h/m AD4

410 0 50 1024 4 1 MAX

C. Lumbela

ganison  
en Exp.

| Exp. Mir.              | Seeing   | Pr.<br>Mag. | Sp.  | Inst.                | Grating/<br>Tilt  | Slit      | Emulsion | P.H. | Program      | Remarks                         | Quality |
|------------------------|----------|-------------|------|----------------------|-------------------|-----------|----------|------|--------------|---------------------------------|---------|
| 25/35<br>no filter     |          |             |      | CASSCD               | 1800h/m<br>G=5140 | 306u      | 5303R    |      |              |                                 |         |
| 25                     |          |             |      |                      |                   |           |          | 5    |              |                                 | 8.5K    |
| 55<br>8,400            |          | 2.98        | G11T |                      |                   |           |          | 2    | Std vel      |                                 | 5K      |
| 25                     |          |             |      |                      |                   |           |          | 7    |              |                                 |         |
| "                      |          |             |      |                      |                   |           |          | 8    |              |                                 |         |
| 850                    | 2"       | 8.7         | G2V  |                      |                   |           |          | 9    | Minor Planet |                                 |         |
| 25                     |          |             |      |                      |                   |           |          | 10   |              |                                 |         |
| 55                     |          |             |      |                      |                   |           |          | 11   |              |                                 |         |
|                        |          |             |      |                      |                   |           |          | 1/2  |              |                                 |         |
| 67mg<br>133mg<br>40/60 | 2.2"     | 6.7         | F2   | rev CCD<br>TV GUIDER | 4600              | 306u slit |          |      |              | Seeing test Dome NW             |         |
|                        | 3 say 4h |             |      |                      |                   |           |          |      |              | " ✓ NO FAIRs tonight            |         |
|                        |          |             |      | CASSCD               | 600h/m<br>G=3125  | 250u      | 6563R    | 4/5  | Focus test   | 425 0 50 1024 4 1<br>CCDFMT MAX |         |
|                        |          |             |      |                      |                   |           |          | 1/2  |              |                                 | MAX     |
| 40                     |          |             |      |                      |                   |           |          | 1.2c |              |                                 | 2.2K    |

p942

Mon/Tues

(31)

Date 1995 June 5/6

Observers B.K./Tn

Emulsion Batches:

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| Plate No.                                                                    | Object                    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter       | Exp.        |
|------------------------------------------------------------------------------|---------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------------|-------------|
| cc33420                                                                      | SKY                       |              |                     | 22 19 12                |                       | 00 00 00          | +43 13 15   |                                 | 1806        |
| 21                                                                           | SKY                       |              |                     | 22 49 25                |                       |                   |             |                                 | 1839        |
| 22                                                                           | SKY                       |              |                     | 23 20 52                |                       |                   |             |                                 | 1800        |
| 23                                                                           | Comp                      |              |                     |                         |                       |                   |             | Fair<br>Clear                   | 40          |
| 24                                                                           | BIAS(4)                   |              |                     |                         |                       |                   |             |                                 |             |
| 25/29 FLATS <del>x4</del> x5. (1st 2 after power back up) (All should be OK) |                           |              |                     |                         |                       |                   |             |                                 |             |
| cc33430/31                                                                   | INBOARD/OUT BOARD HARTMAN |              |                     |                         |                       | 00 00 00          | +43 13 15   | Tung<br>Ap 1/8<br>Fair<br>Clear | 9s<br>40/80 |
| 32                                                                           | Comp                      |              |                     |                         |                       | "                 | "           | Fair<br>Clear                   | 40s         |
| 33                                                                           | SKY                       |              |                     | 00 27 59                |                       | "                 | "           |                                 | 1827        |
| 34                                                                           | SKY                       |              |                     | 00 58 44                |                       | "                 | "           |                                 | 1806        |
| 35                                                                           | SKY                       |              |                     | 01 29 11                |                       | "                 | "           |                                 | 1810        |
| 36                                                                           | Comp                      |              |                     |                         |                       | "                 | "           | Fair<br>Clear                   | 40s         |
| 37                                                                           | BIAS(4)                   |              |                     |                         |                       | "                 | "           |                                 |             |
| 38/40                                                                        | FLATS x3                  |              |                     |                         |                       | "                 | "           | TUNG<br>Ap 1/8                  | 9sa         |
|                                                                              |                           |              |                     |                         |                       |                   |             |                                 |             |
|                                                                              |                           |              |                     |                         |                       |                   |             |                                 |             |

Exp. Mir.

Spectr. Ten

Focus...

Exp. Mir.

Spectr. Ten

Focus...

Exp. Mir.

Spectr. Ten

Focus...

Exp. Mir.

Spectr. Ten

Focus...

Exp. Mir.

Spectr. Ten

Focus...

Exp. Mir.

Spectr. Ten

Focus...

Exp. Mir.

Spectr. Ten

Focus...

Exp. Mir.

Spectr. Ten

Focus...

Exp. Mir.

Spectr. Ten

Focus...

Exp. Mir.

Spectr. Ten

Focus...

Exp. Mir.

Spectr. Ten

Focus...



<sup>CCD</sup>  
 Spectr. Temp.  $-100.6^{\circ}\text{C}$ ..... Dome Temp./Hum.  $+20.3^{\circ}\text{C}$ ... 5158H Transparency Conditions... Slightly Hazy... (32)  
 Focus... 6.70.....  
<sup>CCD</sup>  
 Spectr. Temp. .... Dome Temp./Hum.  $+18.0^{\circ}\text{C}$ ... 5839H  
 c. 10/10/10

| Exp. Mtr.                                                         | Seeing | Ptg. Mag. | Sp. | Inst.    | Grating/Tilt        | Slit | Emulsion          | P.H. | Program    | Remarks                                                                                            | Quality   |
|-------------------------------------------------------------------|--------|-----------|-----|----------|---------------------|------|-------------------|------|------------|----------------------------------------------------------------------------------------------------|-----------|
| 1806<br>no filter<br>102                                          |        |           |     | CASS CCD | 600 nm/mm<br>G=3125 | 2 Du | 6583A<br>$\pm 5A$ | 13ci |            | Dome WNW, Telescope on WEST SIDE                                                                   |           |
| 1839<br>3 90                                                      |        |           |     |          |                     |      |                   | 14   |            | 1/4 Moon in WSW / Strongest 30 HZ                                                                  |           |
| 1800<br>88                                                        |        |           |     |          |                     |      |                   | 15   |            | (a bare background)                                                                                |           |
| 40                                                                |        |           |     |          |                     |      |                   | 16   |            |                                                                                                    | 2.8K      |
|                                                                   |        |           |     |          |                     |      |                   | 1/2  |            |                                                                                                    |           |
| 95                                                                |        |           |     |          |                     |      |                   | 17   |            | Complete power failure while flattening                                                            | 11K       |
| 40/80<br>6.70 OK still                                            |        |           |     | CASS CCD | 600 nm/mm<br>G=3050 | 2 Du | 6180<br>$\pm 3A$  | 3/4  | focus test | Right on                                                                                           |           |
| 405<br>Exp meter<br>off due to power failure earlier<br>No Filter |        |           |     |          |                     |      |                   | 18ci |            | Uniform Haze But Zenith looks good. Sky seems brighter now (I can see slit with guide) camera now. | max 3000H |
| 1827<br>83                                                        |        |           |     |          |                     |      |                   | 19   |            |                                                                                                    |           |
| 1806<br>75                                                        |        |           |     |          |                     |      |                   | 20   |            |                                                                                                    |           |
| 1810                                                              |        |           |     |          |                     |      |                   | 21   |            |                                                                                                    |           |
| 405                                                               |        |           |     |          |                     |      |                   | 22   |            |                                                                                                    | 2.9K      |
|                                                                   |        |           |     |          |                     |      |                   | 1/2  |            |                                                                                                    |           |
| 950                                                               |        |           |     |          |                     |      |                   | 23   |            |                                                                                                    | 107K      |

17 #1

June 6/7

33

Date 1995 ~~Aug~~ Observers Bln / Smt + Stacey Smith.

Emulsion Batches:

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.....  
.....

| Plate No.    | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End             | Declination | Comparison<br>Type/Filter | Exp.            |
|--------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------------------|-------------|---------------------------|-----------------|
| CC3344<br>42 | INBOARD/<br>OUTBOARD |              |                     |                         |                       |                               |             | FeAr<br>clear             | 30/60           |
| 43           | BIAS(4)              |              |                     | 22 35                   |                       |                               |             |                           | —               |
| 44           | COMP                 |              |                     |                         |                       |                               |             | FeAr<br>clear             | 60              |
| 45           | SKY                  |              |                     | 22 39 10                |                       | 0 <sup>h</sup> 0 <sup>m</sup> | +43°59'     |                           | 1800            |
| 46           | SKY                  |              |                     | 23 15 20                |                       | "                             | "           |                           | 1800            |
| 47           | SKY                  |              |                     | 23 47 40                |                       | "                             | "           |                           | 1800            |
| 48           | COMP                 |              |                     |                         |                       |                               |             | FeAr<br>clear             | 60              |
| 49           | BIAS(4)              |              |                     | 0 23                    |                       |                               |             |                           | —               |
| 50-52        | FLAT x 3             |              |                     |                         |                       | "                             | "           | Tung<br>4Ap               | 4               |
| 53           | BIAS(4)              |              |                     | 0 32                    |                       |                               |             |                           | —               |
| 54/55        | INBOARD/<br>OUTBOARD |              |                     |                         |                       |                               |             | FeNe<br>clear             | 30/50           |
| 56           | BIAS(4)              |              |                     | 1 33                    |                       |                               |             |                           | —               |
| 57           | COMP                 |              |                     |                         |                       |                               |             | FeAr<br>clear             | 90              |
| 58           | SKY                  |              |                     | 1 39 46                 |                       | 0 <sup>h</sup> 0 <sup>m</sup> | +43°59'     |                           | 1800            |
|              | <del>SKY</del>       |              |                     |                         |                       | "                             | "           |                           | <del>1800</del> |

Spectr. Tem.

Focus.....

Spectr. Tem.

Exp. Mir.

198

150

120



Spectr. Temp.  $-100.4^{\circ}\text{C}$  ..... Dome Temp./Hum.  $20.8^{\circ}\text{C}/61.4\%$  Transparency Conditions *cloudy w/ H. Moon*  
 Focus ..... ~~6.73~~  $6.73/6.68$  @  $5745\text{\AA}$  / @  $5070\text{\AA}$  ..... *poking through clouds*  
 Spectr. Temp. .... Dome Temp./Hum.  $19.8^{\circ}\text{C}/65.3\%$  @ FOCUS TEST #2  
 425 0 50 1024 41 ccd/mnt (34)

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst.    | Grating/Tilt             | Slit      | Emulsion                               | P.H.          | Program    | Remarks                                                                           | Quality                      |
|-----------|--------|-----------|-----|----------|--------------------------|-----------|----------------------------------------|---------------|------------|-----------------------------------------------------------------------------------|------------------------------|
| 30/60     |        |           |     | CASS CCD | 600 l/mm (C)<br>G = 2961 | 250 $\mu$ | 5745 $\text{\AA}$                      | 3/4           | FOCUS TEST | telescope on E side, Dome set too cool but time to start                          | ENE                          |
| —         |        |           |     |          |                          |           | <del>5745</del>                        | 1             |            |                                                                                   |                              |
| 60        |        |           |     |          |                          |           |                                        | 5             |            |                                                                                   |                              |
| 1/100     | 198    |           |     |          |                          |           |                                        | 6             | Bln        | some "ghosting" off spectrum<br>45-49 cols $\rightarrow$ ~12-42 cols              |                              |
| 1800      | 150    |           |     |          |                          |           |                                        | 7             | "          | cloud thinning, $\alpha$ Boo visible 8x Vir<br>no "ghosts" $\alpha$ Cyg & $\beta$ |                              |
| 1800      | 120    |           |     |          |                          |           |                                        | 8             | "          | only thin cloud now.                                                              |                              |
| 60        |        |           |     |          |                          |           |                                        | 9             |            |                                                                                   |                              |
| —         |        |           |     |          |                          |           |                                        | 1             |            |                                                                                   |                              |
| 4         |        |           |     |          |                          |           |                                        | 2             |            |                                                                                   | 13.5K<br>$\rightarrow$ 13.4K |
| —         |        |           |     |          |                          |           |                                        | 1             |            |                                                                                   |                              |
| 30/60     |        |           |     | CASS CCD | 1500 l/mm<br>G = 4980    | 306 $\mu$ | 5070 $\text{\AA}$<br>$\pm 3\text{\AA}$ | 3/4           | FOCUS TEST | in focus                                                                          |                              |
| —         |        |           |     |          |                          |           |                                        | 1             |            |                                                                                   |                              |
| 90        |        |           |     |          |                          |           |                                        | 10            |            | really weak                                                                       |                              |
| 1800      |        |           |     |          |                          |           |                                        | 11            | Bln        | only thin haze now, Moon has set                                                  |                              |
| 1800      |        |           |     |          |                          |           |                                        | <del>12</del> |            | nothing there but cosmic                                                          |                              |
|           |        |           |     |          |                          |           |                                        |               |            | I don't think rays                                                                |                              |

All backed up  
to Perseus only

don't think that the rack was moved

/ P3H1

1995

Fri / Sat

(35)

Emulsion Batches:

Date June 9/10

Observers T. / [KK] ST.

| Plate No.   | Object                             | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Ex  |
|-------------|------------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-----|
| ce 09233/34 | Focus test<br>in board / out board |              |                     |                         |                       |                   |             | TRA                       |     |
| 09235       | bias (4)                           |              |                     |                         |                       |                   |             |                           |     |
| 09236       | comp                               |              |                     |                         |                       |                   |             | Th Ar                     | 15  |
| 37          | HD 8890                            | 1 22 34      | 88 46 26            | 22:14:24                |                       | -11 22 E          |             | THAR                      | 236 |
| 38          | comp                               |              |                     |                         |                       |                   |             | Th Ar                     | 15  |
| 39          | HD 8890                            | 1 22 34      | 88 46 26            | 22:20:35                |                       | -11 14 E          |             |                           | 356 |
| 40          | comp                               |              |                     |                         |                       |                   |             | Th Ar                     | 15  |
| 41          | HD 8890                            | 1 22 34      | 88 46 26            | 22:29:22                |                       | -11 05 E          |             |                           | 377 |
| 42          | comp                               |              |                     |                         |                       |                   |             | Th Ar                     | 15  |
| 43          | comp                               |              |                     |                         |                       |                   |             | Th Ar                     | 15  |
| 44          | HD 124897                          | 14 11 06     | 19 42 11            | 22:20:55                |                       | 2 03 W            |             |                           | 177 |
| 45          | comp                               |              |                     |                         |                       |                   |             | Th Ar                     | 15  |
| 46          | HD 124897                          | 14 11 06     | 19 42 11            | 22:25:21                |                       | 2 07 W            |             |                           | 132 |
| 47          | comp                               |              |                     |                         |                       |                   |             | Th Ar                     | 15  |
| 48          | BIAS (4)                           |              |                     | 23 30                   |                       |                   |             |                           |     |



Spectr. Temp. .... -100°C ..... Dome Temp./Hum. 15.3°C / 52.4% Transparency Conditions ... cloudy .....

Focus ..... 244 .....

Spectr. Temp. .... Dome Temp./Hum. ....

(36)

Comparison  
Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp.     | Inst.                                                               | Grating/<br>x Tilt | Slit        | Emulsion | P.H. | Program | Remarks                                  | Quality |
|-----------|--------|-----------|---------|---------------------------------------------------------------------|--------------------|-------------|----------|------|---------|------------------------------------------|---------|
|           |        |           |         | echelle                                                             |                    |             |          |      |         |                                          |         |
|           |        |           |         | 18.50*                                                              | 300<br>.5790       | 60u<br>400a | G100     |      |         |                                          |         |
|           |        |           |         | * Unchanged echelle tilt.<br>(Previous run was indicated as 18.45?) |                    |             |          | 1    |         |                                          |         |
|           |        |           |         |                                                                     |                    |             |          | 3    |         |                                          |         |
| 466       | ~4"    | 2.0       | F8 Ib   |                                                                     |                    |             |          | 4    | Polaris |                                          | 13.2 K  |
|           |        |           |         |                                                                     |                    |             |          | 3    |         |                                          | 8.8 K   |
| 396       | 4"     | 2.0       | F8 Ib   |                                                                     |                    |             |          | 4    | Polaris |                                          | 14 K    |
|           |        |           |         |                                                                     |                    |             |          | 3    |         |                                          | 8.5 K   |
| 30        | 4"     | 2.0       | F8 Ib   |                                                                     |                    |             |          | 4    | Polaris | clouded out.                             | 1 K     |
|           |        |           |         |                                                                     |                    |             |          | 3    |         |                                          | 8.7 K   |
|           |        |           |         |                                                                     |                    |             |          | 3    |         |                                          |         |
| 153       | 4"     | 0.06      | K2 IIIp |                                                                     |                    |             |          | 5    |         | Std. Vel <sup>-only thing vis-ble!</sup> | 4 K     |
|           |        |           |         |                                                                     |                    |             |          | 3    |         |                                          |         |
| 363       | poor   | 0.06      | K2 IIIp |                                                                     |                    |             |          | 5    |         | Std Vel                                  | 8.3 K   |
|           |        |           |         |                                                                     |                    |             |          | 3    |         |                                          | 9 K     |
|           |        |           |         |                                                                     |                    |             |          | 1/2. |         |                                          |         |

Pg #2

Fri/SAT

(37)

Emulsion Batches:

Date 1995 June 9/10.... Observers [R.K.] / J.M. / S.T.h.....

| Plate No. | Object             | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp      |
|-----------|--------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|----------|
| CC09249   | Comp               |              |                     |                         |                       |                   |             | Th Ar                     | 15       |
| 50        | HD 137909          | 15 23 42     | 29 27 01            | 23:35:42                |                       | 114 W             |             |                           | 600      |
| 51        | Comp               |              |                     |                         |                       |                   |             | Th Ar                     | 1        |
| 52        | HD 137909          | 15 23 42     | 29 27 01            | 23:49:27                |                       | 133 W             |             |                           | 1005     |
| 53        | Comp               |              |                     |                         |                       |                   |             | Th Ar                     | 15       |
| 54        | Comp ✓<br>* edit ✓ |              |                     | 00 14 55                |                       |                   |             | Th Ar                     | 15       |
| 55        | HD 131 156 (A)     | 14 46 46     | 19 30 57            | 00 15 33                |                       | 235 W             |             |                           | 960      |
| 56        | Comp edit ✓        |              |                     | 00 33                   |                       |                   |             | Th Ar                     | 1        |
| 57        | HD 131 156 (B)     | 14 46 46     | 19 30 57            | 00 35 29                |                       |                   |             |                           | 1800     |
| 58        | Comp               |              |                     |                         |                       |                   |             | Th Ar                     | 1        |
| 59        | HD 131 156 (A)     | 14 46 46     | 19 30 57            | 01 08 46                |                       | 329 W             |             |                           | 986      |
| 60        | Comp               |              |                     |                         |                       |                   |             | Th Ar                     | 1        |
| 61        | BIAS(4)            |              |                     | 01 29                   |                       |                   |             |                           |          |
| 62        | Comp               |              |                     |                         |                       |                   |             | Th Ar                     | 1        |
| 63        | ADS 11632 (A)      | 18 41 42     | 59 29 00            | 01 48 53                |                       | 031 W             |             |                           | 1800 500 |



Spectr. Temp. .... -100°C ..... Dome Temp./Hum. .14.6°C / 56.8% Transparency Conditions ... cleaned ... up ... in ... S.W. ....

Focus ..... 244 .....

Spectr. Temp. .... Dome Temp./Hum. .13.6°C / 59.1%

38  
CEOFMT. 0  
250  
1024  
4

| Comparison<br>Filter | Exp. | Exp. Mtr. | Seeing       | Ptg.<br>Mag. | Sp.            | Inst.<br><i>Echelle</i> | Grating/<br>X Tilt | Slit        | Emulsion | P.H. | Program                                       | Remarks                                                                                                     | Quality                 |
|----------------------|------|-----------|--------------|--------------|----------------|-------------------------|--------------------|-------------|----------|------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------|
| Ar                   | 15   |           |              |              |                | 18.50                   | 300.<br>5790       | 60µ<br>450µ | 6100     | 3    |                                               |                                                                                                             | 9K                      |
|                      | 100  | 292       |              | 3.66         | F <sub>p</sub> |                         |                    |             |          | 6    | β Cr B<br>KK prgm                             |                                                                                                             | 4K                      |
| Ar                   | 1    | 252       |              |              |                |                         |                    |             |          | 3    |                                               |                                                                                                             | 9K                      |
|                      | 100  | 460       | pool<br>4.6" | 3.66         | F <sub>p</sub> |                         |                    |             |          | 6    | β Cr B<br>KK prgm                             |                                                                                                             | 4.6 K                   |
|                      | 15   |           |              |              |                |                         |                    |             |          | 3    |                                               |                                                                                                             | 9.4 K                   |
| Ar                   | 15   |           |              |              |                |                         |                    |             |          | 3    |                                               |                                                                                                             |                         |
|                      | 960  | 149       | pool         | 4.74         | G8V            |                         |                    |             |          | 4    | NS slit prgm<br>*<br>note Rowlot<br>in 3rd CI | brighter and south of<br>↓ pair ↓<br>this image is likely repeat of<br>Polaris except that it is more!! off | 2.9K                    |
|                      | 1    |           |              |              |                |                         |                    |             |          | 3    |                                               |                                                                                                             | 9.9K                    |
|                      | 1300 | 30        |              | 6.90         | K5V            |                         |                    |             |          | 5    | "                                             | Fainter and north of<br>pair                                                                                | 1.2K                    |
|                      | 1    |           |              |              |                |                         |                    |             |          | 3    |                                               |                                                                                                             |                         |
|                      | 986  | 171       |              | 4.74         | G8V            |                         |                    |             |          | 6    | "                                             | brighter and south of<br>pair                                                                               |                         |
|                      | 1    |           |              |              |                |                         |                    |             |          | 3    |                                               |                                                                                                             |                         |
|                      | 1    |           |              |              |                |                         |                    |             |          | 1    |                                               |                                                                                                             |                         |
|                      | 1    |           |              |              |                |                         |                    |             |          | 3    |                                               |                                                                                                             | 8K                      |
|                      | 1    | 0         | 7"           | 8.90         | dm4            |                         |                    |             |          | 2    |                                               | NORTH and brighter<br>I think                                                                               | 250<br>plate<br>redgral |

39

### Emulsion Batches:

Date 1995 June 9/10 Observers KK/Jm/STn.....

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[illegible]









Spectr. Temp. .... -100°C ...

Dome Temp./Hum. ~~14.1°C / 73.1%~~Transparency Conditions ~~part clouds~~ ... clear ...

Focus ..... 0.242 .....

14.5% C / 51.5%

Full moon

(42)

Spectr. Temp. ....

Dome Temp./Hum. ....

90C99in - 00 256 1024 4 1 CCOFMT

Comparison  
Filter Exp

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst.<br>Echelle | Grating/<br>Tilt              | Slit            | Emulsion            | P.H. | Program    | Remarks                                                                                     | Quality           |
|-----------|--------|------|-----|------------------|-------------------------------|-----------------|---------------------|------|------------|---------------------------------------------------------------------------------------------|-------------------|
|           |        |      |     | 18.50            | 300 l/mm<br>350 l/mm<br>15790 | 60µ W<br>400µ H | 6100 Å              |      |            | - extreme difficulty with<br>GPIO errors and software<br>freeze-up!!! (dv)                  |                   |
|           |        |      |     |                  |                               |                 |                     |      | NOT SAVED. | - duration, counts HA at end<br>not recorded - avoided saturation by<br>drifting off region |                   |
|           |        |      |     | 18.50            | 300 l/mm<br>15790             |                 | EW slit<br>Tonight, |      | Focus Test | 100 tscale used.                                                                            |                   |
|           |        |      |     |                  |                               |                 |                     |      | 00 128     | 1024 81 CCOFMT<br>FOR Focus Test only                                                       | MAX<br>AD4<br>10K |
|           |        |      |     |                  |                               |                 |                     | 3    |            |                                                                                             |                   |
| 220       | 2      | F    |     |                  |                               |                 |                     | 5    | KK pgrm    |                                                                                             | 12K               |
|           |        |      |     |                  |                               |                 |                     | 3    |            |                                                                                             |                   |
| 189       |        |      |     |                  |                               |                 |                     | 4    |            |                                                                                             | 8K                |
|           |        |      |     |                  |                               |                 |                     | 3    |            |                                                                                             |                   |
| 215       |        |      |     |                  |                               |                 |                     | 5    |            |                                                                                             | 8K                |
|           |        |      |     |                  |                               |                 |                     | 3    |            |                                                                                             | 9.5K              |
|           |        |      |     |                  |                               |                 |                     | 3    |            |                                                                                             |                   |
| 36        | 5"     | 5.11 | F8V |                  |                               |                 |                     | 4c.  | Std Vel    | Full moon ≈ 45° away                                                                        | 900               |
|           |        |      |     |                  |                               |                 |                     | 3    |            |                                                                                             |                   |

P32

Mon/Tues

(43)

Emulsion Batches:

Date 1995 June 12/13 Observers .... [KK] STn/Tn.....

| Plate No. | Object        | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|---------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce 09294  | bias (4)      |              |                     | 23 19                   |                       |                   |             |                           |      |
| 95        | comp          |              |                     |                         |                       |                   |             | Th Ar                     | 1s   |
| 96        | HD 146361 A   | 16 10 56     | 34 06 42            | 23 27 28                |                       | 00 31 W           |             |                           | 693  |
| 97        | comp          |              |                     |                         |                       |                   |             | Th Ar                     | 1s   |
| 98        | HD 146362 B   | 16 10 56     | +34 06 42           | 23 41 29                |                       | 01 03 W           |             |                           | 1740 |
| 99        | comp          |              |                     |                         |                       |                   |             | Th A                      | 1s   |
| 300       | HD 146361 A   | 16 10 56     | +34 06 42           | 00 14 53                |                       | 01 20 W           |             |                           | 787  |
| 301       | comp          |              |                     |                         |                       |                   |             | Th A                      | 1s   |
| 302       | bias (4)      |              |                     | 00 30                   |                       |                   |             |                           |      |
| 303       | comp          |              |                     |                         |                       |                   |             | Th A                      | 1s   |
| 304       | ADS 13256 (A) | 19 56 42     | +10 28              | 00 42 41                |                       | -1 46 E           |             |                           | 1533 |
| 305       | comp          |              |                     |                         |                       |                   |             | Th A                      | b    |
| 06        | ADS 13256 (B) |              |                     | 01 11 08                |                       | -1 09 E           |             |                           | 1900 |
| 07        | comp          |              |                     |                         |                       |                   |             | Th A                      | 1s   |
| 08        | ADS 13256 (A) | 19 56 42     | 10 28               | 01 46 15                |                       | -0 E              |             |                           | 1521 |



Spectr. Temp. .... -100.8°C ... Dome Temp./Hum. ... 13.3°C / 58.3% Transparency Conditions .... clear

Focus ..... 24.2

Spectr. Temp. .... Dome Temp./Hum. ... 12.9°C / 58.3%

Full/moon

(44)

| Comparison<br>filter | Exp. | Exp. Mtr. | Seeing | Ptg.<br>Mag. | Sp. | Inst<br>echelle | Grating/<br>Tilt  | Slit                      | Emulsion | P.H. | Program       | Remarks                                                        | Quality           |
|----------------------|------|-----------|--------|--------------|-----|-----------------|-------------------|---------------------------|----------|------|---------------|----------------------------------------------------------------|-------------------|
|                      |      |           |        |              |     |                 | 300 l/nm<br>.5790 | 60 $\mu$ W<br>400 $\mu$ H | 6100 Å   | 1    |               |                                                                |                   |
|                      | 1s   |           |        | 5.58         | 60V |                 |                   |                           |          | 3    |               | <del>brighter and NE of pair</del>                             |                   |
|                      | 897  | 80        | 4"     | 5.58         | 60V |                 |                   |                           |          | 5    | HK Vis Bin    | brighter and NE of pair                                        | 1.4K              |
|                      | 1s   |           |        |              |     |                 |                   |                           |          | 3    |               |                                                                |                   |
|                      | 1740 | 72        | 4"     | 6.59         | G1V |                 |                   |                           |          | 6    | HK Vis Bin    | fainter and SW                                                 | 1.3K              |
|                      | 1s   |           |        |              |     |                 |                   |                           |          | 3    |               |                                                                |                   |
|                      | 787  | 103       |        | 5.58         | 60V |                 |                   |                           |          | 4.5  | HK Vis Binary | brighter + NE pair                                             | 1.7K              |
|                      | 1s   |           |        |              |     |                 |                   |                           |          | 3    |               |                                                                |                   |
|                      |      |           |        |              |     |                 |                   |                           |          | 1    |               |                                                                |                   |
|                      | 1s   |           |        |              |     |                 |                   |                           |          | 3    |               |                                                                |                   |
|                      | 1533 | 3         | 4"     | 7.60         |     |                 |                   |                           |          | 4    |               | <del>brighter and south</del><br>-poorly separated, bad seeing | 500               |
|                      | b    |           |        |              |     |                 |                   |                           |          | 3    |               | brighter and south<br>(Probably bad idea with moon 45° away)   |                   |
|                      | 1920 | 8         | 3" 4"  | 1.80         |     |                 |                   |                           |          | 5    |               | poorly resolved.<br>fainter and north                          | 950<br>above bkg. |
|                      | 1s   |           |        |              |     |                 |                   |                           |          | 3    |               | <del>brighter and south</del>                                  |                   |
|                      | 1520 | 1         |        | 7.60         |     |                 |                   |                           |          | 4    |               | -brighter and south of pair                                    |                   |

p93

45

Emulsion Batches:

Date 1995 June 12/13. Observers ... [KKJ] / Tn / S.Tn .....

| Plate No. | Object        | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|---------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| cc 09309  | comp          |              |                     |                         |                       |                   |             | Th A                      | 1s   |
| 10        | HE bias (4)   |              |                     | 02 14                   |                       |                   |             |                           |      |
| 11        | comp          |              |                     |                         |                       |                   |             | Th A                      | 1s   |
| 12        | HD 197964 (A) | 20 42 01     | 15 45 50            | 02 21 11                | <del>02 21 11</del>   | -01 08 E          |             |                           | 588  |
| 13        | comp          |              |                     |                         |                       |                   |             | Th A                      | 1s   |
| 14        | HD 197963 (B) | 20 42 01     | 15 45 50            | 02 33 19                |                       | -00 48 E          |             |                           | 1040 |
| 15        | comp          |              |                     |                         |                       |                   |             | Th A                      | 1s   |
| 16        | HD 197964 (A) | 20 42 01     | 15 45 50            | 02 52 56                |                       | -00 36 E          |             |                           | 581  |
| 17        | comp          |              |                     |                         |                       |                   |             | Th A                      | 1s   |
| 18        | comp          |              |                     |                         |                       |                   |             |                           |      |
| 19        | HD 204867     | 21 24 18     | -06 00 40           | 03 08 18                |                       | -01 09 E          |             |                           | 400  |
| 20        | comp          |              |                     |                         |                       |                   |             | Th A                      | 1s   |
| 21        | comp          |              |                     |                         |                       |                   |             | Th A                      | 1s   |
| 22        | HD 8890       | 01 22 34     | 88 46 26            | 03 22 40                |                       | -06 07 E          |             |                           | 116  |
| 23        | comp          |              |                     |                         |                       |                   |             |                           |      |



Spectr. Temp. .... Dome Temp./Hum. 12.3°C / 57.6% Transparency Conditions ..... clean... but windy. MNR.  
 Focus ..... 242 ..... Full moon, (46)  
 Spectr. Temp. .... Dome Temp./Hum. 12.2°C / 56.8%

Comparison  
 Exp.

| Exp. Mtr. | Seeing | Ptg. Mag.       | Sp.              | Inst.<br>Echelle | Grating/<br>Tilt | Slit            | Emulsion | P.H. | Program   | Remarks                                     | Quality                   |
|-----------|--------|-----------------|------------------|------------------|------------------|-----------------|----------|------|-----------|---------------------------------------------|---------------------------|
| 15        |        |                 |                  |                  | 300 l/mm<br>5790 | 60µ W<br>400µ H | 6100 Å   | 3    |           |                                             | 11K                       |
| 15        |        |                 |                  |                  |                  |                 |          | 1    |           |                                             |                           |
| 558       | 114    | 4-5"            | 4.5              | K1 IV            |                  |                 |          | 3    |           | East and brighter of<br>well separated pair | 3 K                       |
| 15        |        |                 |                  |                  |                  |                 |          | 3    |           |                                             |                           |
| 1040      | 91     | 5.5             | F7 V             |                  |                  |                 |          | 2    |           | West and fainter of<br>well separated pair  | 1.7 K                     |
| 15        |        |                 |                  |                  |                  |                 |          | 3    |           |                                             |                           |
| 501       | 144    | 4-7"            | 4.5              | K1 IV            |                  |                 |          | 6    |           | East and brighter of<br>well separated pair | 2.6 K                     |
| 15        |        | <del>2.91</del> | <del>GO Ib</del> |                  |                  |                 |          | 3    |           |                                             |                           |
|           |        |                 |                  |                  |                  |                 |          | 3    |           |                                             |                           |
| 400       | 138    | 5-8"            | 2.91             | GO Ib            |                  |                 |          | 5    | Std. Vel. |                                             | 3.2 K<br><del>3.2 K</del> |
| 15        |        |                 |                  |                  |                  |                 |          | 3    |           |                                             |                           |
| 15        |        |                 |                  |                  |                  |                 |          |      | Polans    |                                             |                           |
| 116       | 224    | 2               | F8 Ib            |                  |                  |                 |          |      | Polans    | Poor seeing down<br>coming                  | 4 K<br><br>10.3 K         |

47

Date 1995 June 12/13 Observers [KK]/Tn/STn

### Emulsion Batches:

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[illegible]



Spectr. Temp.  $-101.8^{\circ}\text{C}.$

Dome Temp./Hum.  $+11.9^{\circ}\text{C}$  56% H

FULL MOON

48

All to Persons and letter CSS386. No worming.  
Edelle Worm disk has no indication of any June Directory, even though ~~some~~ it  
was made & some of Fri/Sat obs supposedly wrote  
to worm. (95-06)

pg #1

(49)

Date 1995 June 13/14 Observers [KK] Tn / STn

Emulsion Batches:

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| Plate No.     | Object                         | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.     |
|---------------|--------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|----------|
| cc09336<br>37 | Focus test<br>inboard/outboard |              |                     |                         |                       |                   |             | Th A                      | 2s<br>2s |
| 38            | bias (4)                       |              |                     | 20 32 45                |                       |                   |             |                           |          |
| 39            | comp                           |              |                     |                         |                       |                   |             | Th A                      | 1s       |
| 40            | HD 84441                       | 09 40 11     | 24 14 05            | 20 38 22                |                       | 04 11 W           |             |                           | 506      |
| 41            | comp                           |              |                     |                         |                       |                   |             | Th A                      | 1s       |
| 42            | comp                           |              |                     |                         |                       |                   |             | Th A                      | 1s       |
| 43            | Ceres                          | 10 06 00     | 21 50 00            | 21 06 40                |                       | 04 38 W           |             |                           | 1586     |
| 44            | comp                           |              |                     |                         |                       |                   |             | Th A                      | 1s       |
| 45            | comp                           |              |                     |                         |                       |                   |             | Th A                      | 1s       |
| 46            | HD 89484                       | 10 14 28     | 20 20 51            | 21 38 23                |                       | 04 32 W           |             |                           | 176s     |
| 47            | comp                           |              |                     |                         |                       |                   |             | Th A                      | 1s       |
| 48            | HD 89485                       | 10 14 28     | 20 20 49            | 21 38 23                |                       | 04 42 W           |             |                           | 549s     |
| 49            | comp                           |              |                     |                         |                       |                   |             | Th A                      | 1s       |
| 50            | HD 89484                       | 10 14 28     | 20 20 51            | 21 53 38                |                       | 04 49 W           |             |                           | 284s     |
| 51            | comp                           |              |                     |                         |                       |                   |             | Th A                      | 1s       |

cc0  
Spectr. Ten

Focus....

Spectr. Ten

Exp. Mir.

337

0

H3

60

36



CCO Spectr. Temp.  $-100^{\circ}\text{C}$  Dome Temp./Hum.  $18.4^{\circ}\text{C} / 58.6\%$  Transparency Conditions ... hazy

Focus ..... 245

Spectr. Temp.  $-100.6^{\circ}\text{C}$  Dome Temp./Hum.  $17.5^{\circ}\text{C} / 60.9\%$

Full Moon.

50

| Comparison<br>Star | Exp. | Exp. Mtr. | Seeing | Ptg.<br>Mag. | Sp.               | Inst.<br>Echelle         | Grating/<br>Tilt | Slit   | Emulsion | P.H. | Program             | Remarks                                          | Quality                     |
|--------------------|------|-----------|--------|--------------|-------------------|--------------------------|------------------|--------|----------|------|---------------------|--------------------------------------------------|-----------------------------|
| 2s                 | 2s   |           |        |              |                   | 18.50                    | 300 ln/mm        | 60% W  | 6100 Å   |      |                     | EW slit                                          |                             |
|                    |      |           |        |              |                   |                          | Q5790            | 400% H |          |      |                     |                                                  |                             |
| 1s                 |      |           |        |              |                   |                          |                  |        |          | 1    |                     |                                                  |                             |
|                    |      |           |        |              |                   |                          |                  |        |          | 3    |                     |                                                  | 12K                         |
| 50b                |      | 207       |        | 2.98         | G1 II (Ephemeras) | G0 II (Bright Star Cat.) |                  |        |          | 4    | Std Vel             | offscr Δα -00 00 16<br>Δδ -00 39                 | 6K                          |
| 1s                 |      |           |        |              |                   |                          |                  |        |          | 3    |                     |                                                  |                             |
| 1s                 |      |           |        |              |                   |                          |                  |        |          | 3    |                     |                                                  |                             |
| 158b               |      | 0         |        | 2.88         | G                 |                          |                  |        |          | 5    | Std Vel<br>asteroid | > 30:1 SN                                        | 2100<br>ADU<br>above<br>bg. |
| 1s                 |      |           |        |              |                   |                          |                  |        |          | 3    |                     |                                                  |                             |
| 1s                 |      |           |        |              |                   |                          |                  |        |          | 3    |                     |                                                  |                             |
| 170s               |      | 143       | 3-4"   | 2.22         | K0 III            |                          |                  |        |          | 6    |                     | NW and brighter of<br>pair - look well separated | 4K                          |
| 1s                 |      |           |        |              |                   |                          |                  |        |          | 3    |                     |                                                  |                             |
| 549s               |      | 66        |        | 3.47         | G7 III            |                          |                  |        |          | 2    |                     | SE and fainter of<br>pair                        | 3K                          |
| 1s                 |      |           |        |              |                   |                          |                  |        |          | 3    |                     |                                                  |                             |
| 284s               |      | 36        |        | 2.22         | K0 III            |                          |                  |        |          | 6    | → cloud ended       | NW and fainter of<br>pair in foot of cloud       | 2K                          |
| 1s                 |      |           |        |              |                   |                          |                  |        |          | 3    |                     |                                                  |                             |

51

### Emulsion Batches:

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[illegible]

CCD  
Spectr. Te

## Focus . . .

Spectr. Te

Exp. Mix.



CCD  
Spectr. Temp. ... 10.1.6°C ...

Dome Temp./Hum. ... 17.3°C / 60.9%

Transparency Conditions ... hazy ... some clouds ...

Focus ... 0.245 ...

Full Moon.

(52)

Spectr. Temp. ...

Dome Temp./Hum. ... 16.9°C / 62.2%

| Comparison Filter | Exp. | Exp. Mtr.      | Seeing | Ptg. Mag. | Sp.  | Inst.<br><i>Echelle</i> | Grating/<br>Tilt   | Slit              | Emulsion | P.H. | Program                  | Remarks                                         | Quality |
|-------------------|------|----------------|--------|-----------|------|-------------------------|--------------------|-------------------|----------|------|--------------------------|-------------------------------------------------|---------|
|                   |      |                |        |           |      | 18.50                   | 300 h/mm<br>0.5790 | 60 μ W<br>450 μ H | 6100 Å   | 1    |                          |                                                 |         |
|                   |      |                |        |           |      |                         |                    |                   |          | 3    |                          |                                                 |         |
|                   | 187  | 315            |        | 2         | F8Ib |                         |                    |                   |          | 2    | Polaris                  |                                                 | 8.6 K   |
|                   |      |                |        |           |      |                         |                    |                   |          | 3    |                          |                                                 |         |
|                   | 187  | 300            |        | 2         | F8Ib |                         |                    |                   |          | 2    | Polaris                  |                                                 | 15 K    |
|                   |      |                |        |           |      |                         |                    |                   |          | 3    |                          |                                                 |         |
|                   | 166  | 264            |        | 2         | F8Ib |                         |                    |                   |          | 2    | Polaris                  |                                                 | 8.6 K   |
|                   |      | <del>264</del> |        |           |      |                         |                    |                   |          | 3    |                          |                                                 |         |
|                   |      |                |        |           |      |                         |                    |                   |          | 3    |                          |                                                 |         |
|                   | 337  | 123            | ~2"    | 4.20      | F0IV |                         |                    |                   |          | 6    | brighter + north of pair | Bright and <sup>north</sup> well separated pair | 2 K     |
|                   |      |                |        |           |      |                         |                    |                   |          | 3    |                          |                                                 |         |
|                   | 900  | 35             |        | 5.20      | δ FO |                         |                    |                   |          | 4    |                          | Sept <sup>Sept</sup> and fainter of pair        | 1.5 K   |
|                   |      |                |        |           |      |                         |                    |                   |          | 3    |                          |                                                 |         |
|                   | 386  | 43             |        | 4.20      | F0IV |                         |                    |                   |          | 6    |                          | brighter and north of pair                      | 850     |
|                   |      |                |        |           |      |                         |                    |                   |          | 3    |                          |                                                 | 11.0 K  |

53

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Spectr. Tem  
Focus.....  
Spectr. Tem

Exp. Mtr.

96



Spectr. Temp. ....

Dome Temp./Hum.  $+168^{\circ}\text{C}$  62%

Transparency Conditions ... hazy, ... ~~some~~ ... cloudy.

54

| Comparison | Filter | Exp |
|------------|--------|-----|
| 1          |        |     |
| 2          |        |     |
| 3          |        |     |
| 4          |        |     |
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| 9          |        |     |
| 10         |        |     |
| 11         |        |     |
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| 89         |        |     |
| 90         |        |     |
| 91         |        |     |
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| 93         |        |     |
| 94         |        |     |
| 95         |        |     |
| 96         |        |     |
| 97         |        |     |
| 98         |        |     |
| 99         |        |     |
| 100        |        |     |

[illegible]

ps' 55 Wed/Thurs

Date ..1995..June..14..15. Observers [Jtk]..Tn..1..STn.....

Emulsion Batches:

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| Plate No.  | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.   |
|------------|------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|--------|
| ce09379-80 | inboard/outboard |              |                     |                         |                       |                   |             | ThA                       | 2s/1.2 |
| 81         | bias (4)         |              |                     | 20 41 00                |                       |                   |             |                           |        |
| 82         | comp             |              |                     |                         |                       |                   |             | ThA                       | 1s     |
| 83         | HD 84441         | 09 40 11     | 24 14 05            | 20 48 15                |                       | 4 24 W            |             |                           | 383    |
| 84         | comp             |              |                     |                         |                       |                   |             | ThA                       | 1s     |
| 85         | comp             |              |                     |                         |                       |                   |             | ThA                       | 1s     |
| 86         | HD 89484         | 10 14 28     | 20 20 51            | 20 58 58                |                       | 0350 W            |             |                           | 154    |
| 87         | comp             |              |                     |                         |                       |                   |             | ThA                       | 1s     |
| 88         | HD 89485         | 10 14 28     | 20 20 49            | 21 03 51                |                       | 04 06 W           |             |                           | 487    |
| 89         | comp             |              |                     |                         |                       |                   |             | ThA                       | 1s     |
| 90         | HD 89484         | 10 14 28     | 20 20 51            | 21 13 21                |                       | 04 W              |             |                           | 212    |
| 91         | comp             |              |                     |                         |                       |                   |             | ThA                       | 1s     |
| 92         | Bias(4)          |              |                     | 21 18                   |                       |                   |             |                           |        |
| 93         | comp             |              |                     |                         |                       |                   |             | ThA                       | 1s     |
| 94         | Ceres            | 10 07 31     | 21 40               | 21 32 24                |                       | 04 57 W           |             |                           | 1073   |

CCD Spectr. Ten  
Focus.....  
Spectr. Ten

Exp. Mtr.

T=1

174

165

121

170

0



CCD Spectr. Temp. ...  $-100^{\circ}\text{C}$  ..... Dome Temp. / Hum.  $11.9^{\circ}\text{C} \dots 44.0\% \text{H}$  Transparency Conditions  $\text{slight cloud / haze} \dots$

Focus .....  $0.245$  .....  $90 \text{ C gain}$

Spectr. Temp. .... Dome Temp. / Hum.  $15.9^{\circ}\text{C} \dots 46.4\% \text{H}$

56

| Comparison Filter | Exp. | Exp. Mtr. | Seeing   | Ptg. Mag. | Sp.            | Inst.                            | Grating/Tilt      | Slit                      | Emulsion | P.H. | Program             | Remarks                                       | Quality |
|-------------------|------|-----------|----------|-----------|----------------|----------------------------------|-------------------|---------------------------|----------|------|---------------------|-----------------------------------------------|---------|
|                   | 2s/1 |           | $T=17.5$ |           |                | Echelle<br>18.50                 | 300 w/mm<br>.5790 | 60 $\mu$ W<br>400 $\mu$ H | 6100 Å   |      | focus test          | 0 0 128 1024 81<br>CCD Fwy                    |         |
|                   |      |           |          |           |                |                                  | SLIT still EW     |                           |          | 1    |                     | 0 0 256 1024 41<br>CCD Fwy                    |         |
|                   | 1s   |           |          |           |                |                                  |                   |                           |          | 3    |                     |                                               | 11.6 K  |
| 383               |      | 174       |          | 2.98      | G1 II<br>G0 II | (Ephemeral)<br>(Bright Star Cal) |                   |                           |          | 4    | Std Vel             |                                               | 5 K     |
|                   | 1s   |           |          |           |                |                                  |                   |                           |          | 3    |                     |                                               |         |
|                   | 1s   |           |          |           |                |                                  |                   |                           |          | 3    |                     |                                               |         |
| 154               |      | 165       | 4.5"     | 2.22      | K0 III         |                                  |                   |                           |          | 5    |                     | NW & brighter of pair                         |         |
|                   | 1s   |           |          |           |                |                                  |                   |                           |          | 3    |                     |                                               |         |
| 487               |      | 121       |          | 3.47      | G1 III         |                                  |                   |                           |          | 6    |                     | SE & fainter of pair<br>- bad separation      | 3.5 K   |
|                   | 1s   |           |          |           |                |                                  |                   |                           |          | 3    |                     |                                               |         |
| 912               |      | 170       | 4.5'     | 2.22      | K0 III         |                                  |                   |                           |          | 5    |                     | NW & fainter of pair                          |         |
|                   | 1s   |           |          |           |                |                                  |                   |                           |          | 3    |                     |                                               |         |
|                   |      |           |          |           |                |                                  |                   |                           |          | 1    |                     |                                               |         |
|                   | 1s   |           |          |           |                |                                  |                   |                           |          | 3    |                     |                                               |         |
| 1073              |      | 0         |          |           |                |                                  |                   |                           |          | 2    | Std Vel<br>asteroid | Epoch = J2000<br>~ 25:1 Signal noise above bg | 35 ADU  |

57  
Wed / Thurs

Date 1995 June 14/15 Observers [KK] Tn./S.Tu.....

Emulsion Batches:

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| Plate No. | Object                        | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.          |
|-----------|-------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|---------------|
| ce09395   | comp                          |              |                     |                         |                       |                   |             | Th A                      | 1s            |
| 96        | Comp                          |              |                     |                         |                       |                   |             | Th A                      | 1s            |
| 97        | <del>HD</del> ADS 9842(A)     | 15 50 42     | -01 54 00           | 22 01 12                |                       | slightly E        |             |                           | 1355          |
| 98        | comp                          |              |                     |                         |                       |                   |             | Th A                      | 1s            |
| 99        | ADS 9842(B)                   | 15 50 42     | -01 54 00           | 22 25 58                |                       | 0 22 W            |             |                           | 2216          |
| 400       | comp                          |              |                     |                         |                       |                   |             | Th A                      | 1s            |
| 401       | ADS 9842(A)                   | 15 50 42     | -01 54 00           | 23 04 46                |                       | 0 47 W            |             |                           | 1375          |
| 402       | comp                          |              |                     |                         |                       |                   |             | Th A                      | 1s            |
| 403       | bios (4)<br><del>comp</del>   |              |                     | 23 30 11                |                       |                   |             | <del>Th A</del>           | <del>1s</del> |
| 404       | <del>HD 137 909</del><br>comp |              |                     |                         |                       |                   |             | Th A                      | 1s            |
| 405       | HD 137 909                    | 15 23 42     | +29 27 01           | 23 39 47                |                       | 01 39 W           |             |                           | 696           |
| 406       | Comp                          |              |                     |                         |                       |                   |             | Th A                      | 1s            |
| 407       | HD 137 909                    | "            | "                   | 23 53 08                |                       | 02 00 W           |             |                           | 1157          |
| 408       | Comp                          |              |                     |                         |                       |                   |             | Th A                      | 1s            |
| 409       | HD 137 909                    | "            | "                   | 00 13 54                |                       | 02 16 W           |             |                           | 810           |
| 410       | Comp                          |              |                     |                         |                       |                   |             | Th A                      | 1s            |

Spectr. Ten

Focus.....

Spectr. Ten

Exp. Nr.

Exp. Nr.

Exp. Nr.

Exp. Nr.

Exp. Nr.

Exp. Nr.

Exp. Nr.

Exp. Nr.

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Exp. Nr.

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Exp. Nr.

Exp. Nr.

Exp. Nr.

Exp. Nr.

Exp. Nr.



Spectr. Temp. .... -100.

Dome Temp./Hum. 15.4°C / 46.2% H Transparency Conditions .. clearing .. some cloud to

Focus ..... 0.245 .....

Spectr. Temp. .... Dome Temp./Hum. *13.7°C 56%RH* *getting windy with resulting bad seeing* *ADG* *MAX*

Spectr. Temp. . . . .

Dome Temp./Hum.  $13.7^{\circ}\text{C}$   $56\%$  getting windier with peculiar b. breeze

[illegible]

py43 (59) Wed / Thurs

Date 1995 June 14/15... Observers [KK] ... In / S.Th.....

Emulsion Batches:

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| Plate No. | Object     | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce 09411  | bias (4)   |              |                     | 00 30 06                |                       |                   |             |                           |      |
| 12        | comp       |              |                     |                         |                       |                   |             | Th A                      | Is   |
| 13        | HD 8890    | 01 22 34     | 88 46 26            | 00 36 26                |                       | -08 37 E          |             |                           | 437  |
| 14        | comp       |              |                     |                         |                       |                   |             | Th A                      | Is   |
| 15        | HD 8890    | 01 22 34     | 88 46 26            | 00 46 10                |                       | -08 30 E          |             |                           | 310s |
| 16        | comp       |              |                     |                         |                       |                   |             | Th A                      | Is   |
| 17        | HD 8890    | 01 22 34     | 88 46 26            | 00 55 02                |                       | -08 20 E          |             |                           | 407  |
| 18        | comp       |              |                     |                         |                       |                   |             | Th A                      | Is   |
| 19        | comp       |              |                     |                         |                       |                   |             | Th A                      | Is   |
| 20        | HD 161 096 | 17 38 32     | 04 36 32            | 01 11 12                |                       | 0 53 W            |             |                           | 595  |
| 21        | comp       |              |                     |                         |                       |                   |             | Th A                      | Is   |
| 22        | comp       |              |                     |                         |                       |                   |             | Th A                      | Is   |
| 23        | HD 187 691 | 19 46 14     | 10 09 55            | 01 28 52                |                       | -0 39 E           |             |                           | 1571 |
| 24        | comp       |              |                     |                         |                       |                   |             | Th A                      | Is   |
| 25        | bias (4)   |              |                     | 01 58 <sup>29</sup>     |                       |                   |             |                           |      |
| 26        | comp       |              |                     |                         |                       |                   |             | Th A                      | Is   |

Spectr. Ter

Focus....

Spectr. Ter

Exp. Mir.

354

350

398

293

48

48



Spectr. Temp. .... Dome Temp./Hum. 13.4°C 50.7% Transparency Conditions Mostly Clear.....

Focus ..... 6.245 .....

Spectr. Temp. .... Dome Temp./Hum. .... *Cumulo*

60

| Exp. Mtr. | Seeing        | Ptg. Mag. | Sp.  | Inst. Echelle | Grating/Tilt      | Slit        | Emulsion | P.H. | Program  | Remarks     | Quality |
|-----------|---------------|-----------|------|---------------|-------------------|-------------|----------|------|----------|-------------|---------|
|           |               |           |      | 18.50         | 350 h/mm<br>15790 | 60μ<br>430μ | 6100A    | 1    |          |             |         |
|           |               |           |      |               |                   |             |          | 3    |          |             |         |
| 431       | 354           | 5"-8"     | 2    | F8 Ib         |                   |             |          | 4    | Polaris  | poor seeing | 6.3K    |
|           |               |           |      |               |                   |             |          | 3    |          |             |         |
| 305       | 350           |           | 2    | F8 Ib         |                   |             |          | 4    | Polaris  |             | 7.5K    |
|           |               |           |      |               |                   |             |          | 3    |          |             | 9.8K    |
| 401       | 398           |           | 2    | F8 Ib         |                   |             |          | 4    | Polaris  |             |         |
|           |               |           |      |               |                   |             |          | 3    |          |             |         |
|           |               |           |      |               |                   |             |          | 3    |          |             | 12.3K   |
| 595       | 293           |           | 2.77 | K2 III CNO.5  |                   |             |          | 5    | Std Vel. |             | 7K      |
|           |               |           |      |               |                   |             |          | 3    |          |             |         |
| 157       | 48            |           | 5.11 | F8 V          |                   |             |          | 3    | Std Vel  |             | 2K      |
| 157       | <del>48</del> |           |      |               |                   |             |          | 6    |          |             |         |
|           |               |           |      |               |                   |             |          | 3    |          |             |         |
|           |               |           |      |               |                   |             |          | 1    |          |             |         |
|           |               |           |      |               |                   |             |          | 3    |          |             |         |

pg #4 61

Date 1995 June 14/15 Observers [KK] Tn / STn

Emulsion Batches:

.....  
.....  
.....

| Plate No. | Object                      | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T.         | Ending Time<br>E.S.T. | Hour Angle<br>End             | Declination | Comparison<br>Type/Filter | Exp.                  |
|-----------|-----------------------------|--------------|---------------------|---------------------------------|-----------------------|-------------------------------|-------------|---------------------------|-----------------------|
| ce 09427  | HD 177724                   | 19 04 04     | 13 51 12            | 02 04 19                        |                       | 022 W                         |             |                           | 420                   |
| 28        | comp                        |              |                     |                                 |                       |                               |             | Th A                      | 1s                    |
| 29        | comp                        |              |                     |                                 |                       |                               |             | Th A                      | 1s                    |
| 30        | HD 197964 (B)               | 20 42 01     | 15 45 50            | 02 36 54<br><del>02 17 47</del> |                       | -0 51 E<br><del>-0 56 E</del> |             |                           | 945<br><del>955</del> |
| 31        | comp                        |              |                     |                                 |                       |                               |             | Th A                      | 1s                    |
| 32        | HD 197963 (F)               | 20 42 00     | 15 45 49            | 02 54 35                        |                       | -0 15 E                       |             |                           | 1191                  |
| 33        | comp                        |              |                     |                                 |                       |                               |             | Th A                      | 1s                    |
| 34        | HD 197964 (B)               | 20 42 01     | 15 45 50            | 03 16 07                        |                       | 0 0 W                         |             |                           | 863                   |
| 35        | comp                        |              |                     |                                 |                       |                               |             | Th A                      | 1s                    |
| 36        | bias (4)                    |              |                     | 03 32 39                        |                       |                               |             |                           |                       |
| 37-43     | flat (7)                    |              |                     | 03 35                           |                       | 00 04W                        | +16 07      | Tung                      | 2s                    |
| 44/45     | inboard / out board HARTMAN |              |                     |                                 |                       | 2 55W                         | 7/6         | Th A                      | <del>2s</del><br>1.5s |

Spectr. Te

Focus....  
Ccd  
Spectr. re

Exp. Mtr.

216

171  
22

85

156

12



Spectr. Temp. .... Dome Temp./Hum.  $13.0^{\circ}\text{C}$  ...  $54.5\%$  H Transparency Conditions ... mainly; clean .....

Focus .....  $0.245$  .....

<sup>CCD</sup>  
Spectr. Temp.  $-101.8^{\circ}\text{C}$  .... Dome Temp./Hum.  $12.7^{\circ}\text{C}$  ...  $57.6\%$  H

62

slamsda

| Exp. Mtr.          | Seeing | Ptg. Mag. | Sp.              | Inst. Echelle | Grating/Tilt      | Slit                  | Emulsion | P.H. | Program                                                                   | Remarks                 | Quality |
|--------------------|--------|-----------|------------------|---------------|-------------------|-----------------------|----------|------|---------------------------------------------------------------------------|-------------------------|---------|
| 920<br>216         |        | 2.99      | A0V <sub>n</sub> | 18.50         | 300 h/mm<br>15790 | 60 $\mu$<br>400 $\mu$ | 6100 A   | 2    | Std Vel                                                                   |                         | 3.4K    |
|                    |        |           |                  |               |                   | 400 $\mu$ H = 0.225   |          | 3    |                                                                           |                         |         |
|                    |        |           |                  |               |                   |                       |          | 3    |                                                                           |                         |         |
| 123 <sup>171</sup> | 5"     | 4.5       | K1 IV            |               |                   |                       |          | 5    |                                                                           | Brighter • East of pair | 4.6K    |
|                    |        |           |                  |               |                   |                       |          | 3    |                                                                           |                         |         |
| 85                 |        | 5.5       | F7V              |               |                   |                       |          | 4    |                                                                           | Fainter • west of pair  | 2K      |
|                    |        |           |                  |               |                   |                       |          | 3    |                                                                           |                         |         |
| 156                |        | 4.5       | K1 IV            |               |                   |                       |          | 5    |                                                                           | Brighter • East of pair | 4.1K    |
|                    |        |           |                  |               |                   |                       |          | 1    |                                                                           |                         |         |
|                    |        |           |                  |               |                   |                       |          | 7    |                                                                           |                         | 15K     |
|                    |        |           |                  |               |                   | 600 $\mu$ H = 0.205   |          |      |                                                                           |                         |         |
| +12.6°C            |        |           | Exp              |               |                   | 400 $\mu$ H           |          | 1/2  | focus test 00 128 1024 81<br>(we had gone through idea temp for this set) |                         |         |
|                    |        |           |                  |               |                   |                       |          |      | All to Perssons only                                                      |                         |         |

pg #1

63

Date 1995 June 15/16 Observers Km / Smt

Emulsion Batches:

06.560. FILTER IN

STELLAR BEAM

| Plate No.  | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T.       | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|------------|------------------|--------------|---------------------|-------------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC33459/60 | INBOARD/OUTBOARD |              |                     | 23 00                         |                       |                   |             | FeAr<br>clear             | 1/2  |
| 61         | BIAS(4)          |              |                     | 23 40                         |                       |                   |             |                           |      |
| 62         | COMP             |              |                     |                               |                       |                   |             | FeAr<br>clear             | 1    |
| 63         | HD126327         | 14 19 42     | +26 11              | 23 44 12                      |                       | 2 40 W            |             |                           | 50   |
| 64         | COMP             |              |                     |                               |                       |                   |             | FeAr<br>clear             | 1    |
| 65         | COMP             |              |                     |                               |                       |                   |             | "                         | 1    |
| 66         | HD123782         | 14 04 33     | +49 55 50           | 23 52 18                      |                       | ~ 3 08 W          |             |                           | 30   |
| 67         | COMP             |              |                     |                               |                       |                   |             | "                         | 1    |
| 68         | COMP             |              |                     |                               |                       |                   |             | "                         | "    |
| 69         | HD141850         | 15 46 05     | +15 26 14           | 0 10 29<br><del>0 06 00</del> |                       | 01 41 W           |             |                           | 148  |
| 70         | COMP             |              |                     |                               |                       |                   |             | FeAr<br>clear             | 1    |
| 71         | COMP             |              |                     |                               |                       |                   |             | FeAr<br>clear             | 1    |
| 72         | HD188350         | 19 49 38     | +00 00 44           | 0 23 00                       |                       | 02 11 E           |             |                           | 124  |
| 73         | COMP             |              |                     |                               |                       |                   |             | "                         | 1    |
| 74         | COMP             |              |                     |                               |                       |                   |             | "                         | 1    |
| 75         | HD146051         | 16 09 06     | -03 26 13           | 0 34 51                       |                       | 01 40 W           |             |                           | 3    |



<sup>ced</sup>  
Spectr. Temp. .... -100.4°C ....

Dome Temp./Hum. 16.1°C / 50%  
FOCUS TEST

Transparency Conditions .. clear .....

Focus ..... 6.74 .....

Spectr. Temp. ....

Dome Temp./Hum. ....

445 0 50 1024 4 1 ccd int

64

| Exp. Mtr. | Seeing | Mag.        | Sp.              | Inst.       | Grating/<br>Tilt  | Slit | Emulsion                       | P.H. | Program       | Remarks                                                                                          | Quality |
|-----------|--------|-------------|------------------|-------------|-------------------|------|--------------------------------|------|---------------|--------------------------------------------------------------------------------------------------|---------|
| 1/2       |        |             |                  | CASS<br>CCD | 1502/mm<br>G=2553 | 230μ | 7500 Å<br>±5 Å<br>(very close) | 3/4  | FOCUS<br>TEST | re-normalized telescope after<br>focus test and attempt to find<br>star with bad encoder coords. |         |
| 1         |        |             |                  |             |                   |      |                                | 5    |               |                                                                                                  |         |
| 50        |        | 7.0<br>-9.1 | +M7.5<br>-M8     |             |                   |      |                                | 6    | Km            | saturated on a few attempts<br>before this one - trailed                                         | 14.5K   |
| 1         |        |             |                  |             |                   |      |                                | 7    |               |                                                                                                  |         |
| 1         |        |             |                  |             |                   |      |                                | 8    |               |                                                                                                  |         |
| 30        |        | 5.25        | M2IIIab          |             |                   |      |                                | 9    | Std. Vel.     |                                                                                                  | 14.8K   |
| 1         |        |             |                  |             |                   |      |                                | 10   |               |                                                                                                  |         |
| 4         |        |             |                  |             |                   |      |                                | 11   |               |                                                                                                  |         |
| 4         |        | 5.16~14.4   | M7IIIe<br>(Mira) |             |                   |      |                                | 12   |               | saturated on first attempt                                                                       |         |
| 1         |        |             |                  |             |                   |      |                                | 13   |               |                                                                                                  |         |
| 1         |        |             |                  |             |                   |      |                                | 14   |               |                                                                                                  |         |
| 124       |        | 5.61        | A0III            |             |                   |      |                                | 15   | flux std.     |                                                                                                  |         |
| 1         |        |             |                  |             |                   |      |                                | 16   |               |                                                                                                  |         |
| 1         |        |             |                  |             |                   |      |                                | 17   |               |                                                                                                  |         |
| 3         |        | 2.75        | M0.5II           |             |                   |      |                                | 18   |               |                                                                                                  |         |

pg # 2 65

Date 1995 June 15/16... Observers Km/Smt.....

Emulsion Batches:

OG 560 FILTER IN  
STELLAR BEAM.....

| Plate No. | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| cc 33476  | HD 146051 | 16 09 06     | -03 26 13           | 00:39 59                |                       | 01 44 W           |             |                           | 5    |
| 77        | comp      |              |                     |                         |                       |                   |             | FeAr<br>clear             | 1    |
| 78        | comp      |              |                     |                         |                       |                   |             | "                         | 1    |
| 79        | HD 167006 | 18 08 08     | +31 22 49           | 00:51:15                |                       | -01 40 E          |             |                           | 15   |
| 80        | comp      |              |                     |                         |                       |                   |             | "                         | 1    |
| 81        | comp      |              |                     |                         |                       |                   |             | "                         | 1    |
| 82        | HD 168720 | 18 16 04     | +21 55 08           | 01:00:10                |                       | -00 01 E          |             |                           | 19   |
| 83        | "         | "            | "                   | 01 01 44                |                       | +00 01 W          |             |                           | 19   |
| 84        | comp      |              |                     |                         |                       |                   |             | "                         | 1    |
| 85        | BIAS(4)   |              |                     | 01 05 40                |                       |                   |             |                           |      |
| 86        | comp      |              |                     |                         |                       |                   |             | "                         | 1    |
| 87        | HD 188350 | 19 49 37     | 00 00 44            | 01 13 15                |                       | -01 20 E          |             |                           | 102  |
| 88        | comp      |              |                     |                         |                       |                   |             | "                         | 1    |
| 89        | comp      |              |                     |                         |                       |                   |             | "                         | 1    |
| 90        | HD 172171 | 18 33 34     | 08 44 48            | 01 24 49                |                       | 0 08 W            |             |                           | 166  |
| 91        | COMP      |              |                     |                         |                       |                   |             | "                         | 1    |

CCP  
Spectr. Ten

Focus....

Spectr. Ter

Exp. Mr.

2500

520

530

530

536

530



COP  
 Spectr. Temp. - 99.7°C ..... Dome Temp./Hum. 15.6°C / 49.5% Transparency Conditions a little hazy down last fall moon rising  
 Focus 6.74 .....  
 Spectr. Temp. .... Dome Temp./Hum. .... FANS OFF (6)  
 445 0 50 1024 4 1 ccd hat

| Exp. Mtr.  | Seeing | V <sub>Re</sub> Mag. | Sp.                | Inst.       | Grating/<br>Tilt  | Slit | Emulsion        | P.H. | Program   | Remarks | Quality |
|------------|--------|----------------------|--------------------|-------------|-------------------|------|-----------------|------|-----------|---------|---------|
| 5<br>2500  |        | 2.75                 | M0.5 II            | CASS<br>CCD | 1502/mm<br>G=2553 | 230μ | 7500 Å<br>± 5 Å | 19   | Km        |         |         |
| 1          |        |                      |                    |             |                   |      |                 | 20   |           |         |         |
| 1          |        |                      |                    |             |                   |      |                 | 21   |           |         |         |
| 15<br>520  |        | 4.97                 | M3 II              |             |                   |      |                 | 22   |           |         |         |
| 1          |        |                      |                    |             |                   |      |                 | 23   |           |         |         |
| 1          |        |                      |                    |             |                   |      |                 | 24   |           |         |         |
| 19<br>530  |        | 4.96                 | M1 II              |             |                   |      |                 | 25   |           |         |         |
| 19<br>530  |        | 4.96                 | M1 II              |             |                   |      |                 | 26   |           |         |         |
| 1          |        |                      |                    |             |                   |      |                 | 27   |           |         |         |
| 1          |        |                      |                    |             |                   |      |                 | 1/2  |           |         |         |
| 1          |        |                      |                    |             |                   |      |                 | 28   |           |         |         |
| 102<br>536 |        | 5.61                 | A0 II              |             |                   |      |                 | 29   | FLUX Std. |         |         |
| 1          |        |                      |                    |             |                   |      |                 | 30   |           |         |         |
| 1          |        |                      |                    |             |                   |      |                 | 5    |           |         |         |
| 166<br>530 |        | 5.9<br>~ 9.2         | M6 III<br>+ K1 III |             |                   |      |                 | 6    |           |         | 145K    |
| 1          |        |                      |                    |             |                   |      |                 | 7    |           |         |         |

149 #3 67

Date 1995 June 15/16 Observers Km/Smt

Emulsion Batches:

06.560. FILTER IN  
STELLAR BEAM

| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T.                          | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp |
|-----------|----------|--------------|---------------------|--------------------------------------------------|-----------------------|-------------------|-------------|---------------------------|-----|
| CC33492   | COMP     |              |                     |                                                  |                       |                   |             | FeAr<br>clear             | 1   |
| 93        | HD177724 | 19 00 49     | +13 42 53           | 1 41 03                                          |                       | 0 05 E            |             |                           | 19  |
| 94        | COMP     |              |                     |                                                  |                       |                   |             | "                         | 1   |
| 95        | BIAS(4)  |              |                     | 1 45                                             |                       |                   |             |                           | —   |
| 96        | COMP     |              |                     |                                                  |                       |                   |             | "                         | 1   |
| 97        | HD177940 | 19 01 33     | +8 04 43            | <del>1 31</del><br><del>1 42 38</del><br>1 52 55 |                       | 0 06 W            |             |                           | 29  |
| 98        | COMP     |              |                     |                                                  |                       |                   |             | "                         | 1   |
| 99        | COMP     |              |                     |                                                  |                       |                   |             | "                         | 1   |
| CC33500   | HD181796 | 19 46 43     | +32 39 40           | 2 08 05                                          |                       | 0 23 E            |             |                           | 15  |
| 01        | COMP     |              |                     |                                                  |                       |                   |             | "                         | 1   |
| 02        | COMP     |              |                     |                                                  |                       |                   |             | "                         | 1   |
| 03        | HD188350 | 19 49 37     | +0 00 44            | 2 17 12                                          |                       | 0 16 E            |             |                           | 120 |
| 04        | COMP     |              |                     |                                                  |                       |                   |             | "                         | 1   |
| 05        | COMP     |              |                     |                                                  |                       |                   |             | "                         | 1   |
| 06        | HD179820 | 19 08 54     | +2 26               | 2 28 54                                          |                       | 0 38 W            |             |                           | 235 |
| 07        | COMP     |              |                     |                                                  |                       |                   |             | "                         | 1   |



Spectr. Temp. .... Dome Temp./Hum. 15.5°C / 49.5% Transparency Conditions a little hazy dome low still

Focus 6.74

FANS OFF full moon is up (68)

Spectr. Temp. ....

Dome Temp./Hum. ....

445 0 50 1024 4 1 ccd int

| Comparison<br>Filter Exp. | Exp. Mtr. | Seeing | Mag.<br>Mag. | Sp.              | Inst.       | Grating/<br>Tilt      | Slit       | Emulsion | P.H. | Program       | Remarks                                                | Quality |
|---------------------------|-----------|--------|--------------|------------------|-------------|-----------------------|------------|----------|------|---------------|--------------------------------------------------------|---------|
|                           |           |        |              |                  | Cass<br>CCD | 150 $\mu$ m<br>6-2553 | 23 $\mu$ m | 7500 Å   | 8    |               |                                                        |         |
| M                         | 900       |        | 2.99         | A0 Vn            |             |                       |            |          | 9    | Telluric Std. | moved star all over slit<br>then pulled off to readout |         |
| 1                         |           |        |              |                  |             |                       |            |          | 10   |               |                                                        |         |
| 1                         |           |        |              |                  |             |                       |            |          | 1/2  |               |                                                        |         |
| 1                         |           |        |              |                  |             |                       |            |          | 11   |               |                                                        |         |
| 235                       | 520       | 3"     | 5.5<br>~12.0 | M5c<br>~M9c      |             |                       |            |          | 12   | Km Mira       | moved it around on 3rd<br>attempt                      | ~16 K   |
| 1                         |           |        |              |                  |             |                       |            |          | 13   |               |                                                        |         |
| 1                         |           |        |              |                  |             |                       |            |          | 14   |               |                                                        |         |
| 15                        | ~1200     |        | 3.3~<br>14.2 | S6.2c<br>~S10.4c |             |                       |            |          | 15   | Km Mira       | many attempts to get one<br>peak across rows           |         |
| 1                         |           |        |              |                  |             |                       |            |          | 16   |               |                                                        |         |
| 1                         |           |        |              |                  |             |                       |            |          | 17   |               |                                                        |         |
| 120                       | 600       |        | 5.41         | A0 III           |             |                       |            |          | 18   | Flux Std.     |                                                        | ~8K     |
| 1                         |           |        |              |                  |             |                       |            |          | 19   |               |                                                        |         |
| 1                         |           |        |              |                  |             |                       |            |          | 20   |               |                                                        |         |
| 235                       | 520       |        | 9.2          | M6 III           |             |                       |            |          | 21   | Km            |                                                        |         |
| 1                         |           |        |              |                  |             |                       |            |          | 23   |               |                                                        |         |

pg #4

69

Date 1995 June 15/16 Observers Km / Smt

Emulsion Batches:

..06.562..FILTER..IN..

..STELLAR..BEAM.....

| Plate No.  | Object      | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T.                | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|------------|-------------|--------------|---------------------|----------------------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC3508     | COMP        |              |                     |                                        |                       |                   |             | FeAr<br>clear             | 1    |
| 09         | HD184313    | 19 28 48     | +5 15               | 2 39 29                                |                       | 0 26 W            |             |                           | 34   |
| 10         | COMP        |              |                     |                                        |                       |                   |             | "                         | 1    |
| 11         | BIAS(4)     |              |                     | 2 43                                   |                       |                   |             |                           | —    |
| 12         | COMP        |              |                     |                                        |                       |                   |             | "                         | 1    |
| 13         | HD196610    | 20 33 21     | +17 55              | 2 <sup>50 38</sup><br><del>48 46</del> |                       | 0 27 E            |             |                           | 20   |
| 14         | COMP        |              |                     |                                        |                       |                   |             | "                         | 1    |
| CG41022-25 | HD195047 x4 | 20 23 54     | +47 35              |                                        |                       | 0 01 E            |             |                           | .061 |
| 26/27      | " x2        |              |                     |                                        | 3 06                  | ↓                 | 86° Alt     | 1.0025<br>armuss          | .133 |
| CC3515     | COMP        |              |                     |                                        |                       |                   |             | FeAr<br>clear             | 1    |
| 16         | HD188350    | 19 49 37     | +0 00 44            | 3 14 34                                |                       | 0 41 W            |             |                           | 99   |
| 17         | COMP        |              |                     |                                        |                       |                   |             | "                         | 1    |
| 18         | COMP        |              |                     |                                        |                       |                   |             | "                         | 1    |
| 19         | HD214665    | 22 34 42     | 56 16 34            | 03 36 26                               |                       | -01 42 E          |             |                           | 13   |
| 20         | COMP        |              |                     |                                        |                       |                   |             | "                         | 1    |



Focus ..... 6:74 .....

Dome Temp./Hum. 15.2°C/49.5% @ seeing test

FANS OFF

4450 50 1024 4 1 (cd)nt

| Comparison<br>Filter | Exp     | Exp. Mtr.             | Seeing | V. Mag.<br>Mag. | Sp.             | Inst.         | Grating/<br>Tilt      | Slit                 | Emulsion          | P.H. | Program        | Remarks                                                 | Quality |
|----------------------|---------|-----------------------|--------|-----------------|-----------------|---------------|-----------------------|----------------------|-------------------|------|----------------|---------------------------------------------------------|---------|
|                      | 1       |                       |        |                 |                 | CASS<br>CCD   | 150 $\mu$ m<br>G=2553 | 230 $\mu$ m          | 7500 $\text{\AA}$ | 24   |                |                                                         |         |
|                      | 3d      | 500                   |        | 6.3<br>-6.9     | M5<br>+M5.5 III |               |                       |                      |                   | 25   | Km             | not saturated though                                    | ~16K    |
|                      | 1       |                       |        |                 |                 |               |                       |                      |                   | 27   |                |                                                         |         |
|                      | -       |                       |        |                 |                 |               |                       |                      |                   | 1    |                |                                                         |         |
|                      | 1       |                       |        |                 |                 |               |                       |                      |                   | 28   |                |                                                         |         |
|                      | 20      | ~700                  |        | 6.3<br>var      | +M6 III         |               |                       |                      |                   | 29   | Km             | moved it around.                                        | 10K     |
|                      | 1       |                       |        |                 |                 |               |                       |                      |                   | 36   |                |                                                         |         |
|                      | 0.06"   |                       | 3"     | 7.9             | G5 IV           | EEV CCD<br>TV |                       | above<br>230 $\mu$ m |                   | -    | SEEING<br>TEST | Done NW, no wind, clear<br>Moon is @ meridian & bright! |         |
|                      | 5<br>MS |                       |        |                 | "               | GUIDER        |                       |                      |                   | -    |                | 60% catwalk humidity                                    |         |
|                      | 1       |                       |        |                 |                 | CASS<br>CCD   |                       |                      |                   | 17   |                |                                                         |         |
|                      | 0.09    | 539                   |        | 5.61            | A0 III          |               |                       |                      |                   | 18   | Flux Std.      |                                                         |         |
|                      | 1       |                       |        |                 |                 |               |                       |                      |                   | 19   |                |                                                         |         |
|                      | 1       |                       |        |                 |                 |               |                       |                      |                   | 20   |                |                                                         |         |
|                      | 0.13"   | 440<br><del>530</del> |        | 5.5:            | M4+ II          |               |                       |                      |                   | 21   |                | first exp. saturated                                    |         |
|                      | 1       |                       |        |                 |                 |               |                       |                      |                   | 23   |                |                                                         |         |





Spectr. Temp. ....

Dome Temp./Hum. ....

Transparency Conditions *clear, bright moon, sun...*  
*coming up → bright in NE*

72

[illegible]

P1 #1 (73)

Date 1995 June 16/17 Observers Bin / Smt

Emulsion Batches:

.....  
.....  
.....

| Plate No.  | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End             | Declination | Comparison<br>Type/Filter | Exp.  |
|------------|------------------|--------------|---------------------|-------------------------|-----------------------|-------------------------------|-------------|---------------------------|-------|
| CC33536/37 | INBOARD/OUTBOARD |              |                     |                         |                       |                               |             | FeNe<br>clear             | 30/45 |
| 38         | BIAS(4)          |              |                     | 21 34                   |                       |                               |             |                           | —     |
| CG41028-31 | HD135891 x4      | 15 12 30     | +37 26              |                         |                       |                               |             |                           | .067  |
| 32/33      | " x2             |              |                     |                         | 21 51                 | 0 03 E                        | 83° Alt     | 1.0071<br>airmass         | .133  |
| CC33539    | COMP             |              |                     |                         |                       |                               |             | FeAr<br>clear             | 90    |
| 40         | SKY              |              |                     | 22 01 06                |                       | 0 <sup>h</sup> 0 <sup>m</sup> | +44°        |                           | 1800  |
| 41         | SKY              |              |                     | 22 32 41                |                       | "                             | "           |                           | 1800  |
| 42         | SKY              |              |                     | 23 03 02                |                       | "                             | "           |                           | 1800  |
| 43         | COMP             |              |                     |                         |                       |                               |             | FeAr<br>clear             | 90    |
| 44         | BIAS(4)          |              |                     | 23 43                   |                       |                               |             |                           | —     |
| 45-47      | FLAT x3          |              |                     |                         |                       |                               |             | Fung<br>clear             | 4     |
| 48/49      | INBOARD/OUTBOARD |              |                     |                         |                       |                               |             | FeNe<br>clear             | 20/40 |
| 50         | BIAS(4)          |              |                     | 0 14                    |                       |                               |             |                           | —     |
| 51         | COMP             |              |                     |                         |                       |                               |             | FeAr<br>clear             | 60    |
| 52         | SKY              |              |                     | 0 18 49                 |                       | 0 <sup>h</sup> 0 <sup>m</sup> | +44°        |                           | 1800  |



CCD  
 Spectr. Temp. .... -99.7°C ..... Dome Temp./Hum. 20.5°C/40.8%  
 @ FOCUS TEST Transparency Conditions ... fine, bit d. haze, hazy.  
 Focus ..... 6:68 .....  
 Spectr. Temp. .... Dome Temp./Hum. 19.9°C/41.8%  
 @ SEEING TEST N FAN ON ONLY (74)  
 410 0 50 1024 4 1 ccdstat

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst.                   | Grating/Tilt        | Slit          | Emulsion                             | P.H.  | Program        | Remarks                                                                               | Quality           |
|-----------|--------|-----------|-----|-------------------------|---------------------|---------------|--------------------------------------|-------|----------------|---------------------------------------------------------------------------------------|-------------------|
|           |        |           |     | CASS<br>CCD             | 1800 l/mm<br>G=4980 | 306μ          | 5070 Å                               | 3/4   | FOCUS<br>TEST  |                                                                                       |                   |
|           |        |           |     |                         |                     |               |                                      | 1     |                |                                                                                       |                   |
|           | 2"     | 7.08      | F8V | EEV CCD<br>TV<br>GUIDER |                     | about<br>306μ |                                      | —     | SEEING<br>TEST | Dome SW, no wind, hazy,<br>S fan just turned off before<br>setting of star,           |                   |
|           |        |           |     |                         |                     |               |                                      | —     | "              |                                                                                       |                   |
|           |        |           |     | CASS<br>CCD             | 1800 l/mm<br>G=4980 | 306μ          | 5070 Å                               | 5     |                | Dome <del>SW</del> just slightly N<br>increasing haze of W                            |                   |
| 165       |        |           |     |                         |                     |               |                                      | 6     | BIn            |                                                                                       |                   |
|           |        |           |     |                         |                     |               |                                      | 7     | "              | Moon rising but shrouded by                                                           |                   |
| 365       |        |           |     |                         |                     |               |                                      | 8     | "              | thick haze → cloud.                                                                   |                   |
|           |        |           |     |                         |                     |               |                                      | 9     |                |                                                                                       |                   |
|           |        |           |     |                         |                     |               |                                      | 1     |                |                                                                                       |                   |
|           |        |           |     |                         |                     |               |                                      | 10    |                |                                                                                       | 15.6 K<br>→ 16.0K |
|           |        |           |     | CASS<br>CCD             | 1800 l/mm<br>G=4851 | 306μ          | <del>4882 Å</del><br>4882 Å<br>± 2 Å | 11/12 | FOCUS<br>TEST  | in focus still. T=18.8°C                                                              |                   |
|           |        |           |     |                         |                     |               |                                      | 1     |                |                                                                                       |                   |
|           |        |           |     |                         |                     |               |                                      | 13    |                |                                                                                       |                   |
| 144       |        |           |     |                         |                     |               |                                      | 14    |                | still thick haze → thinning<br>no features blue of the overlap<br>feature at red end. |                   |

pg #2

June 16/17

75

Date 1995.

## Observers

Bln / Smt

### Emulsion Batches:

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.....

.....

[illegible]



410 0 50 1024 4 1 credit

76

son  
Exp.

pg #1

(77)

Date 1995 June 18/19 Observers Km/Smt

Emulsion Batches:

06.560 IN STELLAR.

R.60 IN COMP

| Plate No.   | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T.                 | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-------------|----------------------|--------------|---------------------|-----------------------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC 33560/61 | INBOARD/<br>OUTBOARD |              |                     |                                         |                       |                   |             | Fetr<br>clear             | 1/2  |
| 62          | BIAS(4)              |              |                     | 22 07                                   |                       |                   |             |                           | —    |
| 63          | COMP                 |              |                     |                                         |                       |                   |             | "                         | 1    |
| 64          | HD 129956            | 14 40 25     | +1 08 22            | 22 09 57                                |                       | 0 58 W            |             |                           | 127  |
| 65          | COMP                 |              |                     |                                         |                       |                   |             | "                         | 1    |
| 66          | COMP                 |              |                     |                                         |                       |                   |             | "                         | 1    |
| 67          | HD 108849            | 12 25 18     | + 4 58 00           | 22 30 47<br><del>22 22 02</del>         |                       | 3 33 W            |             |                           | 80   |
| 68          | COMP                 |              |                     |                                         |                       |                   |             | "                         | 1    |
| 69          | comp                 |              |                     |                                         |                       |                   |             |                           | 1    |
| 70          | HD 129956            | 14 40 25     | +1 08 22            | 23 <sup>40 26</sup><br><del>34 33</del> |                       | ~ 2 40 W          |             |                           | 200  |
| 71          | comp                 |              |                     |                                         |                       |                   |             | "                         | 1    |
| 72          | BIAS(4)              |              |                     | 23 47                                   |                       |                   |             |                           | —    |
| 73          | comp                 |              |                     |                                         |                       |                   |             | "                         | 1    |
| 74          | HD 123782            | 14 08 07     | + 49 28 46          | 23 57 02                                |                       | 3 21 W            |             |                           | 90   |
| 75          | COMP                 |              |                     |                                         |                       |                   |             | "                         | 1    |



<sup>CCD</sup>  
Spectr. Temp. ... -100 °C .....

Dome Temp./Hum. 25.0°C / 61.5%  
@ FOCUS TEST

Transparency Conditions .. hazy, thin cloud .....

Focus ..... 6.62 .....

BOTH FANS ON

Spectr. Temp. ....

Dome Temp./Hum. ....

(78)

Comparison  
ter Exp.

1/2

-

1

127

1

1

80

1

1

200

1

-

1

90

1

| Exp. Mtr.              | Seeing | Ptg. Mag.            | Sp.       | Inst.       | Grating/Tilt        | Slit | Emulsion        | P.H.                                   | Program               | Remarks                                                            | Quality |
|------------------------|--------|----------------------|-----------|-------------|---------------------|------|-----------------|----------------------------------------|-----------------------|--------------------------------------------------------------------|---------|
|                        |        |                      |           | CASS<br>CCD | 150 lines<br>G=2556 | 230μ | 7474 Å<br>± 3 Å | 3/4<br>1<br>5<br>6                     | FOCUS<br>TEST         | 445 0 50 1024 4 1 ccd flat<br>430 0 50 1024 4 1 ccd flat           |         |
| 550                    | 2"     | 5.69 <sup>V</sup>    | B1.5V     |             |                     |      |                 | 7<br>8<br>9                            | Km <del>Std</del> Std |                                                                    | ~5K     |
| 380                    | 4"     | 7.1-8.7 <sup>V</sup> | M7-III    |             |                     |      |                 | 10<br>11<br>12<br>13<br>14<br>15<br>16 | Km                    | moved star around<br>lost dec S motion (slow)<br>became bad seeing | 8.1K    |
| 704<br><del>1030</del> |        |                      |           |             |                     |      |                 |                                        |                       |                                                                    |         |
| 400                    | 3"     | 5.25 <sup>V</sup>    | M2 III ab |             |                     |      |                 |                                        | Std Vel.              |                                                                    | 10K     |

pg #2

79

Date 1995 June 18/19.

Observers Km/Smt

Emulsion Batches:

06.560 FILTER IN STELLAR  
R 60 " " COMP

| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC33576   | COMP     |              |                     |                         |                       |                   |             | Fed<br>clear              | 1    |
| 77        | HD141477 | 15 44 14     | +18 27 01           | 0 07 39                 |                       | 151 W             |             |                           | 69   |
| 78        | COMP     |              |                     |                         |                       |                   |             | "                         | 1    |
| 79        | COMP     |              |                     |                         |                       |                   |             | "                         | 1    |
| 80        | HD151061 | 16 39 54     | -2 54               | 0 17 55                 |                       | 1 06 W            |             |                           | 95   |
| 81        | COMP     |              |                     |                         |                       |                   |             | "                         | 1    |
| 82        | COMP     |              |                     |                         |                       |                   |             | "                         | 1    |
| 83        | HD154143 | 16 58 33     | +14 14 09           | 0 28 34                 |                       | 0 59 W            |             |                           | 168  |
| 84        | COMP     |              |                     |                         |                       |                   |             | "                         | 1    |
| 85        | COMP     |              |                     |                         |                       |                   |             | "                         | 1    |
| 86        | HD156014 | 17 10 05     | +14 30 15           |                         |                       | 01 01 W           |             |                           | 20   |
| 87        | "        | "            | "                   | 0 43 37                 |                       | ↓                 |             |                           | 20   |
| 88        | COMP     |              |                     |                         |                       |                   |             | "                         | 1    |
| 89        | BIAS(4)  |              |                     | 0 47                    |                       |                   |             |                           | -    |
| 90        | COMP     |              |                     |                         |                       |                   |             | "                         | 1    |



Spectr. Temp. ... 101.5°C ...

Dome Temp./Hum. 24.1°C/62.2%

Transparency Conditions 47m cloud

Focus ..... 6.62 .....

FANS OFF, OOPS

Spectr. Temp. ....

Dome Temp./Hum. ....

430 0 50 1024 4 1 ccd/fat

| Exp. Mtr.              | Seeing | Ptg. Mag.   | Sp.               | Inst.       | Grating/Tilt     | Slit | Emulsion | P.H. | Program | Remarks                                            | Quality |
|------------------------|--------|-------------|-------------------|-------------|------------------|------|----------|------|---------|----------------------------------------------------|---------|
|                        |        |             |                   | CASS<br>CCD | 1502/m<br>G=2556 | 230μ | 7474A    | 17   |         |                                                    |         |
| 460                    |        | V<br>4.10   | M0.5<br>IIab      |             |                  |      |          | 18   | Km      |                                                    | 10K     |
|                        |        |             |                   |             |                  |      |          | 19   |         |                                                    |         |
|                        |        |             |                   |             |                  |      |          | 20   |         |                                                    |         |
| 450                    |        | V<br>7.25   | M5III<br>25,5IIIb |             |                  |      |          | 21   | Km      |                                                    | 13.5K   |
|                        |        |             |                   |             |                  |      |          | 22   |         |                                                    |         |
|                        |        |             |                   |             |                  |      |          | 23   |         |                                                    |         |
| 400                    | 3"     | V<br>4.98   | M3-III            |             |                  |      |          | 24   | Km      | Thicker cloud here                                 | 10K     |
|                        |        |             |                   |             |                  |      |          | 25   |         |                                                    |         |
|                        |        |             |                   |             |                  |      |          | 26   |         |                                                    |         |
| 1200<br><del>450</del> |        | 3.1-<br>3.9 | M5II<br>-II       |             |                  |      |          | 27   | Km      | Small companion to E on slit<br>moved star around. | ~16K    |
| 200                    |        | "           | "                 |             |                  |      |          | 28   |         | took companion off slit                            |         |
|                        |        |             |                   |             |                  |      |          | 29   |         |                                                    |         |
|                        |        |             |                   |             |                  |      |          | 1    |         |                                                    |         |
|                        |        |             |                   |             |                  |      |          | 30   |         |                                                    |         |

M#3 81

Date 1995 June 18/19 Observers Km./Smt

Emulsion Batches:

06.560 FILTER 14 STEUAR  
R60 " " COMP

| Plate No. | Object      | R.A.<br>1900 | Declination<br>1900         | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-------------|--------------|-----------------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC33591   | HD164058    | 17 54 17     | +51 30 02                   | 1 05 35                 |                       | 0 40 W            |             |                           | 10   |
| 92        | COMP        |              |                             |                         |                       |                   |             | FeAr<br>clear             | 1    |
| 93        | COMP        |              |                             |                         |                       |                   |             | "                         | 1    |
| 94        | HD175588    | 18 51 00     | +36 46 17                   | 1 22 11                 |                       | 0 01 E            |             |                           | 20   |
| 95        | COMP        |              |                             |                         |                       |                   |             | "                         | 1    |
| CG41034-7 | HD176844 x4 | 18 57 03     | +40 32 36                   |                         |                       |                   |             |                           | .067 |
| 38/39     | " x2        |              |                             |                         | 1 43 33               | 0 14 W            | 86° Alt     | arr mag<br>1.0025         | .133 |
| CC33596   | BIAS(4)     |              |                             | 1 48                    |                       |                   |             |                           | —    |
| 97        | COMP        |              |                             |                         |                       |                   |             | FeAr<br>clear             | 1    |
| 98        | HD142143    | 15 47 48     | +48 47                      | 1 58 33                 |                       | 3 39 W            |             |                           | 60   |
| 99        | COMP        |              |                             |                         |                       |                   |             | FeAr<br>clear             | 1    |
| CC33600   | COMP        |              |                             |                         |                       |                   |             | "                         | 1    |
| 01        | HD188350    | 19 49 37     | +0 00 44                    | 2 08 45                 |                       | -00 03 E          |             |                           | 724  |
| 02        | COMP        |              |                             |                         |                       |                   |             | "                         | 1    |
| 03        | COMP        |              |                             |                         |                       |                   |             | "                         | 1    |
| 04        | HD207076    | 21 46 36     | -02 12<br><del>+60 09</del> | 2 32 19                 |                       | -01 34 E          |             |                           | 515  |



Spectr. Temp.  $-100^{\circ}\text{C}$ Dome Temp./Hum.  $23.6^{\circ}\text{C}/62.2\%$ Transparency Conditions *partly cloudy* 82Focus  $6.62$ 

Spectr. Temp. ....

Dome Temp./Hum.  $23.4^{\circ}\text{C}/62.2\%$  @ seeing test

N DOME FAN ON

430 0 50 1024 4 1 100 f/8

| Exp. Mtr. | Seeing | Ptg. Mag.        | Sp.              | Inst.                | Grating/Tilt                  | Slit                       | Emulsion | P.H. | Program        | Remarks                                                                          | Quality |
|-----------|--------|------------------|------------------|----------------------|-------------------------------|----------------------------|----------|------|----------------|----------------------------------------------------------------------------------|---------|
| 1800      |        | V<br>2.23        | KSTIII           | CASS<br>CCD          | 150 $\mu\text{m}$<br>G = 2556 | 230 $\mu\text{m}$          | 7474A    | 31   | Km             | moved star around                                                                | 10K     |
|           |        |                  |                  |                      |                               |                            |          | 32   |                |                                                                                  |         |
|           |        |                  |                  |                      |                               |                            |          | 8    |                |                                                                                  |         |
| 880       | 3"     | V<br>4.30        | M4II             |                      |                               |                            |          | 9    | Km             | moved it around<br>another star was in finder<br>but probably not the right one. | 9K      |
|           |        |                  |                  |                      |                               |                            |          | 10   |                |                                                                                  |         |
|           | 3"     | V<br>6.65        | M2III            | EEV CCD<br>TV GUIDER |                               | above<br>230 $\mu\text{m}$ |          | —    | SEEING<br>TEST | Dome W, medium W wind<br>mostly cloudy now except<br>overhead.                   |         |
|           |        | 6.65             | "                | "                    |                               |                            |          | —    | "              |                                                                                  |         |
|           |        |                  |                  | CASS<br>CCD          |                               |                            |          | 1    |                |                                                                                  |         |
|           |        |                  |                  |                      |                               |                            |          | 11   |                |                                                                                  |         |
| 210       | 3"     | V<br>6.8<br>-8.5 | M6.5<br>-M7.5III |                      |                               |                            |          | 12   | Km             |                                                                                  | 9.5K    |
|           |        |                  |                  |                      |                               |                            |          | 13   |                |                                                                                  |         |
|           |        |                  |                  |                      |                               |                            |          | 14   |                |                                                                                  |         |
| 497       |        | 5.61             | A0II             |                      |                               |                            |          | 15   | sp. std *      |                                                                                  |         |
|           |        |                  |                  |                      |                               |                            |          | 16   |                |                                                                                  |         |
|           |        |                  |                  |                      |                               |                            |          | 17   |                |                                                                                  |         |
| 302       |        | 6.4-6.8          | M7 III           |                      |                               |                            |          | 18   |                |                                                                                  |         |

pg #41 83

Date 1995 June 18/19

Observers Km / Smt

Emulsion Batches:

06. 560. FILTER IN STELLAR  
R. 60. " " COMP

| Plate No. | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| cc33605   | comp      |              |                     |                         |                       |                   |             | FeAr<br>clear             | 1    |
| 06        | COMP      |              |                     |                         |                       |                   |             | "                         | 1    |
| 07        | HD 206330 | 21 36 16     | +42 49 11           | 2 54 13                 |                       | 1 14 E            |             |                           | 60   |
| 08        | COMP      |              |                     |                         |                       |                   |             | "                         | 1    |
| 09        | BIAS (4)  |              |                     | 2 58                    |                       |                   |             |                           | —    |
| 10        | COMP      |              |                     |                         |                       |                   |             | "                         | 1    |
| 11        | HD 188350 | 19 49 37     | +0 00 44            | 3 10 25                 |                       | 0 53 W            |             |                           | 360  |
| 12        | COMP      |              |                     |                         |                       |                   |             | "                         | 1    |
| 13        | COMP      |              |                     |                         |                       |                   |             | "                         | 1    |
| 14        | HD 206936 | 21 40 27     | +58 19 17           | 3 35 32                 |                       | 0 36 E            |             |                           | 10   |
| 15        | COMP      |              |                     |                         |                       |                   |             | "                         | 1    |
| 16        | COMP      |              |                     |                         |                       |                   |             | "                         | 1    |
| 17        | HD 202380 | 21 10 18     | +59 42              | 3 45 45                 |                       | 0 05 W            |             |                           | 60   |
| 18        | COMP      |              |                     |                         |                       |                   |             | "                         | 1    |
| 19        | BIAS (4)  |              |                     |                         |                       | 0 <sup>h</sup>    | +40°        |                           | —    |
| 20-28     | FLAT x9   |              |                     |                         |                       |                   |             | Tung<br>1/2 Ad            | 5    |



Spectr. Temp. .... -101.5°C... Dome Temp./Hum. 22.6°C/65.3%

Transparency Conditions . mostly cloudy . thin haze .

Focus ..... 61.62.....

FANS OFF

Spectr. Temp. .... Dome Temp./Hum. ....

430 0 50 1024 4 1 cad

84

Comparison  
Filter Exp.

| Exp. Mtr. | Seeing | Ptg. Mag.         | Sp.      | Inst.                         | Grating/Tilt        | Slit | Emulsion | P.H. | Program  | Remarks                     | Quality |
|-----------|--------|-------------------|----------|-------------------------------|---------------------|------|----------|------|----------|-----------------------------|---------|
|           |        |                   |          | PASS CCD                      | 150 R/min<br>G=2556 | 230μ | 7474 Å   | 19   |          |                             |         |
|           |        |                   |          |                               |                     |      |          | 20   |          |                             |         |
| 520       |        | 5.10 <sup>v</sup> | M1 IIIab |                               |                     |      |          | 21   | Km       |                             |         |
|           |        |                   |          |                               |                     |      |          | 22   |          |                             |         |
|           |        |                   |          |                               |                     |      |          | 1    |          |                             |         |
|           |        |                   |          |                               |                     |      |          | 23   |          |                             |         |
| 1000      | 5"     | 5.61 <sup>v</sup> | A0 III   |                               |                     |      |          | 24   | Sp. Std. | Seeing getting bad.         | 12.5K   |
|           |        |                   |          |                               |                     |      |          | 25   |          |                             |         |
|           |        |                   |          |                               |                     |      |          | 26   |          |                             |         |
| 2000      |        | 4.08 <sup>v</sup> | M2 Ia    |                               |                     |      |          | 27   | Km       |                             | 10K     |
|           |        |                   |          |                               |                     |      |          | 29   |          |                             |         |
|           |        |                   |          |                               |                     |      |          | 30   |          |                             |         |
| 520       |        | 7.0 <sup>v</sup>  | M2 Ib    |                               |                     |      |          | 31   | Km       | sky getting bright.         | 15K     |
|           |        |                   |          |                               |                     |      |          | 32   |          |                             |         |
|           |        |                   |          | All backed up to Persens ONLY |                     |      |          | 1    |          |                             |         |
|           |        |                   |          |                               |                     |      |          | 2    |          | * 06560 FILTER IN FOR FLATS | 13.5K   |

p1 #1 (85) Tues/Wed

Date 1995 June 20/21 Observers [KK] Th./Smt.....

Emulsion Batches:

30 gain

| Plate No.              | Object           | R.A.<br>1900                            | Declination<br>1900                      | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|------------------------|------------------|-----------------------------------------|------------------------------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| cc336 <sup>29/30</sup> | inboard/outboard |                                         |                                          |                         |                       | 00 0              | +46°        | FeNe<br>Clear             | 15/30 |
| 31                     | BIAS(4)          |                                         |                                          | 21 05                   |                       |                   |             |                           | —     |
| 32                     | Comp             |                                         |                                          |                         |                       |                   |             | FeNe<br>clear             | 20    |
| 33                     | HD125162         | 14 <sup>12 35</sup><br><del>14 27</del> | +46 <sup>32 51</sup><br><del>14 00</del> | 21 07 50                |                       | 0 39 W            |             |                           | 445   |
| 34                     | COMP             |                                         |                                          |                         |                       |                   |             | "                         | 20    |
| 35                     | COMP             |                                         |                                          |                         |                       |                   |             | "                         | 20    |
| 36                     | HD125161         | 14 12 37                                | +51 49 42                                | 21 22 23                |                       | 0 58 W            |             |                           | 850   |
| 37                     | COMP             |                                         |                                          |                         |                       |                   |             | "                         | 20    |
| 38                     | BIAS(4)          |                                         |                                          | 21 39                   |                       |                   |             |                           | —     |
| 39                     | Comp             |                                         |                                          |                         |                       |                   |             | "                         | 20    |
| 40                     | HD106251         | 12 0820                                 | +10 49 08                                | 21 47 24                |                       | 3 33 W            |             |                           | 1236  |
| 41                     | Comp             |                                         |                                          |                         |                       |                   |             | FeNe<br>Clear             | 20    |
| 42                     | Comp             |                                         |                                          |                         |                       |                   |             |                           |       |
| 43                     | HD106591         | 12 1029                                 | +57 35 18                                | 22 15 42                |                       | 3 42 W            |             |                           | 218   |
| 44                     | Comp             |                                         |                                          |                         |                       |                   |             | FeNe<br>Clear             | 20    |

Exp. Mir.

Focus.....

Spectr. Tem.

Exp. Mir.

B639

Filter

OK

OK

OK

OK



Spectr. Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $21.7^{\circ}\text{C}$  ...  $49.4\%$  Transparency Conditions ... Hazy slightly improving 86  
 Focus  $6.70$  .....  
 Spectr. Temp. .... Dome Temp./Hum.  $20.7^{\circ}\text{C}$  ...  $50.8\%$   $30\text{ C gain}$   
 $\lambda$  Lambda 430 0 50 1024 4 1 cadat

| Exp. Mtr.   | Seeing | Ptg. Mag. | Sp. | Inst.      | Grating/Tilt       | Slit | Emulsion | P.H. | Program    | Remarks                            | ADD Quality |
|-------------|--------|-----------|-----|------------|--------------------|------|----------|------|------------|------------------------------------|-------------|
| BG39 Filter |        |           |     | CAS<br>LCD | 600nm/mm<br>G=2640 | 230u | 4150A    | 3/4  | focus test | Set cool but T will drop           |             |
|             |        |           |     |            |                    |      |          | 1    |            | CSS 386 CLOCK IS<br>>10 SEC FASTER |             |
|             |        |           |     |            |                    |      |          | 5    |            | <del>FAST</del> AHEAD OF WWV       | 2.1K        |
| 10 K        | 4.5"   | 4.25      | A0P |            |                    |      |          | 6    | KK A*      |                                    | 10.5K       |
|             |        |           |     |            |                    |      |          | 7    |            |                                    |             |
|             |        |           |     |            |                    |      |          | 8    |            |                                    |             |
| 10.8K       | 4"     | 4.75      | A7V |            |                    |      |          | 9    | KK A*      |                                    | 12.5K       |
|             |        |           |     |            |                    |      |          | 10   |            |                                    |             |
|             |        |           |     |            |                    |      |          | 1    |            |                                    |             |
|             |        |           |     |            |                    |      |          | 11   |            |                                    |             |
| 4.2K        | 4"     | 6.06      | A2m |            |                    |      |          | 12   | KK A*      |                                    | 13K         |
|             |        |           |     |            |                    |      |          | 13   |            |                                    |             |
|             |        |           |     |            |                    |      |          | 14   |            |                                    |             |
| 10K         | 8.5"   | 3.39      | A3V |            |                    |      |          | 15   | KK A*      |                                    | 13K         |
|             |        |           |     |            |                    |      |          | 16   |            |                                    | 2.2K        |





200  
Spectr. Temp. -100.5°C

Dome Temp./Hum. 20.4°C/51.4%

Transparency Conditions clear with haze

Focus 6.70

Spectr. Temp. ....

Dome Temp./Hum. ....

88  
430 0 50 1024 4 1 CCDAT

| Exp. Mir.       | Seeing | Ptg. Mag. | Sp.           | Inst.               | Grating/Tilt       | Slit          | <del>Position</del> | P.H. | Program         | Remarks                                 | Quality |
|-----------------|--------|-----------|---------------|---------------------|--------------------|---------------|---------------------|------|-----------------|-----------------------------------------|---------|
|                 | 5"     | G8V       | 6.66          | EEV CCD<br>TUGUIDER |                    | above<br>230μ |                     |      | Seeing tests    | Dome SW, lite ESE wind, haze on horizon |         |
|                 |        | ↗         |               |                     |                    |               |                     |      | "               | N FAN ON ONLY                           |         |
| 36 39<br>FILTER |        |           |               | CASS<br>CCD         | 600 81mm<br>G=2640 | 230μ          | 4150Å               | 1    |                 | CSS 386 CLOCK NOW 3 SEC<br>BEHIND WWV   |         |
|                 |        |           |               |                     |                    |               |                     | 17   |                 |                                         |         |
| 1585            | 4.5    | G8V       | 6.66          |                     |                    |               |                     | 18   | 120<br>Std. Vel |                                         | 1.7K    |
|                 |        |           |               |                     |                    |               |                     | 19   |                 |                                         |         |
|                 |        |           |               |                     |                    |               |                     | 20   |                 |                                         |         |
| 10.4K           |        | V<br>3.73 | A2m           |                     |                    |               |                     | 21   | KK A*           |                                         | 11K     |
|                 |        |           |               |                     |                    |               |                     | 22   |                 |                                         |         |
|                 |        |           |               |                     |                    |               |                     | 23   |                 |                                         |         |
| 10.7K           | 5"     | B<br>2.49 | A1V<br>(+A3V) |                     |                    |               |                     | 24   | KK A*           | can't resolve image into<br>A & BC      | 8K      |
|                 |        |           |               |                     |                    |               |                     | 25   |                 |                                         |         |
|                 |        |           |               |                     |                    |               |                     | 1    |                 |                                         |         |
|                 |        |           |               |                     |                    |               |                     | 26   |                 |                                         |         |
| 8.4K            | 6"     | B=        | A9V           |                     |                    |               |                     | 27   | KK A*           |                                         | 5K      |
|                 |        |           |               |                     |                    |               |                     | 28   |                 |                                         | 2K      |

Py # 89 Tues/Wed

Date 1995 June 20/21.. Observers [kk].Tn./Smt.....

Emulsion Batches:

30 gain

| Plate No. | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| cc 33659  | HD 157792 | 17 20 16     | -24 05 00           | 23 53 46                |                       | 0 26 W            |             |                           | 1206 |
| 60        | Comp      |              |                     |                         |                       |                   |             | FelNe<br>Clear            | 20   |
| 61        | Comp      |              |                     |                         |                       |                   |             | "                         | "    |
| 62        | HD 159561 | 17 30 18     | +12 37 58           | 00 20 53                |                       | 0 25 W            |             |                           | 1105 |
| 63        | Comp      |              |                     |                         |                       |                   |             | FelNe<br>Clear            | 20   |
| 64        | Comp      |              |                     |                         |                       |                   |             | "                         | "    |
| 65        | HD 156164 | 17 10 55     | +29 57 25           | 00 31 28                |                       | 0 58 W            |             |                           | 199  |
| 66        | Comp      |              |                     |                         |                       |                   |             | FelNe<br>Clear            | 20   |
| 67        | B115 (4)  |              |                     | 00 37                   |                       |                   |             |                           |      |
| 68        | Comp      |              |                     |                         |                       |                   |             | FelNe<br>Clear            | 20   |
| 69        | HD 165777 | 18 02 37     | +9 32 58            | 00 43 10                |                       | 0 20 W            |             |                           | 360  |
| 70        | COMP      |              |                     |                         |                       |                   |             | FelNe<br>Clear            | 20   |
| 71        | COMP      |              |                     |                         |                       |                   |             | "                         | 20   |
| 72        | HD 177724 | 19 00 49     | +13 42 53           | 0 57 55                 |                       | 0 26 E            |             |                           |      |
| 73        | COMP      |              |                     |                         |                       |                   |             | "                         | 20   |



MAX  
ADU

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp.   | Inst.    | Grating/Tilt      | Slit | Emulsion           | P.H. | Program | Remarks                                     | Quality |
|-----------|--------|-----------|-------|----------|-------------------|------|--------------------|------|---------|---------------------------------------------|---------|
| RG 39     |        |           |       |          |                   |      |                    |      |         |                                             |         |
| 9.9K      | 5"     | B<br>4.46 | A9V   | CASS CCD | 600W/mg<br>G=2690 | 230u | 4150A <sup>6</sup> | 27   | KK A*   | A repeat exposure                           | 7.5K    |
|           |        |           |       |          |                   |      |                    | 28   |         |                                             | 2.2K    |
|           |        |           |       |          |                   |      |                    | 29   |         |                                             |         |
| 12K       |        | B<br>2.23 | A5III |          |                   |      |                    | 30   | KK A*   |                                             | 10K     |
|           |        |           |       |          |                   |      |                    | 5    |         |                                             |         |
|           |        |           |       |          |                   |      |                    | 7    |         |                                             |         |
| 10K       |        | B<br>3.22 | A3IV  |          |                   |      |                    | 8    | KK A*   | Faint companion due west 10"                | 10K     |
|           |        |           |       |          |                   |      |                    | 10   |         |                                             | 2.1     |
|           |        |           |       |          |                   |      |                    | 1    |         |                                             |         |
|           |        |           |       |          |                   |      |                    | 11   |         |                                             |         |
| 10.7K     | 7"     | B<br>3.82 | A4V   |          |                   |      |                    | 12   | KK A*   | Seeing just went horribly for this exposure | 11K     |
|           |        |           |       |          |                   |      |                    | 13   |         |                                             |         |
|           |        |           |       |          |                   |      |                    | 14   |         |                                             |         |
| 11K       | 5"     | B<br>2.99 | A0Vn  |          |                   |      |                    | 15   | KK A*   |                                             | 13.4K   |

pg #4

(91)

Date 1995 June 20/21 Observers [KK] Tn / Smt .....

Emulsion Batches:

30 gain

| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| cc33674   | COMP     |              |                     |                         |                       |                   |             | FeNe<br>clear             | 20   |
| 75        | HD187642 | 19 45 54     | +8 36 15            |                         |                       | 1 03 E            |             |                           | 20   |
| 76        | COMP     |              |                     |                         |                       |                   |             | "                         | 20   |
| 77        | COMP     |              |                     |                         |                       |                   |             | "                         | 20   |
| 78        | HD172167 | 18 33 33     | +38 41 26           | 01 26 30                |                       |                   |             |                           | 10   |
| 79        | "        |              |                     | 01 21 56                |                       |                   |             |                           | 10   |
| 80        | "        |              |                     | 01 24 12                |                       | 0 26 W            |             |                           | 10   |
| 81        | COMP     |              |                     |                         |                       |                   |             | FeNe<br>clear             | 20   |
| 82        | BIAS(4)  |              |                     | 1 30                    |                       |                   |             |                           | -    |
| 83        | COMP     |              |                     |                         |                       |                   |             | "                         | 20   |
| 84        | HD182640 | 19 20 27     | +2 54 55            | 1 36 10                 |                       | 0 06 E            |             |                           | 240  |
| 85        | COMP     |              |                     |                         |                       |                   |             | "                         | 20s  |
| 86        | Comp     |              |                     |                         |                       |                   |             | "                         | "    |
| 87        | HD200499 | 20 58 43     | -20 15 01           | 02 04 44                |                       | 0 58 E            |             |                           | 1350 |
| 88        | Comp     |              |                     |                         |                       |                   |             | "                         | 20   |



Spectr. Temp.  $-100.^\circ\text{C}$  ..... Dome Temp./Hum.  $18.2^\circ\text{C}/55.0\%$  Transparency Conditions ... *clear* .....  
 Focus .....  $6.70$  .....  
 Spectr. Temp. .... Dome Temp./Hum. ....

92

430 0 50 1024 4 1 ccd fat

| Exp. Mtr. | Seeing | Ptg. Mag.            | Sp.    | Inst.       | Grating/Tilt                         | Slit      | Emission          | P.H. | Program | Remarks                                    | Quality |
|-----------|--------|----------------------|--------|-------------|--------------------------------------|-----------|-------------------|------|---------|--------------------------------------------|---------|
|           |        |                      |        | CASS<br>CCD | 600 $\text{\AA}/\text{mm}$<br>G=2640 | 230 $\mu$ | 4150 $\text{\AA}$ | 17   |         |                                            |         |
| 12.7K     |        | <sup>B</sup><br>0.99 | A7IV-V |             |                                      |           |                   | 18   | KK A*   | moved star around to spread out the signal | 7 K     |
|           |        |                      |        |             |                                      |           |                   | 19   |         |                                            |         |
|           |        |                      |        |             |                                      |           |                   | 20   |         |                                            |         |
| 13.7K     |        | <sup>B</sup><br>0.00 | A0V    |             |                                      |           |                   | 21   | KK Vega | see above remark                           | 6 K     |
| 17.7K     |        | "                    | "      |             |                                      |           |                   | 22   | KK "    | "                                          | 8.4K    |
| 13.0K     |        | "                    | "      |             |                                      |           |                   | 23   | KK "    | "                                          | 6.6K    |
|           |        |                      |        |             |                                      |           |                   | 25   |         |                                            |         |
|           |        |                      |        |             |                                      |           |                   | 1    |         |                                            |         |
|           |        |                      |        |             |                                      |           |                   | 26   |         |                                            |         |
| 9.3K      | 4"     | <sup>B</sup><br>3.68 | F0IV   |             |                                      |           |                   | 27   | KK A*?  | close enough to A-type to be called an A*  | 8.5K    |
|           |        |                      |        |             |                                      |           |                   | 28   |         |                                            |         |
|           |        |                      |        |             |                                      |           |                   | 28   |         |                                            |         |
| 7.5K      | 6"     | <sup>B</sup><br>4.98 | A5V    |             |                                      |           |                   | 29   | KK A*   |                                            | 7.0K    |
|           |        |                      |        |             |                                      |           |                   | 31   |         |                                            |         |

pg #5 93

Date 1995 June 20/21 Observers [KK] Tn / Smt

Emulsion Batches:

~~8~~ 30 c9ain

| Plate No. | Object                     | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| cc33689   | BIAS(4)                    |              |                     | 2 30                    |                       |                   |             |                           | —     |
| 90        | COMP                       |              |                     |                         |                       |                   |             | FeNe<br>clear             | 20    |
| 91        | HD201184                   | 21 02 50     | -21 35 44           | 2 39 29                 |                       | 0 23 E            |             |                           | 1560  |
| 92        | COMP                       |              |                     |                         |                       |                   |             | "                         | 20    |
| 93        | COMP                       |              |                     |                         |                       |                   |             | "                         | 20    |
| 94        | HD207098                   | 21 41 31     | -16 34 52           | 3 12 07                 |                       | 0 51 E            |             |                           | 300   |
| 95        | COMP                       |              |                     |                         |                       |                   |             | "                         | 20    |
| 96        | BIAS(4)                    |              |                     | 3 20                    |                       |                   |             |                           | —     |
| 97        | COMP                       |              |                     |                         |                       |                   |             | "                         | 20    |
| 98        | HD210418                   | 22 05 01     | +5 42 21            | 3 23 44                 |                       | 1 02 E            |             |                           | 280   |
| 99        | COMP                       |              |                     |                         |                       |                   |             | "                         | 20    |
| cc33700   | COMP                       |              |                     |                         |                       |                   |             | "                         | "     |
| 01        | HD212061                   | 22 16 30     | -1 53 29            | 3 33 58                 |                       | 1 02 E            |             |                           | 400   |
| 02        | COMP                       |              |                     |                         |                       |                   |             | "                         | 20    |
| 03-11     | FLAT x 9                   |              |                     |                         |                       | 0° 50' E          | -1° 30'     | Tung<br>clear             | 11    |
| 12/13     | Inboard / OUTBOARD HARTMAN |              |                     |                         |                       | 0 0               | +23°        | FeNe                      | 15/30 |

CCD  
Spectr. TeFocus.  
CCD  
Spectr. Te

Exp. Mtr.

5750

10.4K

0.7K

2K



CCD Spectr. Temp. ... -100..... Dome Temp./Hum. 17.5°C/53.7% Transparency Conditions ... clear, no more haze...

Focus ... 6.70.....

CCD Spectr. Temp. ... -101.6°C.....

Dome Temp./Hum. 17.0°C/53.7% @

FOCUS TEST

430 0 50 1024 4 1 ccdnat

94

mpanson  
er Exp.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp.       | Inst.          | Grating/Tilt             | Slit        | Emulsion          | P.H. | Program | Remarks                  | Quality          |
|-----------|--------|-----------|-----------|----------------|--------------------------|-------------|-------------------|------|---------|--------------------------|------------------|
| -         |        |           |           | CASS<br>CCD    | 600 $\mu$ m<br>6 = 26.40 | 230 $\mu$ m | 4150 $\text{\AA}$ | 1    |         |                          |                  |
| 20        |        |           |           |                |                          |             |                   | 5    |         |                          |                  |
| 1500      | 5750   | 6"        | 5.27      | A0V            |                          |             |                   | 6    | KK A*   |                          | 4.4K             |
| 20        |        |           |           |                |                          |             |                   | 7    |         |                          |                  |
| 20        |        |           |           |                |                          |             |                   | 10   |         |                          |                  |
| 300       | 10.4K  | >6"       | B<br>3.06 | A6m            |                          |             |                   | 11   | KK A*   |                          | 9.0K             |
| 20        |        |           |           |                |                          |             |                   | 12   |         |                          |                  |
| -         |        |           |           |                |                          |             |                   | 1    |         |                          |                  |
| 20        |        |           |           |                |                          |             |                   | 13   |         |                          |                  |
| 280       | 10.7K  |           | B<br>3.61 | A2V            |                          |             |                   | 14   | KK A*   | sky getting blue         | 13.0K            |
| 20        |        |           |           |                |                          |             |                   | 15   |         |                          |                  |
| "         |        |           |           |                |                          |             |                   | 17   |         |                          |                  |
| 400       | 11.2K  |           | B<br>3.78 | A0V            |                          |             |                   | 18   | KK A*   | sky getting bright.      | 13.4K            |
| 20        |        |           |           |                |                          |             |                   | 19   |         |                          |                  |
| 11        |        |           |           |                |                          |             |                   | 20   |         |                          | 13.5K<br>→ 13.6K |
| 150       |        | +16.9°C   |           | Set 6.70 still |                          |             |                   | 3/4  |         | went through ideal temp. |                  |

pg # 95 Wed / Thurs

Date 1995 June 21/22 Observers [kk] Tn / Smt

Emulsion Batches:

30 again

| Plate No.                          | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|------------------------------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC33 <del>7</del> <sup>14/15</sup> | INBOARD/<br>OUTBOARD |              |                     |                         |                       |                   |             | FeNe<br>clear             | 15/30 |
| 16                                 | Comp                 |              |                     |                         |                       |                   |             | FeNe<br>clear             | 20    |
| 17                                 | HD125162             | 14 12 35     | +46 32 51           | 20 50 01                |                       | 0 22 W            |             |                           | 386   |
| 18                                 | COMP                 |              |                     |                         |                       |                   |             | "                         | 20    |
| 19                                 | BIAS(4)              |              |                     | 20 59                   |                       |                   |             |                           | —     |
| 20                                 | COMP                 |              |                     |                         |                       |                   |             | "                         | 20    |
| 21                                 | HD102647             | 11 43 58     | +15 07 52           | 21 07 07                |                       | 3 02 W            |             |                           | 90    |
| 22                                 | COMP                 |              |                     |                         |                       |                   |             | "                         | 20    |
| 23                                 | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 24                                 | HD97603              | 11 08 47     | +21 04 18           | 21 15 24                |                       | 3 46 W            |             |                           | 154   |
| 25                                 | COMP                 |              |                     |                         |                       |                   |             | "                         | 20    |
| 26                                 | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 27                                 | HD87696              | 10 01 32     | +35 43 56           | 21 26 43                |                       | 5 18 W            |             |                           | 917   |
| 28                                 | COMP                 |              |                     |                         |                       |                   |             | "                         | 20    |
| 29                                 | BIAS(4)              |              |                     | 21 45                   |                       |                   |             |                           | —     |



Spectr. Temp. <sup>CCD</sup> -100°C ..... Dome Temp./Hum. +20.6°C... 45.28% Transparency Conditions Hazy.....

Focus <sup>4</sup> 6.70.....

Spectr. Temp. .... Dome Temp./Hum. ....

C Lambda

430 0 50 1024 4 1 ccd-f

96

| Exp. Mtr.       | Seeing | Ptg. Mag.            | Sp. | Inst.    | Grating/Tilt           | Slit | Emulsion | P.H. | Program    | Remarks      | Quality |
|-----------------|--------|----------------------|-----|----------|------------------------|------|----------|------|------------|--------------|---------|
| B6 39<br>FILTER |        |                      |     | CASS CCD | 600 l/mm (1)<br>G=2640 | 230μ | 4150A    | 3/4  | focus test | * fine still |         |
|                 |        |                      |     |          |                        |      |          | 5    |            |              |         |
| 9K              | 3"     | <sup>V</sup><br>4.25 | A0p |          |                        |      |          | 6    | KK A*      |              | 14.8K   |
|                 |        |                      |     |          |                        |      |          | 7    |            |              |         |
|                 |        |                      |     |          |                        |      |          | 1    |            |              |         |
|                 |        |                      |     |          |                        |      |          | 8    |            |              |         |
| 9.1K            |        | <sup>B</sup><br>2.23 | A3V |          |                        |      |          | 9    | KK A*      |              | 14.2K   |
|                 |        |                      |     |          |                        |      |          | 10   |            |              |         |
|                 |        |                      |     |          |                        |      |          | 11   |            |              |         |
| 10.9K           | 3"     | <sup>B</sup><br>2.68 | A4V |          |                        |      |          | 12   | KK A*      |              | 15.6K   |
|                 |        |                      |     |          |                        |      |          | 13   |            |              |         |
|                 |        |                      |     |          |                        |      |          | 14   |            |              |         |
| 10.0K           | 2"-3"  | <sup>B</sup><br>4.66 | A7V |          |                        |      |          | 15   | KK A*      |              | 13.0K   |
|                 |        |                      |     |          |                        |      |          | 16   |            |              |         |
|                 |        |                      |     |          |                        |      |          | 1    |            |              |         |

pg #2 (97) Wed / Thurs

Date 1995 June 21/22 Observers [KK] Tn / Smt

Emulsion Batches:

30 gain

| Plate No. | Object              | R.A.<br>1900        | Declination<br>1900  | Starting Time<br>E.S.T. | Ending Time<br>E.S.T.           | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|---------------------|---------------------|----------------------|-------------------------|---------------------------------|-------------------|-------------|---------------------------|------|
| CC33730   | COMP                |                     |                      |                         |                                 |                   |             | FeNe<br>clear             | 20   |
| 31        | HD118098            | 13 29 36            | -0 05 05             | 21 41 57                |                                 | 2 05 W            |             |                           | 420  |
| 32        | COMP                |                     |                      |                         |                                 |                   |             | "                         | 20   |
| 33        | COMP                |                     |                      |                         |                                 |                   |             | "                         | 20   |
|           | <del>HD130841</del> | <del>14 45 21</del> | <del>-15 37 34</del> | ABORTED                 | DUE TO SPEC CONTROLLER FAILURES |                   |             |                           |      |
| 34        | HD125162            | 14 12 35            | +46 32 51            | 22 24 40                |                                 | 1 56 W            |             |                           | 296  |
| 35        | Comp                |                     |                      |                         |                                 |                   |             |                           |      |
| 36        | BIAS(4)             |                     |                      | 22 31 57                |                                 |                   |             |                           |      |
| 37        | Comp                |                     |                      |                         |                                 |                   |             | FeNe<br>clear             | 205  |
| 38        | HD8890A             | 01 22 34            | +88 46 26            | 22 43 18                |                                 | 10 09 E           |             |                           | 775  |
| 39        | Comp                |                     |                      |                         |                                 |                   |             | FeNe<br>clear             | 205  |
| 40        | HD 8890 B           | "                   | "                    | 22 49 44                |                                 | 9 36 E            |             |                           | 1549 |
| 41        | Comp                |                     |                      |                         |                                 |                   |             | FeNe<br>clear             | 205  |
| 42        | HD 8890 H           | "                   | "                    | 23 19 45                |                                 | 9 32 E            |             |                           | 72   |
| 43        | Comp                |                     |                      |                         |                                 |                   |             | FeNe<br>clear             | 205  |
| 44        | BIAS(4)             |                     |                      | 23 23                   |                                 |                   |             |                           |      |

CCO  
Spectr. Te  
Focus .6  
Spectr. Te

Exp. Mtr.

B639

9.3K

8.2K

8.4K

9.3K

8.2K



CCD Spectr. Temp. ... -100.5°C ... Dome Temp./Hum. 119.8°C 46.9% H Transparency Conditions slightly hazy. (98)

Focus .. 6.70 ..

Spectr. Temp. .... Dome Temp./Hum. +19.0°C 48.0% H

430 0 50 1024 4 1 ccdint

| Exp. Mtr. | Seeing | Ptg. Mag.            | Sp. | Inst.   | Grating/Tilt       | Slit | Emulsion | P.H. | Program | Remarks                            | Quality |
|-----------|--------|----------------------|-----|---------|--------------------|------|----------|------|---------|------------------------------------|---------|
| 26 BG 39  |        |                      |     | CSS CCD | 600 l/mm<br>G=2640 | 230μ | 4150 Å   | 17   |         |                                    | MAX     |
| 420 9.3K  |        | <sup>B</sup><br>3.47 | A3V |         |                    |      |          | 18   | KK A*   |                                    | 11.8K   |
| 20        |        |                      |     |         |                    |      |          | 19   |         |                                    |         |
| 20        |        |                      |     |         |                    |      |          | 20   |         | spectr control failures            | 22K     |
| 241 8.2K  | 2"     | <sup>V</sup><br>4.25 | A0p |         |                    |      |          | 21   |         |                                    | 14.8    |
|           |        |                      |     |         |                    |      |          | 1    |         |                                    |         |
| 26s 8.4K  | 2"     |                      |     |         |                    |      |          | 22   |         |                                    | 22K     |
| 71s       |        |                      |     |         |                    |      |          | 23   | KK pgn  | POLARIS 24th column                | 12K     |
| 20s       |        |                      |     |         |                    |      |          | 24   |         |                                    |         |
| 15- 1750  | 2"     | ≈ 8                  |     |         |                    |      |          | 25   | KK pgn  | 20th column well separated from A* | 660     |
| 20        |        |                      |     |         |                    |      |          | 26   |         |                                    |         |
| 72 8.2K   |        |                      |     |         |                    |      |          | 23   |         | (centered on 19th column)          | 10K     |
| 2         |        |                      |     |         |                    |      |          | 27   |         |                                    | 23K     |
|           |        |                      |     |         |                    |      |          | 1    |         |                                    |         |

pg # 3

Wed / Thurs

(C9)

Date 1995 June 21/22 Observers [KK] Tn / Smt.....

Emulsion Batches:

30 c9am

| Plate No. | Object                     | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC33745   | Comp                       |              |                     |                         |                       |                   |             | Feltb<br>Clear            | 205  |
| 46        | HD172167                   | 18 33 33     | +38 41 26           | 23 32 14                |                       | 1 22 E            |             | "                         | 10   |
| 47        | COMP                       |              |                     |                         |                       |                   |             | "                         | 20   |
| 48        | COMP                       |              |                     |                         |                       |                   |             | "                         | "    |
| 49        | HD187691                   | 19 46 14     | +10 09 55           | 23 39 39                |                       | 2 12 E            |             |                           | 1003 |
| 50        | COMP                       |              |                     |                         |                       |                   |             | "                         | 20   |
| 51-59     | FLAT x 9                   |              |                     |                         |                       | 2 <sup>h</sup> E  | +10°        | Tung<br>clear             | 10   |
| 60        | BINS(4)                    |              |                     |                         |                       |                   |             |                           |      |
| 61/62     | inboard / outboard HURTMAN |              |                     |                         |                       | 90 c9am new       |             | Feltb<br>KAP              | 4/8  |
| 63        | COMP                       |              |                     |                         |                       |                   |             | "                         | 3    |
| 64        | HD187691                   | 19 46 14     | +10 09 55           | 00 31 46                |                       | 1 35 E            |             |                           | 72   |
| 65        | COMP                       |              |                     |                         |                       |                   |             | "                         | 3    |
| 66        | BINS(4)                    |              |                     |                         |                       |                   |             | "                         | "    |
| 67        | COMP                       |              |                     |                         |                       |                   |             | Feltb<br>KAP              | 3    |
| 68        | V361 Lyr                   | 19 02 29     | +46 58 42           | 1 34 02                 |                       | 0 45 W            |             |                           | 1800 |

CCO  
Spectr. Ter

Focus...

Spectr. Ter

Exp. Mir.

110K

80K

0-500

Beck

R60 filter

100

3



CCD  
Spectr. Temp. — 100.5 °C

Dome Temp./Hum. 18.5°C/49.5%

Transparency Conditions ... clear

Focus ... 6.70

30 c/gain  
Dome Temp./Hum. 18.1°C/51.5% @ Focus

(100)

Spectr. Temp. ....

TEST 430 0 50 1024 4 1 ccdint for 6400

| Comparison<br>Filter Exp | Exp. Mtr.                       | Seeing | Ptg.<br>Mag.            | Sp.            | Inst.       | Grating/<br>Tilt   | Slit | Emulsion | P.H. | Program       | Remarks                                      | Quality |
|--------------------------|---------------------------------|--------|-------------------------|----------------|-------------|--------------------|------|----------|------|---------------|----------------------------------------------|---------|
| 28                       |                                 |        |                         |                | CASS<br>CCD | 600 L/mm<br>G=2640 | 220µ | 4150Å    | 28   |               |                                              | 2.3K    |
| 10                       | 11.0K                           |        | 0.00                    | A0 V           |             |                    |      |          | 29   | KK Vega       | moved star around                            | 4.5K    |
| 20                       |                                 |        |                         |                |             |                    |      |          | 30   |               |                                              |         |
|                          |                                 |        |                         |                |             |                    |      |          | 5    |               |                                              |         |
| 1003                     | 8.0K                            | 3"     | 5.11                    | F8V            |             |                    |      |          | 6    | IAU Std Vel.  |                                              | 10.0K   |
| 20                       |                                 |        |                         |                |             |                    |      |          | 7    |               |                                              |         |
| 10                       |                                 |        |                         |                |             |                    |      |          | 2    |               |                                              | 13.3K   |
|                          |                                 |        |                         |                |             |                    |      |          | 1    |               |                                              |         |
| 4/8                      | OG 560 in Stellar<br>Beam       |        |                         |                | CASS<br>CCD | 830 L/mm<br>G=4209 | 306µ | 8450Å    | 3/4  | FOCUS<br>TEST | 280 0 50 1024 4 1 ccdint<br>5.11 6.70 (good) |         |
| 3                        | [R60 filter in Comparison Beam] |        |                         |                |             |                    |      |          | 5    |               |                                              |         |
| 22                       | 1000                            |        | 5.11                    | F8V            |             |                    |      |          | 6    | IAU Std Vel   |                                              | 4K      |
| 3                        |                                 |        |                         |                |             |                    |      |          | 7    |               |                                              | 8K      |
| 1                        |                                 |        |                         |                |             |                    |      |          | 8    |               |                                              | 0.5K    |
| 3                        |                                 |        |                         |                |             |                    |      |          | 9    |               |                                              |         |
| 120                      | 31                              |        | V=13.6<br>I=12.4<br>max | K1 V<br>+ K2 V |             |                    |      |          | 11   | Rei           | very weak, lots of sky                       |         |

pg#4 (101)

Date 1995 June 21/22... Observers [Rci] Tn./Smt.....

Emulsion Batches:

FILTERS AS BEFORE

90.....  
.....gain.....

| Plate No. | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T.                | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-----------|--------------|---------------------|----------------------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| cc 33769  | COMP      |              |                     |                                        |                       |                   |             | FoNe<br>Ap 1/2            | 3    |
| 70        | V361 Lyr  | 19 02 29     | +46 58 42           | 2 <sup>14 10</sup><br><del>21 15</del> |                       | 1 25 W            |             | FoNe<br>Ap 1/2            | 1800 |
| 71        | COMP      |              |                     |                                        |                       |                   |             | FoNe<br>Ap 1/2            | 3    |
| 72        | BIAS(4)   |              |                     | 2 48                                   |                       |                   |             |                           | -    |
| 73        | Comp      |              |                     |                                        |                       |                   |             | FoNe<br>A 1/2             | 3    |
| 74        | HD 293947 | 22 2954      | +26 05 00           | 2 54 37                                |                       | 1 47 E            |             |                           | 592  |
| 75        | Comp      |              |                     |                                        |                       |                   |             | FoNe<br>Ap 1/2            | 3    |
| 76        | Comp      |              |                     |                                        |                       |                   |             | "                         | "    |
| 77        | HD 177724 | 19 00 49     | +13 42 53           | 3 18 29                                |                       | 1 58 W            |             |                           | 61   |
| 78        | COMP      |              |                     |                                        |                       |                   |             | "                         | 3    |
| 79        | Comp      |              |                     |                                        |                       |                   |             | "                         | 3    |
| 80        | HD 205835 | 21 32 56     | +39 57 51           | 03 28 09                               |                       | 0 22 E            |             |                           | 230  |
| 81        | Comp      |              |                     |                                        |                       |                   |             | FoNe<br>Ap 1/2            | 3    |
| 82        | BIAS(4)   |              |                     | 03 36                                  |                       |                   |             |                           |      |



Spectr. Temp. ...  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum. ...  $16.8^{\circ}\text{C}/55.3\%$  Transparency Conditions ... *clear* ..... 102

Focus ...  $6.70$  .....

Spectr. Temp. .... Dome Temp./Hum. ...  $16.6^{\circ}\text{C}/56.8\%$  .....

280 0 50 1024 4 1 ccd/nt

| Exp. Mtr. | Seeing | Ptg. Mag.               | Sp.            | Inst.       | Grating/Tilt         | Slit      | Emulsion | P.H. | Program      | Remarks                     | Quality |
|-----------|--------|-------------------------|----------------|-------------|----------------------|-----------|----------|------|--------------|-----------------------------|---------|
|           |        |                         |                | CASS<br>CCD | 831 R/mm<br>G = 4209 | 300 $\mu$ | 8450 Å   | 13   |              |                             |         |
| 37        | ?      | V=13.6<br>I=12.4<br>max | KI V<br>+ K4 V |             |                      |           |          | 12   | Rci          | a little stronger than last |         |
|           |        |                         |                |             |                      |           |          | 14   |              |                             |         |
|           |        |                         |                |             |                      |           |          | 1    |              |                             |         |
|           |        |                         |                |             |                      |           |          | 17   |              |                             | 8.2k    |
| 2370 2'3" |        | V<br>7.54               | K4 III         |             |                      |           |          | 18   | Std/vel      |                             | 13.0X   |
|           |        |                         |                |             |                      |           |          | 19   |              |                             |         |
|           |        |                         |                |             |                      |           |          | 20   |              |                             |         |
| 3400      |        | V<br>2.99               | A0 Vann        |             |                      |           |          | 21   | Telluric Std |                             |         |
|           |        |                         |                |             |                      |           |          | 22   |              |                             |         |
|           |        |                         |                |             |                      |           |          | 26   |              |                             |         |
| 360 3'5"  |        | V<br>5.00               | A4             |             |                      |           |          | 27   | A5 (std use) |                             |         |
|           |        |                         |                |             |                      |           |          | 28   |              |                             |         |
|           |        |                         |                |             |                      |           |          | 1    |              |                             |         |

Date 1995 June 21/22 Observers [Rci] Tn / Smt

### Emulsion Batches:

FILTERS AS BEFORE.

90 again

[illegible]



Spectr. Temp. ....

Dome Temp./Hum.  $+16.2^{\circ}\text{C}$  57.6%  
14

Transparency Conditions *clear, bright sky*.....

280 0 50 1024 4 1 100 feet

2s

pg # 105 Thurs / Fri

Date 1995 June 22/23 Observers [Rm] Tn/Smt + Blh, Dbd, Bill Hedges

Emulsion Batches:

| Plate No.   | Object           | R.A.<br>1900       | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-------------|------------------|--------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 33796/97 | INBOARD/OUTBOARD |                    |                     |                         |                       |                   |             | FeAr<br>clear             | 50/60 |
| 98          | BIAS(4)          |                    |                     | 21 43                   |                       |                   |             |                           | —     |
| 99          | COMP             |                    |                     |                         |                       |                   |             | FeAr<br>clear             | 60    |
| CC 33800    | HD 149803        | 16 32 00           | + 29 56             | 21 51 08                |                       | 0 35 E            |             |                           | 1400  |
| 01          | COMP             |                    |                     |                         |                       |                   |             | "                         | 60    |
| CG 41046-49 | HD 144579 x4     | 16 01 30           | +39 24              |                         |                       |                   |             |                           | 1067  |
| 50/51       | " x2             |                    |                     |                         | 22 29                 | 0 10 W            | 85° Alt     | 1003F<br>airmass          | .133  |
| CC 33802    | COMP             |                    |                     |                         |                       |                   |             | FeAr<br>clear             | 60s   |
| 03          | HD 144579        | 16 01 30           | +39 24              | 22 34 07                |                       | 0 30 W            |             |                           | 880s  |
| 04          | Comp             |                    |                     | i                       |                       |                   |             | FeAr<br>clear             | 60s   |
| 05          | BIAS(4)          |                    |                     | 22 53                   |                       |                   |             |                           |       |
| 06          | Comp             |                    |                     |                         |                       |                   |             | FeAr<br>clear             | 60s   |
| 07          | Juno             | J 2000<br>17 44 44 | -04 14 50           | 23 14 50                |                       | 0.02 E            |             |                           | 2440  |
| 08          | Comp             |                    |                     |                         |                       |                   |             | FeAr<br>clear             | 60s   |
| 09          | BIAS(4)          |                    |                     | 23 59                   |                       |                   |             |                           | —     |



CCD Spectr. Temp. -100.5°C

Dome Temp./Hum. 22.0°C / 68.5%

Transparency Conditions clear → hazy!

Focus 6.67

@ FOCUS TEST

FANS ON

Spectr. Temp. 90.0 again

Dome Temp./Hum. 21.4°C / 70.3%

@ Seeing test

410 0 50 1024 4 1 CCD int

106

| Exp. Mtr.            | Seeing | Ptg. Mag. | Sp.  | Inst.                | Grating/Tilt         | Slit          | <del>Emulsion</del> | P.H. | Program                         | Remarks                                             | Quality   |
|----------------------|--------|-----------|------|----------------------|----------------------|---------------|---------------------|------|---------------------------------|-----------------------------------------------------|-----------|
| CG 560 FILTER        |        |           |      | C455 CCD             | 1800 lines<br>G=5940 | 306μ          | 6400 Å              | 3/4  | FOCUS TEST                      | * actually @ 6382 Å<br>set cool intentionally       |           |
|                      |        |           |      |                      |                      |               |                     | 1    |                                 |                                                     |           |
|                      |        |           |      |                      |                      |               |                     | 5    |                                 |                                                     |           |
| 681                  | 3"     | 8.40      | F7V  |                      |                      |               |                     | 6    | 14V Std. Vel.                   |                                                     | 1.5K      |
|                      |        |           |      |                      |                      |               |                     | 7    |                                 |                                                     |           |
| despite the headers. | 3"     | 6.45      | G8Vp | EEV CCD<br>TV GUIDER |                      | above<br>306μ |                     | -    | SEEING TEST                     | Dome W, no wind, hazy!<br>82% catwalk, okay seeing. |           |
|                      |        |           |      |                      |                      |               |                     | -    | "                               |                                                     |           |
|                      |        |           |      |                      |                      |               |                     | 8    |                                 |                                                     |           |
| 2,208                | 2.3"   | 6.45      | G8Vp |                      |                      |               |                     | 9    | 14V Std. Vel.                   |                                                     | 6K        |
|                      |        |           |      |                      |                      |               |                     | 10   |                                 |                                                     | 2.8K      |
|                      |        |           |      |                      |                      |               |                     | 1    |                                 |                                                     |           |
|                      |        |           |      |                      |                      |               |                     | 11   |                                 |                                                     |           |
| 436                  | 3"     | 10        | G2V  |                      |                      |               |                     | 12   | Asteroid. Near closest approach |                                                     | see above |
|                      |        |           |      |                      |                      |               |                     | 13   |                                 |                                                     |           |
|                      |        |           |      |                      |                      |               |                     | 1    |                                 |                                                     |           |

Pg #2 (107)

Date 1995 June 22/23... Observers [Rm.] Tn/Smt.....

Emulsion Batches:

.....  
.....  
.....

| Plate No. | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. | Exp. Mtr.      |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|----------------|
| CC 33810  | COMP      |              |                     |                         |                       |                   |             | FcAr<br>clear             | 60   | 5550<br>FILTER |
| 11        | HD 180583 | 19 11 59     | +27 45              | 0 05 32                 |                       | 1 01 E            |             |                           | 870  | 43/8           |
| 12        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |                |
| 13        | "         |              |                     |                         |                       |                   |             | "                         | 60   |                |
| 24        | HD 173297 | 18 39 20     | -20 45              | 0 30 14                 |                       | 0 08 W            |             |                           | 2143 | 1600           |
| 15        | Comp      |              |                     |                         |                       |                   |             | FcAr<br>clear             | 60s  |                |
| 16        | BIAS(4)   |              |                     | 01 09                   |                       |                   |             |                           | —    |                |
| 17        | Comp      |              |                     | 07                      |                       |                   |             | FcAr<br>clear             | 60s  |                |
| 18        | HD 331970 | 20 08 27     | 32 34 16            | 01 16 02                |                       | 0 19 E            |             |                           | 3016 | 1440           |
| 19        | Comp      |              |                     |                         |                       |                   |             | FcAr<br>clear             | 60s  |                |
| 20        | BIAS(4)   |              |                     | 02 10                   |                       |                   |             |                           | —    |                |
| 21        | Comp      |              |                     |                         |                       |                   |             | "                         | 60   |                |
| 22        | HD 214975 | 22 36 54     | +56 19              | 2 33 57                 |                       | 1 56 E            |             |                           | 1430 | 1700           |
| 23        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |                |
| 24        | BIAS(4)   |              |                     | 3 00                    |                       |                   |             |                           | —    |                |



Spectr. Temp. ... 100.6°C

Dome Temp./Hum. 20.5°C / 72.6%

Transparency Conditions ... hazy

Focus ... 6.67

Spectr. Temp. ....

Dome Temp./Hum. ....

410 0 50 1024 4 1 ccd font

(108)

| Exp. Mtr.        | Seeing | Ptg. Mag.      | Sp.         | Inst.       | Grating/Tilt       | Slit | Emulsion                     | P.H. | Program     | Remarks             | Quality |
|------------------|--------|----------------|-------------|-------------|--------------------|------|------------------------------|------|-------------|---------------------|---------|
| 06 560<br>FILTER |        |                |             | CASS<br>CCD | 1800.21m<br>G=5940 | 30um | 6400 Å                       | 14   |             |                     |         |
| 870<br>4318      | 3"     | <V><br>6.19    | F6I<br>-IIb |             |                    |      | region<br>6382 Å<br>actually | 15   | Rm V473 Lyr |                     | 11.5K   |
|                  |        |                |             |             |                    |      |                              | 16   |             |                     |         |
|                  |        |                |             |             |                    |      |                              | 17   |             |                     | 29K     |
| 1600             | 3.4"   | <V><br>7.48    | ~G0Ib       |             |                    |      |                              | 18   | Rm V350     | very hazy down here | 3K      |
|                  |        |                |             |             |                    |      |                              | 19   |             |                     | 29K     |
|                  |        |                |             |             |                    |      |                              | 1    |             |                     |         |
|                  |        |                |             |             |                    |      |                              | 20   |             |                     |         |
| 1440             | 2.3"   | <V><br>9.1-9.8 | F8<br>-G2Ib |             |                    |      |                              | 21   | Rm [MW Egg] |                     | 3.5K    |
|                  |        |                |             |             |                    |      |                              | 22   |             |                     |         |
|                  |        |                |             |             |                    |      |                              | 1    |             |                     |         |
|                  |        |                |             |             |                    |      |                              | 23   |             |                     |         |
| 1700             | 2.5"   | <V><br>8.40    | ~G0Ib       |             |                    |      |                              | 24   | Rm Z Lac    |                     | 5.0K    |
|                  |        |                |             |             |                    |      |                              | 25   |             |                     |         |
|                  |        |                |             |             |                    |      |                              | 1    |             |                     |         |

pg #3 (109)

Date 1995 June 22/23 Observers [Rm] Tn/Smt

### Emulsion Batches:

.....

.....

.....

[illegible]

CoD  
Spectr. Ten

## Focus....

Spec. Ten

Exp. Mir.

OG 560  
FILTER

2900

3970



Focus ..... 6.67 .....

Spectr. Temp.  $\sim 10,677$ .....

Dome Temp./Hum. 19.1°C / 80.6%

Dome Temp./Hum. 18.9°C / 83.1%

Transparency Conditions . . . *hazy* . . .

110

### @ FOCUS TEST

410 050 1024 4 1 credit

[illegible]

Fri/SAT

### Emulsion Batches:

.....

.....

.....

28



CCD Spectr. Temp. ... -100.3°C ..... Dome Temp./Hum. +20.8°C ... 750% H Transparency Conditions ... Part. Cloudy & Hazy ...

Focus .... 6.67 .....

Spectr. Temp. ....

Dome Temp./Hum. +20.0°C ... 79% H 90 C gain  
e Lambda

430 0 50 1024 4 1 SCOT=0

(112)

| Exp. Mtr. | Seeing  | Ptg. Mag. | Sp.    | Inst.    | Grating/Tilt | * Slit          | Emulsion | P.H. ci | Program      | Remarks                      | Quality |
|-----------|---------|-----------|--------|----------|--------------|-----------------|----------|---------|--------------|------------------------------|---------|
| 15/30     |         |           |        | CASS CCD | 600 l/m      | 230u            | 3920A    | 3/4     |              | Sky spectrum H+43            | MAX AD4 |
|           |         |           |        |          | G=2610       | "               | ±10A     | 1       |              | CCOT = -101.8°C              |         |
|           |         |           |        |          |              |                 |          | 5       |              |                              | 15.7K   |
|           |         |           |        |          |              |                 |          | 6       |              |                              | 7K      |
| 100       |         |           |        |          |              |                 |          | 7       |              | Sky, Part cloudy, dome west. |         |
| 112       |         |           |        |          |              |                 |          | 8ci     |              |                              |         |
|           |         |           |        |          |              |                 |          | 1       |              | CCOT = -100.0°C              |         |
| 128       |         |           |        |          |              |                 |          | 9       |              | thin cloud throughout        |         |
|           |         |           |        |          |              |                 |          | 10      |              |                              |         |
|           |         |           |        |          |              |                 |          | 1       |              |                              |         |
| 67ms      | 22"     | 6.76      | KO III |          |              | Above 230u slit |          |         | Seeing test. | thin cloud, no wind          |         |
| 133ms     | I think |           |        |          |              |                 |          |         | "            | dome WNW                     |         |
|           |         |           |        |          |              | All to Perseus. |          |         |              |                              |         |

Date 1995 June 25/26 Observers [Blh].../Tn.../Dbd...

### Emulsion Batches:

[illegible]



Spectr. Temp.  $-100^{\circ}\text{C}$

Dome Temp./Hum. 22.4°C 73.4% H

Transparency Conditions ... *Part. Clouche* ...

Focus... 6.64 .....

Spectr. Temp. . . . .

Dome Temp./Hum.  $+22^{\circ}\text{C}$  18/64

395 0 50 1024 4 1 <sup>100%</sup> ~~CONF~~ ADG

[illegible]

pg #1 (115)

Date 1995 June 28/29 Observers [Rm.] Smt. .... iks. as backup

Emulsion Batches:

.....  
.....  
.....

| Plate No.  | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|------------|------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC33865/66 | INBOARD/OUTBOARD |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60/65 |
| 67         | BIAS(4)          |              |                     | 21 26                   |                       |                   |             |                           |       |
| 64/059-62  | HD144579 x 4     | 16 01 30     | + 39 24             | 22 02                   |                       |                   |             |                           | .067  |
| 63/64      | " x 2            |              |                     |                         | 22 04                 | 0 08 W            | 85° Alt     | 1.0038<br>air mass        | .133  |
| CC33868    | COMP             |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60    |
| 69         | HD144579         | 16 01 30     | + 39 24             | 22 01 48                |                       | 0 35 W            |             |                           | 1250  |
| 70         | COMP             |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60    |
| 71         | BIAS(4)          |              |                     | 22 33                   |                       |                   |             |                           | —     |
| 72         | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 73         | HD180583         | 19 11 59     | + 27 44 59          | 22 42 33                |                       | 2 03 E            |             |                           | 1200  |
| 74         | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 75         | BIAS(4)          |              |                     | 23 11                   |                       |                   |             |                           | —     |
| 76         | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 77         | HD331970         | 20 08 27     | + 32 34 16          | 23 14 29                |                       | 2 17 E            |             |                           | 1870  |
| 78         | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 79-87      | FLAT x 9         |              |                     |                         |                       | 0h                | -4°         | Thy 4 Ap                  | 7     |

200 Spectr. Tem

Focus .....

Spectr. Tem

Exp. Mtr.

25 560

Filter

1440

3033

470



CCD Spectr. Temp.  $-100.5^{\circ}\text{C}$

Dome Temp./Hum.  $20.2^{\circ}/72.2\%$   
@ focus test

Transparency Conditions  $\text{partly cloudy, thin overcast, thick to S and horizon. mtl}$

Focus  $6.67$

Spectr. Temp. ....

Dome Temp./Hum.  $19.9^{\circ}/77.1\%$   
@ seeing test

(116)  
415 0 50 1024 41 ccd frnt

| Exp. Mtr. | Seeing | Ptg. Mag.    | Sp.         | Inst.                | Grating/Tilt       | Slit                | Emission          | P.H. | Program           | Remarks                                                               | Quality          |
|-----------|--------|--------------|-------------|----------------------|--------------------|---------------------|-------------------|------|-------------------|-----------------------------------------------------------------------|------------------|
| 60/65     |        |              |             | CASS CCD             | 1800L/mm<br>G=5928 | 30 $\mu$ m          | 6400 $\text{\AA}$ | 3/4  | FOCUS TEST        | set in focus.                                                         |                  |
|           |        |              |             |                      |                    |                     |                   | 1    |                   |                                                                       |                  |
| 067       | 3"     | 6.66         | G8V         | EEV CCD<br>TV GUIDER |                    | above<br>30 $\mu$ m |                   | -    | SEEING TEST       | Done W, med. E wind, clouds below 0 $^{\circ}$ dec and around horizon |                  |
| 133       | -4"    | "            | G8V         |                      |                    |                     |                   | -    | "                 | 85% catwalk N FAN ON                                                  |                  |
| 60        |        |              |             | CASS CCD             |                    |                     |                   | 5    |                   | flash of lightning on horizon to SW                                   |                  |
| 1250      | 4"     | 6.66         | G8V         |                      |                    |                     |                   | 6    | IAU Std. Velocity | some cloud.                                                           | 3.7K             |
| 60        |        |              |             |                      |                    |                     |                   | 7    |                   |                                                                       |                  |
|           |        |              |             |                      |                    |                     |                   | 1    |                   |                                                                       |                  |
| 60        |        |              |             |                      |                    |                     |                   | 8    |                   | can see $\alpha$ Boo, $\alpha$ Lyr but not 2+                         |                  |
| 1200      | 5"     | <V><br>6.19  | F6I<br>-IIb |                      |                    |                     |                   | 9    | Rm                | V473 Lyr thicker cloud now                                            | 6.5K             |
| 60        |        |              |             |                      |                    |                     |                   | 10   |                   |                                                                       |                  |
|           |        |              |             |                      |                    |                     |                   | +    |                   |                                                                       |                  |
| 60        |        |              |             |                      |                    |                     |                   | 11   |                   |                                                                       |                  |
| 1870      | 4"-5"  | V<br>9.1-9.8 | F8-<br>G2Ib |                      |                    |                     |                   | 12   | Rm                | sky lines, in cloud here MW Cyg rising SB to autoguide.               | 1.0K             |
| 60        |        |              |             |                      |                    |                     |                   | 13   |                   |                                                                       |                  |
| 7         |        |              |             |                      |                    |                     |                   | 14   |                   | overcast sky                                                          | 11.6K<br>→ 11.0K |

p9 #2

(117)

Date 1995 June 28/29. Observers [Rm] Smt..... iks. as backup

Emulsion Batches:

.....  
.....  
.....

| Plate No. | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC33888   | COMP             |              |                     |                         |                       |                   |             | Fed<br>clear              | 60    |
| 89        | HD203156         | 21 15 23     | +37 48 55           | 1 20 28                 |                       | 1 38 E            |             |                           | 630   |
| 90        | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 91        | BIAS(4)          |              |                     | 1 33                    |                       |                   |             |                           | -     |
| 92        | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 93        | HD214975         | 22 36 54     | +56 19              | 1 47 50                 |                       | 2 06 E            |             |                           | 2200  |
| 94        | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 95        | BIAS(4)          |              |                     | 2 27                    |                       |                   |             |                           | -     |
| 96        | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 97        | HD215159         | 22 38 15     | +53 23 08           | 2 33 13                 |                       | 1 52 E            |             |                           | 400   |
| 98        | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 99        | COMP             |              |                     |                         |                       |                   |             | "                         | "     |
| CC33900   | HD213947         | 22 29 54     | +26 05              | 2 57 01                 |                       | 1 18 E            |             |                           | 540   |
| 01        | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 02        | BIAS(4)          |              |                     | 3 08                    |                       |                   |             |                           | -     |
| 03/04     | INBOARD/OUTBOARD |              |                     |                         |                       | 01                | +31°        | "                         | 60/65 |

C.C.D.  
Spectr. Ten

Focus.....

Spectr. Ten

Exp. Mir.

S10

FILTER

2485

1351

2610

1200



<sup>CCD</sup>  
Spectr. Temp. .... -101.7°C

Dome Temp./Hum. 18.6°C/86.3%

Transparency Conditions. cloud back down to pg #2

Focus ..... 6:67 .....

1917

0° dec again 118

Spectr. Temp. ....

Dome Temp./Hum. 18.3°C / 90.2%

415 0 50 1034 4 1 ccdft

| Comparison<br>Filter | Exp.  | Exp. Mtr.        | Seeing | Ptg.<br>Mag. | Sp.    | Inst.       | Grating/<br>Tilt   | Slit | Emulsion | P.H. | Program             | Remarks                                                      | Quality |
|----------------------|-------|------------------|--------|--------------|--------|-------------|--------------------|------|----------|------|---------------------|--------------------------------------------------------------|---------|
|                      | 60    | 26 560<br>FILTER |        |              |        | CASS<br>CCD | 1800.2lm<br>G=5928 | 30μm | 6400 Å   | 15   |                     | 1 hour cloudy break before<br>this exposure.                 |         |
|                      | 630   | 2485             | 4"     | V<br>5.8-5.9 | F2     |             |                    |      |          | 16   | Rm                  | couple of minutes in an<br>isolated cloud. V133469           | 7.5K    |
|                      | 60    |                  |        |              |        |             |                    |      |          | 17   |                     |                                                              |         |
|                      | -     |                  |        |              |        |             |                    |      |          | 1    |                     |                                                              |         |
|                      | 60    |                  |        |              |        |             |                    |      |          | 18   |                     |                                                              |         |
|                      | 2200  | 1051             | 3-4"   | <V><br>8.40  | ~G0Ib  |             |                    |      |          | 19   | Rm                  | no cloud here<br>2 Lac                                       | 2.6K    |
|                      | 60    |                  |        |              |        |             |                    |      |          | 20   |                     |                                                              |         |
|                      | -     |                  |        |              |        |             |                    |      |          | 1    |                     |                                                              |         |
|                      | 60    |                  |        |              |        |             |                    |      |          | 21   |                     |                                                              |         |
|                      | 400   | 2610             |        | V<br>6.19    | K2     |             |                    |      |          | 22   | Rm                  | 2 Lac velocity comparison<br>star                            | 7.8K    |
|                      | 60    |                  |        |              |        |             |                    |      |          | 23   |                     |                                                              |         |
|                      | "     |                  |        |              |        |             |                    |      |          | 24   |                     |                                                              |         |
|                      | 540   | 1000             | 4"     | V<br>7.53    | K4 III |             |                    |      |          | 25   | 1AU Std<br>Velocity | 95% humidity on condenser<br>92% in dome, some cloud<br>here | 3.0K    |
|                      | 60    |                  |        |              |        |             |                    |      |          | 26   |                     |                                                              |         |
|                      | -     |                  |        |              |        |             |                    |      |          | 1    |                     |                                                              |         |
|                      | 60/65 |                  |        |              |        |             |                    |      |          | 3/4  | Focus<br>TEST       | still in focus.                                              | .       |





Spectr. Temp. ....

Dome Temp./Hum. 19.9°/93.4%  
@ close

Transparency Conditions. hazy, partly cloudy.....

415 0 50 1024 4 1 cent

120

| Site | Exp. |
|------|------|
|------|------|

Pl #1 (121)

Emulsion Batches:

Date M95 July 2/3... Observers [Bin] Dbd / Smt...

| Plate No.      | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T.   | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|----------------|----------------------|--------------|---------------------|-------------------------|-------------------------|-------------------|-------------|---------------------------|-------|
| CC33925/<br>26 | INBOARD/<br>OUTBOARD |              |                     | CCD                     | still cooling slightly. |                   |             | FeAr<br>clear             | 50/60 |
| 27             | BIAS(4)              |              |                     | 21 15                   |                         |                   |             |                           |       |
| 28             | COMP                 |              |                     |                         |                         |                   |             | FeAr<br>clear             | 60    |
| 29             | HD130841             | 14 45 21     | -15 37 34           | 21 20 00                |                         | 0 56 W            |             |                           | 95    |
| 30             | COMP                 |              |                     |                         |                         |                   |             | FeAr<br>clear             | 60    |
| 31             | HD130841             | "            | "                   | 21 28 15                |                         | 1 07 W            |             |                           | 215   |
| 32             | COMP                 |              |                     |                         |                         |                   |             | "                         | 60    |
| 33             | BIAS(4)              |              |                     | 21 40                   |                         |                   |             |                           | —     |
| 34             | COMP                 |              |                     |                         |                         |                   |             | "                         | 60    |
| 35             | HD130109             | 14 41 12     | +2 18 51            | 21 43 47                |                         | 21 25 W           |             |                           | 200   |
| 36             | COMP                 |              |                     |                         |                         |                   |             | "                         | 60    |
| CG41065-68     | HD144579 x4          | 16 01 30     | +39 25 36           |                         |                         |                   |             |                           | 1067  |
| 69/70          | " x2                 |              |                     |                         | 22 00                   | 0 19 W            | 84° Alt     | 1.0056<br>airmass         | 1.133 |
| CC33937-39     | FLAT x3              |              |                     |                         |                         |                   |             | Tung<br>1/2 Ap            | 3     |
| 40             | COMP                 |              |                     |                         |                         |                   |             | FeAr<br>clear             | 40    |

Spectr. Ten

Focus...

Spectr. Ten

Exp. Mtr.

560

FILTER

100

11K

5400



Spectr. Temp. -100

Focus 6.69

Spectr. Temp.

Dome Temp./Hum. 14.6°C/61.5%

Transparency Conditions clear

@ FOCUS TEST START FANS ON

Dome Temp./Hum. 13.5°C/65.3%

@ seeing test

415 0 50 1024 4 1 ccd/fut

122

| Exp. Mtr.     | Seeing          | Ptg. Mag. | Sp. | Inst.         | Grating/Tilt        | Slit  | Emulsion | P.H. | Program        | Remarks                                                                    | MAXAVU Quality |
|---------------|-----------------|-----------|-----|---------------|---------------------|-------|----------|------|----------------|----------------------------------------------------------------------------|----------------|
| 560<br>FILTER |                 |           |     | CASS<br>CCD   | 1800 L/mm<br>G=5570 | 300µm | 5900 Å   | 3/4  | FOCUS<br>TEST  | T=14.2°C slightly<br>cool for T day.                                       |                |
|               |                 |           |     |               |                     |       |          | 1    |                |                                                                            |                |
|               |                 |           |     |               |                     |       |          | 5    |                |                                                                            |                |
| 5100          | 5"-6" ✓<br>2.74 |           | Am  |               |                     |       |          | 6    | Bln            | TEST EXPOSURE brightest<br>S/N ~ 350:1 in field.                           | 9.5K           |
|               |                 |           |     |               |                     |       |          | 7    |                |                                                                            |                |
| 11 K          | 5"-6" "         |           | "   |               |                     |       |          | 8    | Bln            | TRAILED<br>S/N ~ 530:1                                                     | ~9K            |
|               |                 |           |     |               |                     |       |          | 9    |                |                                                                            |                |
|               |                 |           |     |               |                     |       |          | 1    |                |                                                                            |                |
|               |                 |           |     |               |                     |       |          | 10   |                |                                                                            |                |
| 5400          | 5" ✓<br>3.72    |           | A0V |               |                     |       |          | 11   | Telluric Std.  |                                                                            | 11.2K          |
|               |                 |           |     |               |                     |       |          | 12   |                |                                                                            |                |
|               | 5" ✓<br>6.66    |           | G8V | EEU CCD<br>TV |                     | above |          | -    | SEEING<br>TEST | Dome SW, very light SW wind<br>clear, with hazy horizon<br>80% on catwalk. |                |
|               |                 |           | "   | GHOR          |                     | 300µm |          | -    |                |                                                                            |                |
|               |                 |           |     |               |                     |       |          | 13   |                |                                                                            | 14.4           |
|               |                 |           |     |               |                     |       |          | 14   |                |                                                                            |                |

p1#2 (123)

Date 1995 July 2/3... Observers [Bin] Dbd / Smt.

Emulsion Batches:

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.....  
.....

| Plate No. | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End         | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|------------------|--------------|---------------------|-------------------------|-----------------------|---------------------------|-------------|---------------------------|-------|
| CC33941   | HD144579         | 16 01 30     | +39 24              | 22 08 48                |                       | 0 44 W<br><del>+12'</del> |             |                           | 900   |
| 42        | COMP             |              |                     |                         |                       |                           |             | FeAr<br>clear             | 60    |
| 43        | BIAS(4)          |              |                     | 22 26                   |                       |                           |             |                           |       |
| 44/45     | INBOARD/OUTBOARD |              |                     |                         |                       | 0 <sup>h</sup>            | +44°        | FeAr<br>clear             | 40/70 |
| 46        | BIAS(4)          |              |                     | 23 06                   |                       |                           |             |                           | —     |
| 47        | COMP             |              |                     |                         |                       |                           |             | FeAr<br>clear             | 60    |
| 48        | SKY              |              |                     | 23 12 00                |                       | 0 <sup>h</sup>            | +44°        |                           | 1800  |
| 49        | SKY              |              |                     | 23 45 12                |                       | "                         | "           |                           | 1800  |
| 50        | SKY              |              |                     | 00 18 30                |                       | "                         | "           |                           | 1800  |
| 51        | COMP             |              |                     |                         |                       |                           |             | FeAr<br>clear             | 60    |
| 52        | BIAS(4)          |              |                     | 0 52                    |                       |                           |             |                           | —     |
| 53-55     | FLAT x 3         |              |                     |                         |                       | "                         | "           | Tung<br>clear             | 5     |
| 56        | BIAS(4)          |              |                     | 0 57                    |                       |                           |             |                           | —     |
| 57/58     | INBOARD/OUTBOARD |              |                     |                         |                       |                           |             | FeAr<br>clear             | 40/75 |
| 59        | BIAS(4)          |              |                     | 1 41                    |                       |                           |             |                           |       |

Spectr. Te

Focus...

Spectr. Te

Exp. Mtr.  
FILM

760

FILTER

70

71

?



Spectr. Temp.  $-100.4^{\circ}\text{C}$ Dome Temp./Hum.  $13.1^{\circ}\text{C}/66.4\%$ Transparency Conditions  $\text{clear, no moon}$ Focus  $6.69/6.76/6.79$ Spectr. Temp.  $5900\text{\AA}$   $4845\text{\AA}$ Dome Temp./Hum.  $11.3^{\circ}\text{C}/77.9\%$ 

last focus test

415 0 50 1024 4 1 cellant

124

| Comparison<br>Filter Exp | Exp. Mtr.<br>FILTER | Seeing | Ptg.<br>Mag. | Sp. | Inst.       | Grating/<br>Tilt                        | Slit      | Emulsion                               | P.H.     | Program              | Remarks                                                            | new Air<br>Quality           |
|--------------------------|---------------------|--------|--------------|-----|-------------|-----------------------------------------|-----------|----------------------------------------|----------|----------------------|--------------------------------------------------------------------|------------------------------|
| 900                      | 2760                | 5"     | 6.66         | d68 | CASS<br>CCD | 1800 $\text{\AA}/\text{mm}$<br>$G=5570$ | 306 $\mu$ | 5900 $\text{\AA}$                      | 15       | 1AU Std.<br>Velocity |                                                                    | 5.0K                         |
| 60                       |                     |        |              |     |             |                                         |           |                                        | 16       |                      |                                                                    |                              |
|                          |                     |        |              |     |             |                                         |           |                                        | 1        |                      |                                                                    |                              |
| 40/70                    | NO<br>FILTER        |        |              |     | CASS<br>CCD | 831 $\text{\AA}/\text{mm}$<br>$G=3156$  | 250 $\mu$ | 4845 $\text{\AA}$<br>$\pm 1\text{\AA}$ | 3/4<br>1 | FOCUS<br>TEST        | 440 0 50 1024 4 1 red tint<br>6.76 FOCUS, $T=12.6^{\circ}\text{C}$ |                              |
| 60                       |                     |        |              |     |             |                                         |           |                                        | 17       |                      |                                                                    |                              |
| 1800                     | 70                  |        |              |     |             |                                         |           |                                        | 18       | B/n                  | only one feature (broad)<br>a red end - will be tough to catch.    |                              |
| 1800                     | 71                  |        |              |     |             |                                         |           |                                        | 19       | "                    | hot pixel streaked across<br>columns in all 3 exposures            |                              |
| 1800                     | ?                   |        |              |     |             |                                         |           |                                        | 20       | "                    |                                                                    |                              |
| 60                       |                     |        |              |     |             |                                         |           |                                        | 21       |                      |                                                                    |                              |
|                          |                     |        |              |     |             |                                         |           |                                        | 1        |                      |                                                                    |                              |
| 5                        |                     |        |              |     |             |                                         |           |                                        | 22       |                      |                                                                    | 14.5K<br>$\rightarrow 14.2K$ |
|                          |                     |        |              |     |             |                                         |           |                                        | 1        |                      |                                                                    |                              |
| 40/75                    |                     |        |              |     | CASS<br>CCD | 1800 $\text{\AA}/\text{mm}$<br>$G=4568$ | 306 $\mu$ | 4463 $\text{\AA}$<br>$\pm 1\text{\AA}$ | 3/4<br>1 | Focus<br>TEST        | 430 0 50 1024 4 1 cellant<br>425 0 50 1024 4 1 cellant             |                              |

pg #3

(125)

Date 1995 July 2/3.... Observers [Bin] Dbd./smt...

Emulsion Batches:

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| Plate No. | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC3960    | COMP      |              |                     |                         |                       |                   |             | Fair<br>clear             | 60   |
| 61        | HD138629  | 15 28 12     | +41 14 19           | 1 49 43                 |                       | 4 52 W            |             |                           | 500  |
| 62        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |
| 63        | HD138629  | "            | "                   | 2 03 06                 |                       | 5 28 W            |             |                           | 1800 |
| 64        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |
| 65        | BIAS(4)   |              |                     | 2 36                    |                       |                   |             |                           | -    |
| 66        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |
| 67        | HD164852  | 17 58 07     | +20 50 00           | 2 43 07                 |                       | 3 27 W            |             |                           | 1200 |
| 68        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |
| 69        | COMP      |              |                     |                         |                       |                   |             | "                         | "    |
| 70        | HD187691  | 19 46 14     | +10 09 55           | 3 19 42                 |                       | 2 07 W            |             |                           | 730  |
| 71        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |
| 72        | BIAS(4)   |              |                     | 3 35                    |                       |                   |             | "                         | 60   |
| 73        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |
| 74        | HD210459  | 22 05 33     | +32 41 15           | 3 41 33                 |                       | 0 08 W            |             |                           | 600  |
| 75        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |
| 76-95     | FLAT x 20 |              |                     |                         |                       | 0 13 W            | +33°        | Very<br>clear             | 22   |

Cib  
Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

639

FILTER

4900

4.4K

9.5K

5.4K

4.6K



Cel  
Spectr. Temp. ... -100.4°C

Dome Temp./Hum. 11.9°C/75.8%

Transparency Conditions ... clear

Focus ... 6.79

Spectr. Temp. ....

Dome Temp./Hum. 11.4°C/79.0%  
during last exposure

425 0 50 1024 4 1 ccdint

126

| Exp. Mtr.             | Seeing | Ptg. Mag. | Sp.   | Inst.                | Grating/Tilt        | Slit | Emulsion | P.H. | Program      | Remarks                                    | max Quality Add  |
|-----------------------|--------|-----------|-------|----------------------|---------------------|------|----------|------|--------------|--------------------------------------------|------------------|
| 60<br>86 39<br>FILTER |        |           |       | CASS<br>CCD          | 1800 l/mm<br>G=4568 | 30µm | 4463A    | 23   |              |                                            |                  |
| 500<br>4900           | 5"     | B<br>5.09 | A5V   |                      |                     |      | 71A      | 24   | Blu A-shell  | S/N ~ 165:1                                | 2.6K             |
| 60<br>1800            |        |           |       |                      |                     |      |          | 25   |              |                                            |                  |
| 60<br>14.4K           |        | "         | "     |                      |                     |      |          | 26   | Blu A-shell. | S/N ~ 280:1                                | 7.6K             |
|                       |        |           |       |                      |                     |      |          | 27   |              |                                            |                  |
|                       |        |           |       |                      |                     |      |          | 1    |              |                                            |                  |
| 60<br>1200            |        |           |       |                      |                     |      |          | 28   |              |                                            |                  |
| 9.5K                  | 4.5"   | B<br>5.19 | B3IV  |                      |                     |      |          | 29   | Blu Sp. Bin. | S/N ~ 240:1                                | 4K               |
| 60                    |        |           |       |                      |                     |      |          | 30   |              |                                            |                  |
| "                     |        |           |       |                      |                     |      |          | 5    |              |                                            |                  |
| 730<br>5.4K           |        | V<br>5.11 | F8V   |                      |                     |      |          | 6    | Std. Vel.    |                                            | 2.4K             |
| 60                    |        |           |       |                      |                     |      |          | 7    |              |                                            |                  |
| 60                    |        |           |       |                      |                     |      |          | 9    |              |                                            |                  |
| 600<br>14.6K          | 5"     | B<br>4.75 | F5III |                      |                     |      |          | 10   | Blu A-shell  | sky getting bright by the end. S/N ~ 280:1 | 7.5K             |
| 60                    |        |           |       |                      |                     |      |          | 12   |              |                                            |                  |
| 22                    |        |           |       | All to Persens & DAT |                     |      |          | 14   |              |                                            | 16.0K<br>→ 15.0K |

pg #1 127

Bill Hodges

Emulsion Batches:

Date 1995 July 6/7... Observers [Bin] Hqs./Smt.....

CSS 386 clock ~ 13 sec ahead of WWV.....

| Plate No.      | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|----------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC33996/<br>97 | INBOARD/<br>OUTBOARD |              |                     |                         |                       |                   |             | FcAr<br>clear             | 40/75 |
| 98             | BIAS(4)              |              |                     |                         |                       |                   |             |                           |       |
| 99             | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| CC34000        | HD130841             | 14 45 21     | -15 37 34           | 21 43 39                |                       | 1 45 W            |             |                           | 670   |
| 01             | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 02             | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 03             | HD148283             | 16 21 50     | +37 37 18           | 22 09 51                |                       | 0 57 W            |             |                           | 1900  |
| 04             | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 05             | BIAS(4)              |              |                     | 22 47                   |                       |                   |             |                           | -     |
| 06             | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 07             | HD152614             | 16 49 17     | +10 19 48           | 22 57 39                |                       | 0 54 W            |             |                           | 600   |
| 08             | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 09             | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 10             | HD164852             | 17 58 07     | +20 50 00           | 23 23 51                |                       | 0 28 W            |             |                           | 1567  |
| 11             | COMP                 |              |                     |                         |                       |                   |             | "                         | 66    |

Spectr. Ter

Focus....

Spectr. Ter

Exp. Mtr.

86 39

Ful. rpk

11.3K

17.3K

14.8K

18.4K



Spectr. Temp.  $-100.4^{\circ}\text{C}$ Dome Temp./Hum.  $23.1^{\circ}\text{C}/68.7\%$ Transparency Conditions *partly cloudy* 128Focus  $6.65$ 

Spectr. Temp. ....

Dome Temp./Hum. ....

425 0 50 1024 4 1 ccd fwh

| Exp. Mtr.       | Seeing | Ptg. Mag.            | Sp.  | Inst.       | Grating/Tilt       | Slit      | Emulsion | P.H. | Program       | Remarks                                                   | max        |
|-----------------|--------|----------------------|------|-------------|--------------------|-----------|----------|------|---------------|-----------------------------------------------------------|------------|
| B6 39<br>FILTER |        |                      |      | CASS<br>CCD | 1800allm<br>G=4568 | 306 $\mu$ | 4462A    | 3/4  | FOCUS<br>TEST | right in focus                                            | max<br>450 |
|                 |        |                      |      |             |                    |           |          | 1    |               |                                                           |            |
|                 |        |                      |      |             |                    |           |          | 5    |               |                                                           |            |
| 11.3K           | 3"     | <sup>B</sup><br>2.89 | Am   |             |                    |           |          | 6    | Bin SB        | S/N ~ 215:1<br>through cloud mostly.                      | 5.2K       |
|                 |        |                      |      |             |                    |           |          | 7    |               |                                                           |            |
|                 |        |                      |      |             |                    |           |          | 8    |               |                                                           |            |
| 17.3K           | 3-4"   | <sup>V</sup><br>5.52 | ASV  |             |                    |           |          | 9    | Bin A-shell   | S/N ~ 350:1                                               | 11.0K      |
|                 |        |                      |      |             |                    |           |          | 10   |               |                                                           |            |
|                 |        |                      |      |             |                    |           |          | 11   |               |                                                           |            |
| 14.8K           | 4"     | <sup>B</sup><br>4.30 | B8V  |             |                    |           |          | 12   | Bin SB        | S/N ~ 315:1                                               | 8.4K       |
|                 |        |                      |      |             |                    |           |          | 13   |               |                                                           |            |
|                 |        |                      |      |             |                    |           |          | 14   |               |                                                           |            |
| 18.4K           |        | <sup>B</sup><br>5.19 | B3IV |             |                    |           |          | 15   | Bin SB        | cloud @ end.<br>taken 20 minutes after<br>exposure's end. | 10K        |
|                 |        |                      |      |             |                    |           |          | 16   |               |                                                           |            |

pg #2 (129)

Date 1995 July 6/7... Observers [Bin] Hgs / Smt...

Emulsion Batches:

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| Plate No.  | Object       | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|------------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC34012    | BIAS(4)      |              |                     | 0 10                    |                       |                   |             |                           | —    |
| 13         | COMP         |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 14         | HD172187     | 18 33 42     | +43 08 12           | 0 24 12                 |                       | 0 54 W            |             |                           | 1550 |
| 15         | COMP         |              |                     |                         |                       |                   |             | "                         | 60   |
| 16-35      | FLAT x 20    |              |                     |                         |                       | 0 <sup>h</sup>    | -9°         | Tung<br>clear             | 22   |
| 36         | BIAS(4)      |              |                     | 1 32                    |                       |                   |             |                           | —    |
| 37         | COMP         |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 38         | HD164577     | 17 56 41     | +1 18 27            | 1 58 48                 |                       | 2 59 W            |             |                           | 1205 |
| 39         | COMP         |              |                     |                         |                       |                   |             | "                         | 60   |
| 40         | COMP         |              |                     |                         |                       |                   |             | "                         | "    |
| 41         | HD180316     | 19 11 00     | +27 46              | 2 28 26                 |                       | 2 16 W            |             |                           | 1260 |
| 42         | COMP         |              |                     |                         |                       |                   |             | "                         | 60   |
| CG41071-74 | HD207754 x 4 | 21 46 12     | +43 25              |                         |                       |                   |             |                           | 1067 |
| 75/76      | " x 2        |              |                     |                         | ~3 00                 | 0 06 E            | 89° Alt     | 1.0002<br>airmass         | 133  |
| CC34043    | BIAS(4)      |              |                     | 3 01                    |                       |                   |             |                           | —    |

Spectr. Te.

Focus....

Spectr. Te.

Exp. Mtr.

31  
FILTER

7.2K

16.4K

7.8K



Spectr. Temp.  $-100^{\circ}\text{C}$ Dome Temp./Hum.  $21.2^{\circ}\text{C}/82.8\%$  Transparency Conditions *partly cloudy*Focus  $6.65$ 

N FAN ON ONLY

130

Spectr. Temp. ....

Dome Temp./Hum.  $20.8^{\circ}\text{C}/79.7\%$   
*after opening again*

4250 50 1024 4 1 cidfnt

| Exp. Mtr.    | Seeing | Ptg. Mag. | Sp.    | Inst.                | Grating/Tilt         | Slit                       | Emulsion | P.H. | Program        | Remarks                                                                              | Quality          |
|--------------|--------|-----------|--------|----------------------|----------------------|----------------------------|----------|------|----------------|--------------------------------------------------------------------------------------|------------------|
| 39<br>FILTER |        |           |        | CASS<br>CCD          | 1800 l/min<br>G=4568 | 306 $\mu\text{m}$          | 4462A    | 1    |                |                                                                                      |                  |
|              |        |           |        |                      |                      |                            |          | 17   |                |                                                                                      |                  |
| 7.2K         | 4"     | B<br>6.40 | FOX    |                      |                      |                            |          | 18   | Bln SB         | through cloud beginning<br>S/N ~ 210:1 and end.                                      | 4.1K             |
|              |        |           |        |                      |                      |                            |          | 19   |                | closed shutters @ end.                                                               |                  |
|              |        |           |        |                      |                      |                            |          | 20   |                | drive off dome closed.                                                               | 15.4K<br>→ 14.2K |
|              |        |           |        |                      |                      |                            |          | 1    |                |                                                                                      |                  |
|              |        |           |        |                      |                      |                            |          | 21   |                | dome open now ~ 1/2 hr later.                                                        |                  |
| 16.4K        | 5"     | B<br>7.46 | A1V    |                      |                      |                            |          | 22   | Bln SB         | clear now, don't see drives<br>S/N ~ 280:1 but I don't<br>know what I'm looking for. | 7.5K             |
|              |        |           |        |                      |                      |                            |          | 23   |                |                                                                                      |                  |
|              |        |           |        |                      |                      |                            |          | 24   |                |                                                                                      |                  |
| 2.8K         | 4"     | B<br>6.64 | B8     |                      |                      |                            |          | 25   | Bln SB         | S/N ~ 130:1                                                                          | 1.7K             |
|              |        |           |        |                      |                      |                            |          | 26   |                |                                                                                      |                  |
|              | 4"     | V<br>7.32 | KO III | EEV CCD<br>TV GUIDER |                      | above<br>306 $\mu\text{m}$ |          | —    | SEEING<br>TEST | 20.4°C, 81.2%<br>Dome W, no wind now,                                                |                  |
|              | "      | "         | "      |                      |                      |                            |          | —    | "              | clear now, 90% catwalk                                                               |                  |
|              |        |           |        | CASS CCD             |                      |                            |          | 1    |                |                                                                                      |                  |





Transparency Conditions clear.....

130

130

130

[illegible]

pg #1 133

Date 1995 July 8/9 Observers [Bin] Hqs / Smt

### Emulsion Batches:

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[illegible]





pg #1 135

Date 1995 July 9/10 Observers [Bin] Hqs. / Smt.....

Emulsion Batches:

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| Plate No.     | Object              | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|---------------|---------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34082<br>83 | INBOARD<br>OUTBOARD |              |                     |                         |                       |                   |             | Fedex<br>clear            | 40/75 |
| 84            | BIAS(4)             |              |                     |                         |                       |                   |             |                           | —     |
| 85            | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |
| 86            | HD152614            | 16 49 17     | +10 19 48           | 22 44 35                |                       | 0 54 W            |             |                           | 615   |
| 87            | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |
| 88            | COMP                |              |                     |                         |                       |                   |             | "                         | "     |
| 89            | HD158 352           | 17 23 44     | +0 24 42            | 23 02 13                |                       | 0 55 W            |             |                           | 1550  |
| 90            | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |
| 91            | BIAS(4)             |              |                     | 23 45                   |                       |                   |             |                           | —     |
| 92            | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |
| 93            | HD138629            | 15 28 12     | +41 14 19           | 23 53 19                |                       | 3 35 W            |             |                           | 1201  |
| 94            | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |
| 95            | COMP                |              |                     |                         |                       |                   |             | "                         | "     |
| 96            | HD164852            | 11 58 07     | +20 50 00           | 0 24 17                 |                       | 1 35 W            |             |                           | 1267  |
| 97            | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |



Spectr. Temp.  $-100.4^{\circ}\text{C}$  ..... Dome Temp./Hum.  $17.2^{\circ}\text{C}/75.8\%$  Transparency Conditions *partly cloudy  $\rightarrow$  clear* .....  
 Focus .....  $6.76$  ..... @ FOCUS TEST near full moon 136  
 Spectr. Temp. .... Dome Temp./Hum. .... FANS OFF  
 430 0 50 1024 4 1 ccd/fat

| Exp.  | Exp. Mtr.   | Seeing | Ptg. Mag. | Sp.  | Inst.    | Grating/Tilt                          | Slit        | Emulsion | P.H. | Program     | Remarks                                                                                              | Quality |
|-------|-------------|--------|-----------|------|----------|---------------------------------------|-------------|----------|------|-------------|------------------------------------------------------------------------------------------------------|---------|
| 40/75 | NOT WORKING |        |           |      | CASS CCD | 1800 $\text{\AA}/\text{mm}$<br>G=4568 | 306 $\mu$   | 44/62A   | 3/4  | FOCUS TEST  |                                                                                                      |         |
| 60    |             |        |           |      |          |                                       |             |          | 1    |             |                                                                                                      |         |
| 60    |             |        |           |      |          |                                       |             |          | 5    |             |                                                                                                      |         |
| 615   | —           | 4"     | B<br>4.30 | B8V  |          |                                       |             |          | 6    | Bln SB      | S/N ~ 350:1                                                                                          | 11.2K   |
| 60    |             |        |           |      |          |                                       |             |          | 7    |             |                                                                                                      |         |
| "     |             |        |           |      |          |                                       |             |          | 8    |             |                                                                                                      |         |
| 1550  | —           | 4"     | B<br>5.66 | A8V  |          |                                       | S/N ~ 305:1 |          | 9    | Bln A-shell | lost all header info when<br>G01B failed during readout.<br>Done 10 minutes after end<br>of exposure | 7.6K    |
| 60    |             |        |           |      |          |                                       |             |          | 10   |             |                                                                                                      |         |
| —     |             |        |           |      |          |                                       |             |          | 1    |             |                                                                                                      |         |
| 60    |             |        |           |      |          |                                       |             |          | 11   |             |                                                                                                      |         |
| 1201  | —           | 4"     | B<br>5.09 | A5V  |          |                                       |             |          | 12   | Bln A-shell | S/N ~ 370:1                                                                                          | 14.5K   |
| 60    |             |        |           |      |          |                                       |             |          | 13   |             |                                                                                                      |         |
| "     |             |        |           |      |          |                                       |             |          | 14   |             |                                                                                                      |         |
| 1207  | —           |        | B<br>5.19 | B3IV |          |                                       |             |          | 15   | Bln SB      | S/N ~ 355:1                                                                                          | 11.0K   |
| 60    |             |        |           |      |          |                                       |             |          | 16   |             |                                                                                                      |         |

Pg #2 137

Date 1995 July 9/10 Observers [Bin] Hqs / Smt

Emulsion Batches:

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| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC34098   | BIAS(4)  |              |                     | 0 50                    |                       |                   |             |                           |      |
| 99        | COMP     |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| CC34100   | HD172187 | 18 33 42     | +43 08 12           | 0 57 21                 |                       | 1 34 W            |             |                           | 1200 |
| 01        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 02        | COMP     |              |                     |                         |                       |                   |             | "                         | "    |
| 03        | HD180316 | 19 11 00     | +27 46              | 1 27 45                 |                       | 1 36 W            |             |                           | 1800 |
| 04        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 05        | BIAS(4)  |              |                     | 2 02                    |                       |                   |             |                           | -    |
| 06        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 07        | HD192518 | 20 10 08     | +28 23 30           | 2 08 13                 |                       | 1 08 W            |             |                           | 1200 |
| 08        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 09        | COMP     |              |                     |                         |                       |                   |             | "                         | "    |
| 10        | HD210459 | 22 05 33     | +32 41 15           | 2 39 08                 |                       | 0 28 E            |             |                           | 600  |
| 11        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 12        | BIAS(4)  |              |                     | 2 53                    |                       |                   |             |                           | -    |



Spectr. Temp. ... 100.0°C ... Dome Temp./Hum. 15.7°C / 86.7% Transparency Conditions ... clear, Moon setting ...

Focus ... 6.76 ...

Spectr. Temp. ... Dome Temp./Hum. 14.3°C / 86.1%

430 0 50 1024 4 1 CCD out

138

| Exp. Mtr.   | Seeing | Ptg. Mag.       | Sp.   | Inst.    | Grating/Tilt       | Slit  | Emulsion | P.H. | Program     | Remarks                        | Quality |
|-------------|--------|-----------------|-------|----------|--------------------|-------|----------|------|-------------|--------------------------------|---------|
| NOT WORKING |        |                 |       | CASS CCD | 1800.21~<br>G=4669 | 300μm | 4462Å    | 1    |             |                                |         |
| 60          |        |                 |       |          |                    |       |          | 17   |             |                                |         |
| 1200        | 4"     | B<br>6.40       | F0V   |          |                    |       |          | 18   | Bln SB      | S/N ~ 220:1                    | 5.2K    |
| 60          |        |                 |       |          |                    |       |          | 19   |             |                                |         |
| "           |        |                 |       |          |                    |       |          | 20   |             |                                |         |
| 1800        | 3"     | B<br>6.64       | B8    |          |                    |       |          | 21   | Bln SB      | some sky lines?<br>S/N ~ 195:1 | 2.9K    |
| 60          |        |                 |       |          |                    |       |          | 22   |             |                                |         |
| -           |        |                 |       |          |                    |       |          | 1    |             |                                |         |
| 60          |        | B=5.36          |       |          |                    |       |          | 23   |             |                                |         |
| 1200        | 3-4"   | <del>5.36</del> | A7IV  |          |                    |       |          | 24   | Bln A-shell | S/N ~ 315:1                    | 8.6K    |
| 60          |        |                 |       |          |                    |       |          | 25   |             |                                |         |
| "           |        |                 |       |          |                    |       |          | 26   |             |                                |         |
| 600         | 3"     | B<br>4.75       | F5III |          |                    |       |          | 27   | Bln A-shell |                                | 8.8K    |
| 60          |        |                 |       |          |                    |       |          | 28   |             |                                |         |
| 7           |        |                 |       |          |                    |       |          | 1    |             |                                |         |

139

Date \_\_\_\_\_

1975 July 9/10

## Observers

[Blw] Hgs. / Smt

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[illegible]



Spectr. Temp. ....  $101.7^{\circ}\text{C}$  .....

Focus ..... 6:76 .....

Spectr. Temp. . . . .

Dome Temp./Hum. 19.3°C / 86% RH

Dome Temp./Hum. ....

Transparency Conditions ... *clear* ... *humid* ...

430 0 50 1024 4 1 ccd font

FANS OFF 140

| Comparison<br>Iter. | Exp   | Exp. Mtr. | Seeing | Ptg.<br>Mag. | Sp.   | Inst.           | Grating/<br>Tilt | Slit                | Emulsion | P.H. | Program        | Remarks                           | Quality                  |
|---------------------|-------|-----------|--------|--------------|-------|-----------------|------------------|---------------------|----------|------|----------------|-----------------------------------|--------------------------|
|                     | .067  |           | 3"     | 7.32         | KOIII | EDV CCD<br>TV   |                  | above<br>30 $\mu$ m |          | -    | SEEING<br>TEST | Dome W, no wind, clear            |                          |
|                     | .133  |           |        |              |       | GLUPER          |                  |                     |          | -    |                | 95% on catwalk, dome is wet       |                          |
|                     | 22    |           |        |              |       |                 |                  |                     |          | 29   |                | Dome closed now, mirrors covered. | 14K<br>$\rightarrow$ RST |
|                     | -     |           |        |              |       |                 |                  |                     |          | 1    |                |                                   |                          |
|                     | 46/15 |           |        |              |       |                 |                  |                     |          | 3/4  | FOCUS<br>TEST  |                                   |                          |
|                     |       |           |        |              |       | All to Perseus. |                  |                     |          |      |                |                                   |                          |

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Date 1995 July 10/11 Observers KK/SMT

Emulsion Batches:

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| Plate No.                             | Object                          | R.A.<br>1900                    | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination     | Comparison<br>Type/Filter | Exp.             |
|---------------------------------------|---------------------------------|---------------------------------|---------------------|-------------------------|-----------------------|-------------------|-----------------|---------------------------|------------------|
| <del>01624</del><br>CF01566           | comparison                      |                                 |                     |                         |                       |                   |                 | diffuser<br>FeNe          | 60               |
| <del>01625</del><br>1567              | bias <sup>(4)</sup> (mean of 4) |                                 |                     |                         |                       |                   |                 |                           | —                |
| 26 1568                               | HD 172167                       | 18 36.8 <sup>1995</sup>         | +38 46              | 21 54 35                |                       |                   | filter =        | OG560                     | 116 <sup>s</sup> |
| 27 1569                               | comparison                      |                                 |                     |                         |                       |                   |                 | FeNe                      | 60 <sup>s</sup>  |
| 28 1570                               | HD 172167                       | "                               | "                   | 22:05:51                |                       |                   |                 | OG560                     | 134              |
| 29 1571                               | HD 159561                       | 17 30 18<br><del>12 31 58</del> | 12 37 58            | 22:17:00                |                       |                   |                 | "                         | 706 <sup>s</sup> |
| 30 1572                               | HD 159561                       | "                               | "                   | 22 31 03                |                       |                   |                 | "                         | 619              |
| 31 1573                               | comparison                      |                                 |                     |                         |                       |                   |                 | FeNe                      | 60               |
| 32 1574                               | HD 182640                       | 19 20 27                        | +2 54 55            | 22 50 53                | 23 10:00              |                   |                 | OG 560                    | 1148             |
| 33 1575                               | "                               | "                               | "                   | 23 10 41                | 23 36 00              |                   |                 | "                         | 1512             |
| 34 1576                               | "                               | "                               | "                   | 23 36 38                | 23 46                 |                   |                 | "                         | 569<br>60        |
| 35 1577                               | comparison                      |                                 |                     |                         |                       |                   |                 | FeNe                      | 1560             |
| <del>36-40</del><br>1578-82           | flats x5                        |                                 |                     |                         |                       |                   |                 | Turn<br>clear             | 15               |
| <del>41 1583</del><br><del>1584</del> | comp                            |                                 |                     |                         |                       |                   | diffuser<br>out | FeNe                      | 60               |
| 42 Hartmann - INBOARD                 |                                 |                                 |                     | 19:48                   | } next day            |                   | "               | FeNe                      | 30               |
| 43 OUTBOARD                           |                                 |                                 |                     | 19:49                   |                       |                   |                 |                           | 30               |

Spectr. Ten

Focus.....

Spectr. Ten

Exp. Mtr.

50000

50000

35000

50000

25000

25100

6500



Spectr. Temp. . . . .

Dome Temp./Hum. ....

Transparency Conditions...cloudy

Spectr. Temp. ....

Spectr. Temp. ....

0 400 1024 128 1 1

142

[illegible]

pg #1 of 2 14,3

Date 1995 July 11/12 Observers KK/Smt

### Emulsion Batches:

• • • • •

• • • • •

• • • • •

| Plate No.                  | Object                            | R.A.<br>1900                    | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.             |
|----------------------------|-----------------------------------|---------------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------------------|
| CF01644<br><del>4586</del> | Bias (4)                          |                                 |                     |                         |                       |                   |             |                           | —                |
| 45 <del>4587</del>         | Comparison                        |                                 |                     |                         |                       |                   | No diffuser | FeNe                      | 180 <sup>s</sup> |
| 46 <del>4588</del>         | HD 125162                         | 14 12 35                        | +46 32 51           | 21 10 *                 |                       |                   |             |                           | 751              |
| 47 <del>4589</del>         | "                                 | "                               | "                   | 21 26                   |                       |                   |             |                           | 940              |
| 48 <del>4590</del>         | "                                 | "                               | "                   | 21 43 20                |                       |                   |             |                           | 960              |
| 49 <del>4591</del>         | COMP                              |                                 |                     |                         |                       |                   | "           | FeNe                      | 180              |
| 50 <del>4592</del>         | HD 155125<br><del>HD 141795</del> | 17 04 39<br><del>15 45 50</del> | -15 36 04           | 22 19 05                |                       |                   |             |                           | 600              |
| 51 <del>4593</del>         | HD 155125                         | 17 04 39                        | -15 36 04           | 22 30 53                |                       |                   |             |                           | 530              |
| 52 <del>4594</del>         | "                                 | "                               | "                   | 22 41 13                |                       | ~0 45 W           |             |                           | 560              |
| 53 <del>4595</del>         | COMP                              |                                 |                     |                         |                       |                   | "           | FeNe                      | 180              |
| 54 <del>4596</del>         | HD 141795                         | 15 45 50                        | +4 46 43            | 22 59 53                |                       |                   |             |                           | 736              |
| 55 <del>4597</del>         | "                                 | "                               | "                   | 23 14 16                |                       |                   |             |                           | 1090             |
| 56 <del>4598</del>         | "                                 | "                               | "                   | 23 33 37                |                       | ~4 <sup>h</sup> W |             |                           | 1140             |
| 57 <del>4599</del>         | COMP                              |                                 |                     |                         |                       |                   |             | FeNe                      | 180              |
| <del>58</del>              | —                                 |                                 |                     |                         |                       |                   |             |                           |                  |

Spectr. Tem

### Focus . . . .

Spectr. Temp.

Exp. Mtr.

11

46-39



Spectr. Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $19.1/60\%$   
 Focus ..... Good .....  
 Spectr. Temp. .... Dome Temp./Hum. ....

Transparency Conditions .. slight haze - full moon ..  
 0 400 1024 128 1 1  $T = -110^{\circ}$  144

| Exp. Mtr.          | Seeing | Ptg. Mag.                | Sp.                   | Inst.  | Grating/Tilt | Slit            | Emulsion                  | P.H. | Program | Remarks                                                | TOTAL Quality |
|--------------------|--------|--------------------------|-----------------------|--------|--------------|-----------------|---------------------------|------|---------|--------------------------------------------------------|---------------|
| blue film<br>B6 39 |        |                          |                       | FR LCD | 600C/31.6    | <del>7x50</del> | 4150A<br><del>4150A</del> |      |         |                                                        |               |
| 9000               |        | V4.25                    | A0p                   |        |              |                 |                           |      |         | *clock 5 <sup>m</sup> fast                             | 9000          |
| 9500               |        | "                        | "                     |        |              |                 |                           | 4    | KK A*   | After clock corrected to within seconds of ASTRO-CLOCK |               |
| 9300               |        | "                        | "                     |        |              |                 |                           | 4    | "       |                                                        |               |
|                    |        |                          |                       |        |              |                 |                           | 5    |         |                                                        |               |
| 15500              |        | V2.49<br><del>3.73</del> | A1X<br><del>A2m</del> |        |              |                 |                           | 6    | KK A*   | sl. weak due to guiding, 1 guess                       |               |
| 15600              |        | V<br>2.49                | A1X                   |        |              |                 |                           | 6    | "       | took refra into account when guiding                   | ~30K          |
| 18500              |        |                          |                       |        |              |                 |                           | 6    | "       |                                                        |               |
|                    |        |                          |                       |        |              |                 |                           | 7    |         | set telescope to next * during comp                    |               |
| 10.1K              | 4"     | V<br>3.73                | A2m                   |        |              |                 |                           | 8    | KK A*   |                                                        |               |
| 10.9K              | 5"     | "                        | "                     |        |              |                 |                           | 8    | "       | lost the seeing, weaker than 1st                       |               |
| 10.0K              | 5"     | "                        | "                     |        |              |                 |                           | 8    | "       | weaker still.                                          |               |
|                    |        |                          |                       |        |              |                 |                           | 9    |         | max ADU ~ 1400                                         |               |

145

### Emulsion Batches:

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.....

.....

[illegible]

Spectr. Ten

Focus... 64

Spectr. Term

Exp. Mtr.

34

FILTER

52K

52K

52K

8.3k



Spectr. Temp. .... Dome Temp./Hum. ....

0 400 1024 128 1 1 cadant

|                                         | Exp. Mtr. | Seeing | Ptg.<br>Mag. | Sp. | Inst. | Grating/<br>Tilt | Slit | Emulsion | -P.H.<br>.C. | Program    | Remarks                                  | Total<br>Quality |
|-----------------------------------------|-----------|--------|--------------|-----|-------|------------------|------|----------|--------------|------------|------------------------------------------|------------------|
| BG 39<br>FILTER                         |           |        |              |     | FFCCD | 600c/3/b         | 7x50 | 4150A    |              |            |                                          |                  |
| 14S                                     | 52K       | 3"     | B<br>0.04    | A0V |       |                  |      |          | 10           | Kk A*/Std. | >90K                                     |                  |
| 102                                     | 52K       | "      | "            | "   |       |                  |      |          | 10           | "          | Very well matched to above               | "                |
| 103                                     | 52K       | "      | "            | "   |       |                  |      |          | 10           | "          | "                                        | "                |
| 180                                     | 8.3K      |        |              |     |       |                  |      |          | 11           |            |                                          |                  |
| 120                                     |           |        |              |     |       |                  |      |          | 10 c-aps.    |            | max ADU ~ 1700 - 1900<br><br>cosmic ray. |                  |
| All to Perseus with corrected filenames |           |        |              |     |       |                  |      |          |              |            |                                          |                  |

pg #1 Wed/Thur (147)

Date 1995 July 12/13 Observers KK/Swt

Emulsion Batches:

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.....  
.....

| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CF01669   | Bias <4> |              |                     |                         |                       |                   |             |                           | —    |
| 70        | COMP     |              |                     | 20:58                   |                       |                   |             | diffuser<br>FeNe          | 180  |
| 71        | HD136202 | 15 14 12     | +2 08 37            | 21 04 23                |                       | 1 11 W            |             |                           | 1300 |
| 72        | COMP     |              |                     |                         |                       |                   |             | "                         | 180  |
| 73        | HD159561 | 17 30 18     | +12 37 58           | 21 39 10                |                       | 0 33 E            |             |                           | 1100 |
| 74        | COMP     |              |                     |                         |                       |                   |             | "                         | 180  |
| 75        | HD172167 | 18 33 33     | +38 41 26           | 22 04 27                |                       |                   |             |                           | 201  |
| 76        | "        | "            | "                   | 22 08 09                |                       |                   |             |                           | 137  |
| 77        | "        | "            | "                   | 22 10 56                |                       | 1 17 E            |             |                           | 236  |
| 78        | COMP     |              |                     |                         |                       |                   |             | "                         | 180  |
| 79-83     | FLAT x 5 |              |                     |                         |                       |                   |             | diffuser in<br>Tungsten   | 120  |
| 84        | BIAS (4) |              |                     | 23 13                   |                       |                   |             |                           | —    |
| 85        | HD155125 | 17 04 39     | -15 36 04           | 23 24 36                |                       |                   |             |                           | 339  |
| 86        | "        | "            | "                   | 23 31 06                |                       |                   |             |                           | 383  |
| 87        | "        | "            | "                   | 23 38 35                |                       | 1 39 W            |             |                           | 349  |
| 88        | COMP     |              |                     |                         |                       |                   |             | diffuser on<br>FeNe       | 180  |

Spectr. Temp.

Focus... Su

Spectr. Temp.

Exp. Mtr.

86 39

FILTER

1250

9260

50K

50K

50K

10.0K

15.0K

10.0K



Spectr. Temp.  $-100^{\circ}\text{C}$ .....

Dome Temp./Hum. 21.2/54.7%

Transparency Conditions. *patchy cloud.  $\rightarrow$  increasing*Focus *same as last night*

Spectr. Temp. ....

Dome Temp./Hum. 20.4/60.7%

0 400 1024 128 1 1 ccd/fnt

| Exp. Mtr.    | Seeing | Ptg. Mag. | Sp.   | Inst. | Grating/Tilt  | Slit     | Emulsion | P.H. | Program      | Remarks                                                   | Quality           |
|--------------|--------|-----------|-------|-------|---------------|----------|----------|------|--------------|-----------------------------------------------------------|-------------------|
| BG 39 FILTER |        |           |       | FF    | 600C<br>40.3° | 7x<br>50 | 4150 Å   | 1    |              |                                                           |                   |
|              |        |           |       |       |               |          |          | 3    |              |                                                           |                   |
| 1250         | 3-4"   | V<br>5.06 | F8IV  |       |               |          |          | 4    | Std. Vel.    | in cloud.                                                 | ~6000 Å above bkg |
|              |        |           |       |       |               |          |          | 5    |              |                                                           |                   |
| 9260         | 3"     | B<br>2.23 | A5III |       |               |          |          | 6    | KK A*        | in cloud, most of counts within a few minutes at the end. | ~10 K above bkg   |
|              |        |           |       |       |               |          |          | 7    |              |                                                           |                   |
| 50 K         |        | B<br>0.04 | A0II  |       |               |          |          | 8    | KK A* (Vega) | in cloud, just barely visible                             | ~90 K above A0V   |
| 50 K         |        | "         | "     |       |               |          |          | 9    | "            | less cloud now.                                           |                   |
| 50 K         |        | "         | "     |       |               |          |          | 8    | "            | "                                                         |                   |
|              |        |           |       |       |               |          |          | 10   |              |                                                           |                   |
|              |        |           |       |       |               |          |          | 11   |              | done closed                                               | max 1.9 K         |
|              |        |           |       |       |               |          |          | 1    |              |                                                           |                   |
| 10.0K        |        | V<br>2.49 | A1V   |       |               |          |          | 4    | KK A*        | done opened 5 min before clear now                        |                   |
| 10.0K        |        |           |       |       |               |          |          | 4    |              | slightly stronger than 1st                                |                   |
| 10.0K        |        |           |       |       |               |          |          | 4    |              | " weaker " "                                              |                   |
|              |        |           |       |       |               |          |          | 5    |              | clouds rolling in quickly                                 |                   |

pg #2.

149

Date 1995 July 12/13

Observers [KK] Smt

### Emulsion Batches:

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.....

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[illegible]



Spectr. Temp. .... Dome Temp./Hum. ....

150

[illegible]





Spectr. Temp. .... Dome Temp./Hum. ....

Transparency Conditions .....

152

[illegible]

pg 1 of 4

[Tues/Wed]

153

Date 1995 July 18/19.... Observers Blh / Smt.....

Emulsion Batches:

.....  
.....  
.....

| Plate No.      | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End  | Declination | Comparison<br>Type/Filter | Exp.  |
|----------------|----------------------|--------------|---------------------|-------------------------|-----------------------|--------------------|-------------|---------------------------|-------|
| CC34136/<br>37 | INBOARD/<br>OUTBOARD |              |                     |                         |                       |                    |             | Fedv<br>clear             | 50/60 |
| 38             | BIAS(4)              |              |                     |                         |                       |                    |             |                           | —     |
| 39             | COMP                 |              |                     |                         |                       |                    |             | "                         | 60    |
| 40             | HD130841             | 14 45 21     | -15 37 34           | 21 28 45                |                       | ~ 2 <sup>h</sup> W |             |                           | 160   |
| 41             | COMP                 |              |                     |                         |                       |                    |             | "                         | 60    |
| 42             | COMP                 |              |                     |                         |                       |                    |             | "                         | 60    |
| 43             | HD130109             |              |                     |                         |                       | 2 25 W             |             |                           | 150   |
| 44             | COMP                 |              |                     |                         |                       |                    |             | "                         | 60    |
| 45             | BIAS(4)              |              |                     | 21 45                   |                       |                    |             |                           | —     |
| 46-48          | FLAT x3              |              |                     |                         |                       | 2 40 W             | +2°         | Tung<br>K Ap              | 9     |
| 49/<br>50      | INBOARD/<br>OUTBOARD |              |                     |                         |                       |                    |             | Fedv<br>clear             | 40/75 |
| 51             | BIAS(4)              |              |                     | 22 32                   |                       |                    |             |                           | —     |
| 52             | COMP                 |              |                     |                         |                       |                    |             | "                         | 60    |
| 53             | HD138629             | 15 28 12     | +41 14 19           | 22 42 52                |                       | 2 56 W             |             |                           | 95A   |
| 54             | COMP                 |              |                     |                         |                       |                    |             | "                         | 60    |

Spectr. Tem

Focus...

Spectr. Tem

Exp. Mtr.

560

FILTER

1.9K

5.3K

39

FILTER

1.1K



Spectr. Temp.  $-100.2^{\circ}\text{C}$  Dome Temp./Hum.  $19.9^{\circ}\text{C}/67.1\%$  Transparency Conditions  $\text{Clear}$   
 Focus  $6.62/\cancel{6.72} 6.72$  @ FOCUS TEST  
 Spectr. Temp. ..... Dome Temp./Hum.  $19.0^{\circ}\text{C}/74.8\%$  @ 2nd FOCUS TEST FANS ON

154

| Exp. Mtr.              | Seeing | Ptg. Mag.            | Sp.  | Inst.       | Grating/Tilt                                          | Slit             | Emulsion                                           | P.H.  | Program       | Remarks                                                       | Plots/Atm Quality       |
|------------------------|--------|----------------------|------|-------------|-------------------------------------------------------|------------------|----------------------------------------------------|-------|---------------|---------------------------------------------------------------|-------------------------|
| 50/60<br>560<br>FILTER |        |                      |      | CASS<br>CCD | 1800 $\text{\AA}/\text{mm}$<br>$G = 5645$             | 30 $\mu\text{m}$ | 5895 $\text{\AA}$                                  | 3/4   | FOCUS<br>TEST | 420 0 50 1524 41 cool<br>good                                 |                         |
|                        |        |                      |      |             |                                                       |                  |                                                    | 1     |               | 430 0 50 1024 41 cool                                         |                         |
|                        |        |                      |      |             |                                                       |                  |                                                    | 5     |               |                                                               |                         |
| 11.9 K                 | 5"     | $\checkmark$<br>2.74 | Am   |             |                                                       |                  |                                                    | 6     | Bin           | S/N $\sim 550:1$                                              | 12.4 K                  |
|                        |        |                      |      |             |                                                       |                  |                                                    | 7     |               |                                                               |                         |
|                        |        |                      |      |             |                                                       |                  |                                                    | 8     |               |                                                               |                         |
| 5.3 K                  |        | $\checkmark$<br>3.72 | A0 V |             |                                                       |                  |                                                    | 9     | Telluric Std. |                                                               | 12.5 K                  |
|                        |        |                      |      |             |                                                       |                  |                                                    | 10    |               |                                                               |                         |
|                        |        |                      |      |             |                                                       |                  |                                                    | 11    |               |                                                               | 13 K<br><del>14 K</del> |
| BA 39<br>FILTER        |        |                      |      | CASS<br>CCD | 1800 $\text{\AA}/\text{mm}$<br>$G = 4655$<br>$\equiv$ | 30 $\mu\text{m}$ | 4465 $\text{\AA}^*$<br>$\#(4463 \pm 2 \text{\AA})$ | 12/13 | FOCUS<br>TEST | set a bit cool but T is falling<br>$T = 19.0^{\circ}\text{C}$ |                         |
|                        |        |                      |      |             |                                                       |                  |                                                    | 14    |               | cosmic rays                                                   |                         |
| 16.6 K                 | 5"     | $\checkmark$<br>5.09 | A5 V |             |                                                       |                  |                                                    | 15    | Bin A-shell   |                                                               | 8.5 K                   |
|                        |        |                      |      |             |                                                       |                  |                                                    | 16    |               |                                                               |                         |

pg 2 of 4

(155)

Date 1995 July 18/19: Observers Blm./Smt.....

Emulsion Batches:

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| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC34155   | COMP     |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 56        | HD148283 | 16 21 50     | +37 37 18           | 23 08 50                |                       | 2 38 W            |             |                           | 1510 |
| 57        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 58        | BIAS(4)  |              |                     | 23 38                   |                       |                   |             | -                         | -    |
| 59        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 60        | HD152614 | 16 49 17     | +10 29 48           | 23 45 52                |                       |                   |             |                           | 575  |
| 61        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 62        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 63        | HD158352 | 17 23 44     | 00 24 42            | 00 07 37                |                       | 2 43 W            |             |                           | 2000 |
| 64        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 65        | BIAS(4)  |              |                     | 0 50                    |                       |                   |             |                           | -    |
| 66        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 67        | HD164577 | 17 56 41     | 1 18 27             | ?                       |                       | 2 40 W            |             |                           | 2000 |
| 68        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 69        | HD164577 | "            | "                   | 1 25 37                 |                       | 3 08 W            |             |                           | 900  |
| 70        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |

Spectr. Ten

Focus...

Spectr. Len

Exp. Mr.

16.39  
FILTER

16.2K

16.4K

11.1K

13.8K

15.5K



Spectr. Temp.  $\sim 100.5^\circ\text{C}$  ..... Dome Temp./Hum.  $18.0^\circ\text{C}/76.4\%$  Transparency Conditions *fine, some clouds to S, windy.*  
 Focus .....  $6.68$  ..... FANS ON. (156)  
 Spectr. Temp. .... Dome Temp./Hum. .... 430 0 50 1024 4 1 ccd bit

| Exp. Mtr.       | Seeing | Ptg. Mag. | Sp. | Inst.       | Grating/Tilt                    | Slit      | Emulsion | P.H. | Program     | Remarks                                             | Quality |
|-----------------|--------|-----------|-----|-------------|---------------------------------|-----------|----------|------|-------------|-----------------------------------------------------|---------|
| BG 39<br>FILTER |        |           |     | CASS<br>CCD | 1500 $\text{blm}$<br>$G = 4655$ | 300 $\mu$ | 4463A    | 17   |             |                                                     |         |
| 16.2K           | 5"     | $5.52$    | A5V |             |                                 |           |          | 18   | Bln A-shell |                                                     | 7.3K    |
|                 |        |           |     |             |                                 |           |          | 19   |             | cosmic rays                                         |         |
|                 |        |           |     |             |                                 |           |          | 1    |             |                                                     |         |
|                 |        |           |     |             |                                 |           |          | 20   |             | S FAN TURNED OFF                                    |         |
| 16.4K           | 5"     | $4.30$    | B8V |             |                                 |           |          | 21   | Bln S13     |                                                     | 8.3K    |
|                 |        |           |     |             |                                 |           |          | 22   |             |                                                     |         |
|                 |        |           |     |             |                                 |           |          | 23   |             |                                                     |         |
| 11.1K           |        | $5.66$    | A8V |             |                                 |           |          | 24   |             | light clouds @ 00:21<br>Moderate @ times            |         |
|                 |        |           |     |             |                                 |           |          | 25   |             |                                                     |         |
|                 |        |           |     |             |                                 |           |          | 1    |             |                                                     |         |
|                 |        |           |     |             |                                 |           |          | 26   |             |                                                     |         |
| 18.8K           |        | $4.46$    | A1V |             |                                 |           |          | 27   | Bln S13     | ACER crashed during exposure, all header info lost. | 7.5K    |
|                 |        |           |     |             |                                 |           |          | 28   |             | time-dos is 8h ahead                                |         |
| 16.5K           | 4"     |           | "   |             |                                 |           |          | 29   | "           | ACER is 15 sec behind now                           | 7.0K    |
|                 |        |           |     |             |                                 |           |          | 30   |             | now                                                 |         |

pg 3 of 4

(157)

Date 1995 July 18/19

Observers Blm / Smt

Emulsion Batches:

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| Plate No.                           | Object       | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-------------------------------------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC34171                             | BIAS(4)      |              |                     | 1 43                    |                       |                   |             |                           | —    |
| 72                                  | COMP         |              |                     |                         |                       |                   |             | Fe Ar<br>clear            | 60   |
| 73                                  | HD164852     | 17 58 07     | +20 50 00           | 1 50 39                 |                       | 3 37 W            |             |                           | 1200 |
| 74                                  | COMP         |              |                     |                         |                       |                   |             | "                         | 60   |
| <sup>clock reset</sup><br>CG80002-5 | HD207754 x 4 | 21 46 12     | +43 25              |                         |                       |                   |             |                           | .667 |
| CG80006/07                          | " x 2        |              |                     |                         | ~ 2 30                | 0 11 W            | 88° AR+     | 1.0007<br>ATM MASS        | .133 |
| CC34175                             | BIAS(4)      |              |                     | 2 40                    |                       |                   |             |                           | —    |
| 76                                  | COMP         |              |                     |                         |                       |                   |             | Fe Ar<br>clear            | 60   |
| 77                                  | HD172187     | 18 33 42     | +43 08 12           | 2 44 05                 |                       | 4 02 W            |             |                           | 1520 |
| 78                                  | COMP         |              |                     |                         |                       |                   |             | "                         | 60   |
| 79                                  | COMP         |              |                     |                         |                       |                   |             | "                         | "    |
| 80                                  | HD187691     | 19 46 14     | +10 09 55           | 3 18 51                 |                       | 3 04 W            |             |                           | 436  |
| 81                                  | COMP         |              |                     |                         |                       |                   |             | "                         | 60   |
| 82                                  | BIAS(4)      |              |                     | 3 29                    |                       |                   |             |                           | —    |
| 83                                  | COMP         |              |                     |                         |                       |                   |             | "                         | 60   |

Spectr. Ter

Focus..

Spectr. Ter

Exp. Mtr.

86 39

FILTER

15.8K

7900

5100



Spectr. Temp. ... -100°C .....

Dome Temp./Hum. 16.8°C / 82.2%

Transparency Conditions . partly cloudy → clear .....

Focus ..... 6.68 .....

Dome Temp./Hum. 16.6°C / 83.7%

ONLY N DOME FAN ON

(158)

Spectr. Temp. ....

430 0 50 1024 4 1 ccd fast

Comparison  
Exp.

-

60

1200

60

1867

133

-

60

1520

60

"

436

0

-

60

| Exp. Mtr.       | Seeing             | Ptg. Mag. | Sp.    | Inst.                   | Grating/<br>Tilt   | Slit           | Emulsion | P.H. | Program             | Remarks                                                                                                            | Quality |
|-----------------|--------------------|-----------|--------|-------------------------|--------------------|----------------|----------|------|---------------------|--------------------------------------------------------------------------------------------------------------------|---------|
| BG 39<br>FILTER |                    |           |        |                         | 1800 Å<br>G = 4655 | 306 μ          | 4463 Å   | 1    |                     | ACER is ~ 15 sec behind<br>WWV now.                                                                                |         |
|                 |                    |           |        |                         |                    |                |          | 5    |                     |                                                                                                                    |         |
| 15.8K           | 4" 5" <sup>B</sup> | 5.19      | B3 IV  |                         |                    |                |          | 6    | Blu SB              |                                                                                                                    | 6.2K    |
|                 |                    |           |        |                         |                    |                |          | 7    |                     |                                                                                                                    |         |
|                 | 4" 5" <sup>V</sup> | 7.32      | KO III | EEV CCD<br>TV<br>GUIDER |                    | above<br>306 μ |          | -    | SEEING<br>TEST      | ACER reset to WWV clock<br>Dome W, no wind now, clear,<br>1/4 Moon is bright, 95% outside<br>1st set with CSS 386. |         |
|                 |                    |           |        |                         |                    |                |          | -    | "                   |                                                                                                                    |         |
|                 |                    |           |        |                         |                    |                |          | 1    |                     |                                                                                                                    |         |
|                 |                    |           |        |                         |                    |                |          | 8    |                     |                                                                                                                    |         |
| 7900            | 5" <sup>B</sup>    | 6.40      | F0 V   |                         |                    |                |          | 9    | Blu SB              | getting too far W for the<br>seeing                                                                                | 3.7K    |
|                 |                    |           |        |                         |                    |                |          | 10   |                     |                                                                                                                    |         |
|                 |                    |           |        |                         |                    |                |          | 11   |                     |                                                                                                                    |         |
| 5100            | 4" <sup>V</sup>    | 5.11      | F8 V   |                         |                    |                |          | 12   | 1AU Sth<br>Velocity | wind picking up again                                                                                              | 2.2K    |
|                 |                    |           |        |                         |                    |                |          | 13   |                     |                                                                                                                    |         |
|                 |                    |           |        |                         |                    |                |          | 14   |                     |                                                                                                                    |         |
|                 |                    |           |        |                         |                    |                |          | 15   |                     |                                                                                                                    |         |

pg 4 of 4 (159)

Date 1995 July 18/19 Observers Bln / Smt

Emulsion Batches: \

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| Plate No. | Object              | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|---------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34184   | HD180316            | 19 11 00     | +27 46              | 3 39 25                 |                       | 4 17 W            |             |                           | 1420  |
| 85        | COMP                |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60    |
| 86-88     | FLAT x3             |              |                     |                         |                       | 4 20 W            | +28°        | Tung<br>clear             | 19    |
| 89        | BIAS(4)             |              |                     | 4 12                    |                       |                   |             |                           | —     |
| 90/91     | INBOARD<br>OUTBOARD |              |                     |                         |                       | 0 <sup>h</sup>    | +37°        | FeAr<br>clear             | 60/75 |

Smt, On July 19/20, took calibration exposures to find Bln H $\beta$  region.

Spectr. Ten

Focus.....

Spectr. Ten

Exp. Mtr.

4000



Spectr. Temp. . . . .

Dome Temp./Hum. .... *TEST*

160

430 0 50 1024 41 Total

| Exposure              | Exp. Mir. | Seeing | Ptg. Mag. | Sp. | Inst.       | Grating/Tilt     | Slit | Emulsion                                    | P.H. | Program       | Remarks                                                                                                                                                                                                                     | Quality |
|-----------------------|-----------|--------|-----------|-----|-------------|------------------|------|---------------------------------------------|------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1420                  | 4000      | 4-5"   | B<br>6.64 | B8  | CASS<br>CCD | 1800nm<br>G=4655 | 300u | 4463A                                       | 16   | B/n SB        | cut short by sky counts                                                                                                                                                                                                     | 2K      |
| 60                    |           |        |           |     |             |                  |      |                                             | 17   |               |                                                                                                                                                                                                                             |         |
| 19                    |           |        |           |     |             |                  |      |                                             | 18   |               |                                                                                                                                                                                                                             | 15.7K   |
|                       |           |        |           |     |             |                  |      |                                             | 1    |               |                                                                                                                                                                                                                             |         |
| 6075                  |           |        |           |     |             |                  |      |                                             | 3/4  | FOCUS<br>TEST | right infocus @ row 281<br>∴ set a bit warm now -<br>for the night.                                                                                                                                                         | perfect |
| All to Perseus & DAT. |           |        |           |     |             |                  |      |                                             |      |               |                                                                                                                                                                                                                             |         |
|                       | →         |        |           |     | CASS<br>CCD | 831nm<br>G=3267  | 250u | 4848A<br>±1A<br>if FeAr maps<br>are correct |      |               | line identified as 4847A falls<br>on pixel row 514.<br>centred using ccdhist:<br>295 0 50 1024 4 1<br>(but this seems to change every<br>time grating is removed, I<br>will see if grating mount<br>repair has helped this) |         |

pg 1 [Fri/Sat] (161)

Date 1995 July 21/22 Observers ~~3~~ {Vys}/Smt

### Emulsion Batches:

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[illegible]



Spectr. Temp. . . . .

Dome Temp./Hum. ....

FANS OFF

162

| Exp. Mtr. | Seeing                                       | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program            | Remarks                                                       | Quality       |
|-----------|----------------------------------------------|-----------|-----|-------|--------------|------|----------|------|--------------------|---------------------------------------------------------------|---------------|
| 20/30     |                                              |           |     | CASS  | 1800 Lm      | 306μ | 5305 Å   | 3/4  | FOCUS TEST         | 415 0 50 1024 4 1 ccd fit                                     |               |
| —         |                                              |           |     | CCD   | G=5235       |      |          | 1    |                    | Set a b.t cool for T drop                                     |               |
| 20        |                                              |           |     |       |              |      |          | 5    |                    | 410 0 50 1024 4 1 ccd fit                                     |               |
| 2720      | 613†                                         | 3"        | ✓   | M     |              |      |          | 6    | {Vys}              | SUM OF 4 BIASES                                               |               |
| 20        |                                              |           |     |       |              |      |          | 7    |                    | a few bits of cloud in the way, VERY WEAK                     |               |
| —         |                                              |           |     |       |              |      |          | 1    |                    | cos rays, sky lines, continuously and much much more!!!       |               |
| le.       | ASTRO clock was out the last time I checked. |           |     |       |              |      |          |      |                    | *ALERT clock is 14 minutes ahead!!!                           |               |
| 20        |                                              |           |     |       |              |      |          | 8    |                    |                                                               |               |
| 1700      | 840                                          | 3"        | ✓   | M0    |              |      |          | 9    | Marcy Std Velocity | {Vys} cos ray right across 1824 spectrum diagonally @ row 482 |               |
| 20        |                                              |           |     |       |              |      |          | 10   |                    |                                                               |               |
| 5         |                                              |           |     |       |              |      |          | 11   |                    | no more safety backup                                         | 12.5K → 12.0K |

p1 163

Date 1995 July 23/24 Observers Smt. {Vys}... [KK] as backup

Emulsion Batches:

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| Plate No.       | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34206/<br>07  | INBOARD/<br>OUTBOARD |              |                     |                         |                       |                   |             | FeNe<br>clear             | 20/35 |
| 08              | COMP                 |              |                     |                         |                       |                   |             | "                         | 20    |
| 09              | HD119850             | 13 40 36     | +15 27              | 21 07 33                |                       | 3 22 W            |             |                           | 720   |
| 10              | COMP                 |              |                     |                         |                       |                   |             | "                         | 20    |
| 11              | BIASx4               |              |                     | 21 21                   |                       |                   |             |                           | —     |
| 12              | COMP                 |              |                     |                         |                       |                   |             | "                         | 20    |
| 13              | BD+48 2108           | 13 15 27     | +48 18 11           | 21 29 11                |                       | 4 14 W            |             |                           | 990   |
| 14              | COMP                 |              |                     |                         |                       |                   |             | "                         | 20    |
| 15              | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 16              | BD+35 2439           | 13 16 20     | +34 48 28           | 21 54 13                |                       | 5 00 W            |             |                           | 2300  |
| 17              | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 18              | BIASx4               |              |                     | 22 35                   |                       |                   |             |                           | —     |
| CG80008-<br>11  | HD176844 x4          | 18 57 03     | +40 32 36           |                         |                       |                   |             |                           | .067  |
| 12/13           | " x2                 | "            | "                   |                         | 22 50                 | 0°22' E           | 85° Alt     | 1.0046<br>air mass        | .133  |
| CC342019-<br>23 | FLAT x5              |              |                     |                         |                       | 0 15 E            | +41°        | Tang<br>YZ Ap             | 6     |
| 24              | BIASx4               |              |                     |                         |                       |                   |             |                           | —     |



Spectr. Temp.  $-100$  ..... Dome Temp./Hum.  $21.9^{\circ}\text{C}/80.6\%$  Transparency Conditions  $\text{Clear}$  .....

Focus .....  $6.66$  .....

@ focus test FANS ON

Spectr. Temp. ....

Dome Temp./Hum.  $20.4^{\circ}\text{C}/85.2\%$

@ seeing test 410 0 50 1024 4 1 ccd test

164

| Exp. Mtr. | Seeing | Ptg. Mag.                  | Sp.    | Inst.                   | Grating/Tilt                  | Slit               | Emulsion          | P.H.                                          | Program               | Remarks                                                                                    | Quality         |
|-----------|--------|----------------------------|--------|-------------------------|-------------------------------|--------------------|-------------------|-----------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------|-----------------|
| 20/35     |        |                            |        | CASS<br>CCD             | 1800 $\text{\AA}$ /<br>G=5235 | 306 $\mu$          | 5305 $\text{\AA}$ | 3/4                                           | FOCUS<br>TEST         | in focus, chip still cooling<br>from $-60^{\circ}\text{C} \rightarrow -50^{\circ}\text{C}$ |                 |
| 20        |        |                            |        |                         |                               |                    |                   | <del>8</del>                                  |                       | chip not @ $-100^{\circ}\text{C}$ until<br>21:05                                           |                 |
| 720       | 1182   | 4"-5" <sup>V</sup><br>8.48 | M1     |                         |                               |                    |                   | <del>8</del><br><del>9</del><br><del>10</del> | Marcy Std<br>Velocity | Vys 308                                                                                    | 1.0K            |
| 20        |        |                            |        |                         |                               |                    |                   | 1                                             |                       | <u>SUM of 4 biases.</u>                                                                    |                 |
| 20        |        |                            |        |                         |                               |                    |                   | 5                                             |                       | S DOME FAN TURNED OFF.                                                                     |                 |
| 990       | 1820   | 4" <sup>V</sup><br>8.5     | M2     |                         |                               |                    |                   | 6                                             | {Vys} 142 AB          |                                                                                            | 1.8K            |
| 20        |        |                            |        |                         |                               |                    |                   | 7                                             |                       |                                                                                            |                 |
| "         |        |                            |        |                         |                               |                    |                   | 11                                            |                       |                                                                                            |                 |
| 2300      | 620    | <sup>V</sup><br>10.6       | M0     |                         |                               |                    |                   | 12                                            | {Vys} 47              | thin wispy clouds coming in<br>95% catwalk humidity                                        | 370 above<br>Wg |
| "         |        |                            |        |                         |                               |                    |                   | 13                                            |                       |                                                                                            |                 |
| "         |        |                            |        |                         |                               |                    |                   | <del>13</del><br><del>1</del>                 |                       |                                                                                            |                 |
| 0.67      | 3"     | <sup>V</sup><br>6.65       | M2 III | EEV CCD<br>TV<br>GUIDER |                               | above<br>306 $\mu$ |                   | —                                             | SEEING<br>TEST        | Dome SW, no wind, thin wispy<br>clouds, dome beginning to<br>drip                          |                 |
| 0.133     |        |                            |        |                         |                               |                    |                   | —                                             | "                     | 94% on catwalk<br>little fan F                                                             |                 |
| 6         |        |                            |        |                         |                               |                    |                   | 14                                            |                       |                                                                                            | 14.5K<br>913.6K |
| —         |        |                            |        |                         |                               |                    |                   | 1                                             |                       |                                                                                            |                 |

pg #1 (163)

Date 1995 July 27/28

Observers Smt. / ~~EU~~ [Rm]

[Blw] as backup

Emulsion Batches:

NO... RA... encoder...

| Plate No.      | Object              | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|----------------|---------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 34225<br>26 | INBOARD<br>OUTBOARD |              |                     |                         |                       |                   |             | Felt<br>clean             | 60/70 |
| 27             | BIAS(4)             |              |                     | 21 10                   |                       |                   |             |                           | —     |
| 28             | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |
| 29             | HD 171391           | 18 29 29     | -11 03 19           | 21 22 59                |                       | 1 00 E            |             |                           | 460   |
| 30             | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |
| 31             | COMP                |              |                     |                         |                       |                   |             | "                         | "     |
| 32             | HD 173297           | 18 39 20     | -20 45 00           | 21 43 51                |                       | 0 35 E            |             |                           | 1200  |
| 33             | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |
| 34             | BIAS(4)             |              |                     | 22 10                   |                       |                   |             |                           | —     |
| 35             | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |
| 36             | HD 180583           | 19 12 00     | +27 44 59           | 22 18 12                |                       | ~ 0 45 E          |             |                           | 901   |
| 37             | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |
| 38             | COMP                |              |                     |                         |                       |                   |             | "                         | "     |
| 39             | HD 203156           | 21 15 23     | +37 48 55           | 22 45 24                |                       | ~ 1 40 E          |             |                           | 800   |
| 40             | COMP                |              |                     |                         |                       |                   |             | "                         | 60    |

Spectr. Tem.

Focus....

Spectr. Tem.

Exp. Mir.

26 560

FILTER

4400

285

4400

4450



Spectr. Temp. -100.....

Dome Temp./Hum. 22.9°C/66.4%

Transparency Conditions . hazy on horizon.....

Focus .....6.62.....

Spectr. Temp. ....

Dome Temp./Hum. ....

FANS OFF

164

410 0 50 1024 4 1 ccd font

| Exp. Mtr.        | Seeing | Ptg. Mag.   | Sp.           | Inst.       | Grating/Tilt        | Slit | Emulsion                                    | P.H. | Program                  | Remarks                                        | Quality |
|------------------|--------|-------------|---------------|-------------|---------------------|------|---------------------------------------------|------|--------------------------|------------------------------------------------|---------|
| OG 560<br>FILTER |        |             |               | CASS<br>CCD | 1800 l/mm<br>G-6010 | 306μ | 6400Å*                                      | 3/4  | FOCUS<br>TEST            | in focus, maybe a bit cool<br>if anything      |         |
|                  |        |             |               |             |                     |      | 6395Å <sup>2</sup><br>@ row 512<br>actually | 1    |                          |                                                |         |
| 4400             | 5"     | V<br>5.14   | G8III         |             |                     |      |                                             | 5    |                          |                                                |         |
|                  |        |             |               |             |                     |      |                                             | 6    | 1AU std vel<br>candidate |                                                | 10K     |
|                  |        |             |               |             |                     |      |                                             | 7    |                          |                                                |         |
|                  |        |             |               |             |                     |      |                                             | 8    |                          |                                                |         |
| 1285             | 5"     | <V><br>7.48 | G0 Ib         |             |                     |      |                                             | 9    | Rm                       | V350 Sgr, hazy here                            | 2.7K    |
|                  |        |             |               |             |                     |      |                                             | 10   |                          |                                                |         |
|                  |        |             |               |             |                     |      |                                             | 1    |                          |                                                |         |
|                  |        |             |               |             |                     |      |                                             | 11   |                          |                                                |         |
| 4400             | 4-5"   | <V><br>6.14 | F6 I<br>-II b |             |                     |      |                                             | 12   | Rm                       | V473 Lyr some cloud<br>or haze.                | 10K     |
|                  |        |             |               |             |                     |      |                                             | 13   |                          |                                                |         |
|                  |        |             |               |             |                     |      |                                             | 14   |                          |                                                |         |
| 4450             | 4-6"   | 5.8<br>-5.9 | F2            |             |                     |      |                                             | 15   | Rm                       | V1334 Cyg seeing kept<br>deteriorating<br>wind | 11.3K   |
|                  |        |             |               |             |                     |      |                                             | 16   |                          |                                                |         |

pg#2 (165)

Date 1995 July 27/28 Observers [Rm] Smt 8ln as backup

### Emulsion Batches:

no RA encoder

.....

Secur. Te

## Focus . . .

240  
C. J. T.

[illegible]



Focus ..... 6.62 .....

Spectr. Temp.  $-101.7^{\circ}\text{C}$

Dome Temp./Hum. 21.1°C / 76.4%

Dome Temp./Hum. *20.7°C / 79.6%*  
*after seeing test*

Transparency Conditions ..... *hazy*

FANS OFF

166

910 0 50 1024 4 1 10dhr

[illegible]

pg 1 (167)

Date 1995 July 28/29 Observers [Rm] Smt Hdy as backup

Emulsion Batches:

.....  
.....  
.....

| Plate No.     | Object               | R.A.<br>1900               | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.         |
|---------------|----------------------|----------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|--------------|
| CC34260/61    | INBOARD/<br>OUTBOARD |                            |                     |                         |                       |                   |             | FeAr<br>clear             | 60/70        |
| 62            | BIAS(4)              |                            |                     | 0 50                    |                       |                   |             |                           | —            |
| 63            | COMP                 |                            |                     |                         |                       |                   |             | "                         | 60           |
| 64            | HD180583             | 19 11 59                   | +27 44 59           | 0 57 04                 |                       | 2 <sup>h</sup> W  |             |                           | 570          |
| 65            | COMP                 |                            |                     |                         |                       |                   |             | "                         | 60           |
| 66            | BIAS(4)              |                            |                     | 1 10                    |                       |                   |             |                           | —            |
| 67            | COMP                 |                            |                     |                         |                       |                   |             | "                         | 60           |
| 68            | HD187691             | 19 46 14                   | +10 09 55           | 1 15 55                 |                       | 1 40 W            |             |                           | 360          |
| 69            | COMP                 |                            |                     |                         |                       |                   |             | "                         | 60           |
| 680020-23     | HD202754 x4          | 21 49 59 <sup>1995.6</sup> | +43 51 48           |                         |                       |                   |             |                           | .067         |
| 24/25         | " x2                 | 21 46 12 <sup>1900</sup>   | +43 25              |                         | 1 31                  | 0 10 E            | 88° Alt     |                           | .133         |
| CC34270-72    | FLAT x3              |                            |                     |                         |                       |                   |             | turn<br>1/2 Ap            | 2            |
| <del>73</del> | <del>BIAS(4)</del>   |                            |                     | <del>1 48</del>         |                       |                   |             |                           | <del>—</del> |

CCD  
Spec. Ten

Focus.....

Spectr. Ten

Exp. Mir.

560

Filter

3600

370

NOT



410 0 50 1024 4 1 ~~ccdfmt~~

pg 1 (169)

Date 1995 July 30/3.1 Observers [Rm] Smt., Hdy... as backup

Emulsion Batches:

no... telescope pos'n...  
...encoders...

\*ACER clock is 55 sec ahead of WWV

| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC34273   | COMP     |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 74        | HD161096 | 17 38 32     | + 4 36 32           | 21 47 48                |                       |                   |             |                           | 1742 |
| 75        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 76        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 77        | HD173297 | 18 39 20     | -20 45              | 22 11 30                |                       |                   |             |                           | 1742 |
| 78        | COMP     |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60 s |
| 79        | BIAS(4)  |              |                     | 22 54                   |                       |                   |             |                           | -    |
| 80        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 81        | HD180583 | 19 11 59     | 27 44 59            | 23 09 41                |                       |                   |             |                           | 650  |
| * 82      | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| ** 83     | COMP     |              |                     |                         |                       |                   |             | "                         | "    |
| 84        | HD331970 | 20 08 27     | + 32 34 16          | 23 34 21                |                       | 0 05 W            |             |                           | 1611 |
| 85        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 86        | BIAS(4)  |              |                     | 0 04                    |                       |                   |             |                           | -    |
| 87        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |

Spectr. Ter

Focus...

Spectr. Ter

Exp. Mtr.

26 568

FILTER

500

5200

5125

1000



Spectr. Temp. .... -100.5°C

Dome Temp./Hum. 22.9°C/53.8%

Transparency Conditions ... hazy only on horizon...  
very good.

Focus ..... 6:62

Spectr. Temp. ....

Dome Temp./Hum. ....

FANS OFF, ops

170

410 0 50 1024 4 1 collect

Comparison  
ter) Exp.

| Exp. Mtr.        | Seeing | Ptg.<br>Mag. | Sp.              | Inst.       | Grating/<br>Tilt | Slit | Emulsion | P.H. | Program | Remarks                | Quality |
|------------------|--------|--------------|------------------|-------------|------------------|------|----------|------|---------|------------------------|---------|
| CG 568<br>FILTER |        |              |                  | CASS<br>CCD | 1800nm<br>G=6010 | 306μ | 6395A    | 5    |         |                        |         |
| <del>5200</del>  |        | V<br>2.77    | K2 III<br>CN 0.5 |             |                  |      |          | 6    | Std Vel |                        | 8K      |
|                  |        |              |                  |             |                  |      |          | 7    |         |                        |         |
|                  |        |              |                  |             |                  |      |          | 8    |         |                        |         |
| 5200             |        | <V><br>7.48  | ~G0 Ib           |             |                  |      |          | 9    | Rm      | V350 Sgr               | 11.9K   |
|                  |        |              |                  |             |                  |      |          | B    |         |                        |         |
|                  |        |              |                  |             |                  |      |          | 1    |         |                        |         |
|                  |        |              |                  |             |                  |      |          | 11   |         |                        |         |
| 5125             |        | <V><br>6.19  | F6 I<br>- IIb    |             |                  |      |          | 12   | Rm      | V473 Lyr               |         |
|                  |        |              |                  |             |                  |      |          | 13   |         |                        |         |
|                  |        |              |                  |             |                  |      |          | 14   |         | *ALCR clock set to WWV |         |
| 1000             |        | V<br>9.1-9.8 | F8 -<br>G2 Ib    |             |                  |      |          | 15   | Rm      | MW Cyg                 | 2.4K    |
|                  |        |              |                  |             |                  |      |          | 16   |         |                        |         |
|                  |        |              |                  |             |                  |      |          | 1    |         |                        |         |
|                  |        |              |                  |             |                  |      |          | 17   |         |                        |         |





Spectr. Temp. . . . .

Dome Temp./Hum. . . . .

Transparency Conditions . *clear*.....

410 0 50 1024 4 1 ~~conf~~

[illegible]

pg 1 (173)

Date 1995 July 31 / Aug 1 Observers Bln / Smt

Emulsion Batches:

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.....

| Plate No.      | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|----------------|------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34309/<br>10 | INBOARD/OUTBOARD |              |                     |                         |                       |                   |             | Fed<br>clear              | 40/75 |
| 11             | BIAS(4)          |              |                     |                         |                       |                   |             |                           | —     |
| 12             | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 13             | HD130841         | 14 45 21     | -15 37 34           | 20 52 50                |                       | 2 25 W            |             |                           | 180   |
| 14             | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 15             | BIAS(4)          |              |                     | 20 59 30                |                       |                   |             |                           | —     |
| 16             | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 17             | HD126053         | 14 18 08     | +1 42 36            | 21 08 40                |                       | 3 20 W            |             |                           | 910   |
| 18             | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 19-21          | FLAT x 3         |              |                     |                         |                       |                   | +1°         | Turn<br>clear             | 22    |
| 22             | BIAS(4)          |              |                     | 21 31                   |                       |                   |             |                           | —     |
| 23/24          | INBOARD/OUTBOARD |              |                     |                         |                       |                   |             | Fed<br>clear              | 30/75 |
| 25             | BIAS(4)          |              |                     |                         |                       |                   |             |                           | —     |
| 26             | COMP             |              |                     |                         |                       |                   |             | "                         | 60    |
| 27             | SKY              |              |                     | 22 51 47                |                       | 0 0 0             | +42°        |                           | 3600  |

CC  
Spectr. Ten

Focus....

Spectr. Ten

Exp. Mtr.

BG 37

FILTER

16 OK

4.6K

FILTER

00



CCP  
Spectr. Temp. .... -100.5°C

Dome Temp./Hum. 25.5°C/49.2%  
@ FOCUS TEST

Transparency Conditions .. Very clear

Focus ..... 6.62.../6.64

Spectr. Temp. ....

Dome Temp./Hum. ....

410 0 50 1024 4 1 CCD Unit

(174)

| Expansion<br>Mtr. Exp. | Exp. Mtr.       | Seeing | Ptg.<br>Mag. | Sp. | Inst.       | Grating/<br>Tilt     | Slit      | Emulsion                     | P.H.     | Program       | Remarks                                                                                            | Max. Alt.<br>Quality |
|------------------------|-----------------|--------|--------------|-----|-------------|----------------------|-----------|------------------------------|----------|---------------|----------------------------------------------------------------------------------------------------|----------------------|
| 40/75                  | BG 37<br>FILTER |        |              |     | CASS<br>CCD | 1800 l/m<br>G = 4673 | 306 $\mu$ | 4463 Å<br>$\pm 2 \text{ Å}$  | 3/4<br>1 | FOCUS<br>TEST | right in focus                                                                                     |                      |
| 60                     |                 |        |              |     |             |                      |           |                              | 5        |               |                                                                                                    |                      |
| 180                    | 16.0K           | 3"     | V<br>2.74    | Am  |             |                      |           |                              | 6        | Bln 5B        | partially obstructed by 7.5K<br>platform/dome. 22° Alt (end)                                       |                      |
| 60                     |                 |        |              |     |             |                      |           |                              | 7        |               |                                                                                                    |                      |
| —                      |                 |        |              |     |             |                      |           |                              | 1        |               |                                                                                                    |                      |
| 60                     |                 |        |              |     |             |                      |           |                              | 8        |               |                                                                                                    |                      |
| 910                    | 4.6K            | 3"     | V<br>6.27    | G1V |             |                      |           |                              | 9        | Std. Vel      | (end) 28° Alt 2.2K                                                                                 |                      |
| 60                     |                 |        |              |     |             |                      |           |                              | 10       |               |                                                                                                    |                      |
| 22                     |                 |        |              |     |             |                      |           |                              | 11       |               |                                                                                                    | 15.8K<br>→ 15.2K     |
| —                      |                 |        |              |     |             |                      |           |                              | 1        |               |                                                                                                    |                      |
| 30/75                  | 50 FILTER       |        |              |     | CASS<br>CCD | 831 l/m<br>G = 3261  | 250 $\mu$ | 4845 Å<br>(H $\beta$ region) | 3/4<br>1 |               | 285 0 50 1024 4 1 CCD Unit<br>6.62 was too warm 6.66 too cool<br>by same amount, will set to 6.64. |                      |
| 60                     |                 |        |              |     |             |                      |           |                              | 12       |               |                                                                                                    |                      |
| 3600                   | 100             |        |              |     |             |                      |           |                              | 13       | Bln           |                                                                                                    |                      |

p9 2 (175)

Date 1995 July 31 / Aug 1 Observers Bln / Smt

Emulsion Batches:

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| Plate No.   | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34328     | BIAS (4)             |              |                     |                         |                       |                   |             |                           | —     |
| 29          | SKY                  |              |                     | 23 55 35                |                       | 0 00              | +42°        |                           | 3600  |
| 30          | BIAS (4)             |              |                     |                         |                       |                   |             |                           | —     |
| 31          | SKY                  |              |                     | 0 59 40                 |                       | "                 | "           |                           | 3600* |
| 32          | BIAS (4)             |              |                     |                         |                       |                   |             |                           |       |
| 33          | COMP                 |              |                     |                         |                       |                   |             | Felt<br>clear             | 60    |
| 34-36       | FLAT x 3             |              |                     |                         |                       |                   |             | Tung<br>clear             | 5     |
| CG80026-29  | HD 214946 x 4        | 22 36 42     | +44 29              |                         |                       |                   |             |                           | .0675 |
| 30/31       | " x 2                |              |                     |                         | 2 37                  | 0 17 W            | 87° Alt     |                           | .1335 |
| CC34337/38  | INBOARD/<br>OUTBOARD |              |                     |                         |                       |                   |             | Felt<br>clear             | 40/75 |
| 39          | BIAS (4)             |              |                     | 3 09                    |                       |                   |             |                           | —     |
| 40          | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 41          | HD 214946            | 22 36 42     | +44 29              | 3 13 30                 |                       | 1 33 W            |             |                           | 2400  |
| 42          | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 43          | BIAS (4)             |              |                     | 3 57                    |                       |                   |             |                           | —     |
| 44-46<br>47 | FLAT x 3<br>BIAS (4) |              |                     |                         |                       | 0 00              | +44°        | Tung<br>clear             | 22    |

Spectr. Ter

Focus...

Spectr. Ter

Exp. Mir.

89

90

639  
LTER

830



FANS OFF 176  
285 0 50 1024 4 1 credit.

| Exp.  | Mtr.            | Seeing | Pg.<br>Mag. | Sp. | Inst.                | Grating/<br>Tilt               | Slit               | Emulsion           | P.H.          | Program        | Remarks                                                         | Quality          |
|-------|-----------------|--------|-------------|-----|----------------------|--------------------------------|--------------------|--------------------|---------------|----------------|-----------------------------------------------------------------|------------------|
| -     |                 |        |             |     | CASS<br>CCD          | 8312/m<br>$G = 3261$           | 250 $\mu$          | 4845Å              | 1             |                |                                                                 |                  |
| 3600  | 89              |        |             |     |                      |                                |                    | (H $\beta$ region) | 14            | Bln            |                                                                 |                  |
| -     |                 |        |             |     |                      |                                |                    |                    | <del>15</del> |                |                                                                 |                  |
| 3600* | 90              |        |             |     |                      |                                |                    |                    | 15            | Bln            | * GP13 error @ 154 and exposure ended prematurely by 5 minutes. |                  |
|       |                 |        |             |     |                      |                                |                    |                    | 1             |                |                                                                 |                  |
| 60    |                 |        |             |     |                      |                                |                    |                    | 16            |                |                                                                 |                  |
| 5     |                 |        |             |     |                      |                                |                    |                    | 17            |                |                                                                 | 12.2K<br>→ 11.7K |
| .067  |                 | 2"     | B<br>7.26   | A5  | FEL CCD<br>TV GUINER |                                | above<br>306 $\mu$ |                    | -             | SEEING<br>TEST | Dark W, no wind, hazy now,                                      |                  |
| .133  |                 | .      | .           | .   |                      |                                |                    |                    | -             |                | 85% catwalk                                                     |                  |
| 40/15 | BG 39<br>FILTER |        |             |     | CASS<br>CCD          | 18002/m<br>$G = 4723$          | 306 $\mu$          | 4463Å              | 18/19         | FOCUS<br>TEST  | T = 21.6°C, FOCUS = 6.64<br>in focus!                           |                  |
| -     |                 |        |             |     |                      |                                |                    |                    | 1             |                |                                                                 |                  |
| 60    |                 |        |             |     |                      | 6 hours<br>ago it<br>was 4673! |                    |                    | 20            |                |                                                                 |                  |
| 2400  | 2830            | 2"     | B<br>7.26   | A5  |                      |                                |                    |                    | 21            | Bln SB         | a few clouds now<br>→ increasing cloud.                         | 1.5K             |
| 60    |                 |        |             |     |                      |                                |                    |                    | 22            |                |                                                                 |                  |
| -     |                 |        |             |     | All 6 Perseus & DAT  |                                |                    |                    | 1             |                |                                                                 | 11.5K<br>→ HOK   |

pg 1 177

Date 1995 Aug. 1/2... Observers [Bln] Smt... Hdy. as backup

Emulsion Batches:

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| Plate No.      | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|----------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34348/<br>19 | INBOARD/<br>OUTBOARD |              |                     |                         |                       |                   |             | Fair<br>clear             | 40/75 |
| 50             | BIAS(4)              |              |                     | 23 13                   |                       |                   |             | "                         | —     |
| 51             | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 52             | HD164852             | 17 58 07     | +20 50 00           | 23 59 38                |                       | 2 33 W            |             | "                         | 1005  |
| 53             | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 54             | BIAS(4)              |              |                     | 0 21                    |                       |                   |             | "                         | —     |
| 55             | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 56             | HD172187             | 18 33 42     | +43 08 12           | 0 28 44                 |                       | 2 40 W            |             | "                         | 1810  |
| 57             | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 58             | BIAS(4)              |              |                     | 01 00                   |                       |                   |             | "                         | —     |
| CA80032<br>-35 | HD207754 x4          | 21 46 12     | +43 25              |                         |                       |                   |             |                           | .067  |
| 34/37          | " x2                 |              |                     |                         | 1 16                  | 0 10 E            | 88° Alt     |                           | .133  |
| CC34359        | COMP                 |              |                     |                         |                       |                   |             | Fair<br>clear             | 60    |
| 60             | HD192518             | 20 10 08     | +28 23 30           | 1 32 01                 |                       | 2 22 W            |             | "                         | 2480  |
| 61             | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |

CCD  
Spectr. Temp.

Focus....

Spectr. Temp.

Exp. Mtr.

Ba 39

FILTER

7570

4680

3800

2000



CCD  
Spectr. Temp. .... -100.5°C

Dome Temp./Hum. 22.9°C / 76.9%  
@ FOCUS TEST

Transparency Conditions . clear now

Focus .... 6.64

Spectr. Temp. ....

Dome Temp./Hum. 20.7°C / 81.5%  
once dome opened.

FANS OFF

410 0 50 1024 4 1 ccd fat.

178

| Exp. Mtr.               | Seeing | Ptg. Mag. | Sp.   | Inst.                   | Grating/Tilt      | Slit          | Emulsion | P.H. | Program        | Remarks                                                                     | Quality |
|-------------------------|--------|-----------|-------|-------------------------|-------------------|---------------|----------|------|----------------|-----------------------------------------------------------------------------|---------|
| BG 39<br>FILTER         |        |           |       | CASS<br>CCD             | 1800 nm<br>G=4585 | 30µm          | 4463 Å   | 3/4  | FOCUS<br>TEST  | Dome closed. set a bit cool.                                                |         |
|                         |        |           |       |                         |                   |               |          | 1    |                |                                                                             |         |
|                         |        |           |       |                         |                   |               |          | 5    |                |                                                                             |         |
| 7570                    | 6"     | B<br>5.19 | B3IV  |                         |                   |               |          | 6    | Bln SB         | seeing very bad, spectrum very spread out across cds                        | 3.2K    |
|                         |        |           |       |                         |                   |               |          | 7    |                |                                                                             |         |
|                         |        |           |       |                         |                   |               |          | 1    |                |                                                                             |         |
|                         |        |           |       |                         |                   |               |          | 8    |                |                                                                             |         |
| 4680                    | 5"     | B<br>6.40 | F0V   |                         |                   |               |          | 9    | Bln SB         | thin cloud here.                                                            |         |
|                         |        |           |       |                         |                   |               |          | 10   |                | ACER clock was fine at start but is now 6 minutes fast.                     |         |
|                         |        |           |       |                         |                   |               |          | 1    |                | ACER clock reset to WWV                                                     |         |
|                         | 4"     | 7.32      | K0III | CEV CCD<br>TV<br>GUIDER |                   | above<br>30µm |          | -    | SEEING<br>TEST | Dome W, thin clouds increasing 94% on catwalk                               |         |
|                         | "      | "         | "     |                         |                   |               |          | -    | "              | NO wind, same seen by the end.<br>T=20.1°C RH=85.3%                         |         |
| 3800<br><del>2800</del> | ?      | B<br>5.36 | A7IV  |                         |                   |               |          | 11   |                |                                                                             |         |
|                         |        |           |       |                         |                   |               |          | 12   | Bln A-shell*   | very cloudy here. spectrograph controller read 1.5K itself during exposure. |         |
|                         |        |           |       |                         |                   |               |          | 13   |                |                                                                             |         |

pg 2 179

Date 1995 Aug 1/2 Observers [Bin] Smt Bin as backup

### Emulsion Batches:

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.....

[illegible]



Spectr. Temp.  $-100.5^{\circ}\text{C}$

Dome Temp./Hum. 19.8°C/86.9%

Transparency Conditions . *mostly cloudy* . . . . . (18)

Focus ..... 6.64 .....

Spectr. Temp. . . . .

Dome Temp./Hum. ... 17.9°C / 86.1%  
@ focus test

410 0 50 1024 4 1 (cont)

[illegible]

pg#1 181 wed / Thurs

# "Ripple Tests" of Flats

Emulsion Batches:

Date 1995 Aug. 2/3... Observers [Bln] T.a./Smt.....

| Plate No.                           | Object                     | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End               | Declination | Comparison<br>Type/Filter | Exp.  |
|-------------------------------------|----------------------------|--------------|---------------------|-------------------------|-----------------------|---------------------------------|-------------|---------------------------|-------|
| CC343 <sup>77</sup> / <sub>78</sub> | Inboard / Outboard HARTMAN |              |                     | <sup>2</sup><br>20 59   |                       | 00 00                           | +41 08      | FeAr<br>clear             | 40/75 |
| CC34379                             | BIAS(4)                    |              |                     |                         |                       | "                               | "           |                           | —     |
| CC343 <sup>80</sup> / <sub>82</sub> | FLATS x 3                  |              |                     | 21 06                   |                       | 0 <sup>h</sup> 0 <sup>m</sup>   | +41°        | TUNG<br>clear             | 22sec |
| LOST → 83                           | Comp                       |              |                     | 21 10 46                |                       | "                               | "           | FeAr<br>clear             | 60s   |
| 84-86                               | FLATS x 3                  |              |                     | 21 17                   |                       | 0 <sup>h</sup> 0 <sup>m</sup>   | +0° 3'      |                           | 22sec |
| 87                                  | BIAS(4)                    |              |                     | 21 25                   |                       | "                               | "           |                           |       |
| 88                                  | Comp                       |              |                     | 21 27                   |                       | "                               | "           | FeAr<br>clear             | 60s   |
| 89-91                               | FLATS x 3                  |              |                     | 21 33                   |                       | 4 <sup>h</sup> 0 <sup>m</sup> W | +28° 5'     | TUNG<br>clear             | 22s   |
| 92                                  | BIAS(4)                    |              |                     |                         |                       | "                               | "           |                           | —     |
| 93                                  | COMP                       |              |                     | 21 39                   |                       | "                               | "           | FeAr<br>clear             | 60    |
| 94-96                               | FLAT x 3                   |              |                     | 21 50                   |                       | 4 <sup>h</sup> 0 <sup>m</sup> E | + 28° 5'    | TUNG<br>clear             | 22    |
| 97                                  | BIAS(4)                    |              |                     | 21 53                   |                       | "                               | "           |                           | —     |
| 98                                  | COMP                       |              |                     | 21 56                   |                       | "                               | "           | FeAr<br>clear             | 60    |
| 99/ <sub>100</sub>                  | Inboard / Outboard         |              |                     | 21 59                   |                       | "                               | "           | FeAr<br>clear             | 40/75 |
| 401/402                             | "                          |              |                     | 22 17                   |                       | 4 <sup>h</sup> 0 <sup>m</sup> W | + 28° 8'    | "                         | "     |

CCD

Spectr. Ten

Focus Set

Spectr. Ten

Exp. Mir.

T=21.4°

T=21.3°



CCD Spectr. Temp.  $-100.0^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+22.0^{\circ}\text{C}$  71.6% Transparency Conditions ... cloudy - dome closed.

Focus Set  $6.67$  ..... 90c gain

Spectr. Temp. .... Dome Temp./Hum. ....

c Lambda

410 0 50 1024 47 CCD KMT MAX

(182)

ADU

| Comparison<br>Iter. Exp. | Exp. Mtr.                    | Seeing    | Ptg.<br>Mag. | Sp. | Inst.    | Grating/<br>Tilt    | Slit | Emulsion | P.H.  | Program    | Remarks                                                                   | Quality          |
|--------------------------|------------------------------|-----------|--------------|-----|----------|---------------------|------|----------|-------|------------|---------------------------------------------------------------------------|------------------|
| 40/75                    | ( $T = 21.6^{\circ}\text{C}$ | 6.67 set) |              |     | CASS CCD | 1800 l/nm<br>G=4585 | 306u | 4463A    | 3/4c  | focus test |                                                                           |                  |
| —                        |                              |           |              |     |          |                     |      |          | 1/2c  |            |                                                                           |                  |
| 22s                      |                              |           |              |     |          |                     |      |          | 5c    |            | position not in FITS header                                               | 15.3K            |
| 60s                      |                              |           |              |     |          |                     |      |          | 6c    |            | CCDT = $-101.7^{\circ}\text{C}$ LOST                                      |                  |
| 22s                      |                              |           |              |     |          |                     |      |          | 7c    |            | pos'n in comment file                                                     |                  |
|                          |                              |           |              |     |          |                     |      |          | 1/2   |            | Lostare (15.3K)<br>+14.6K                                                 |                  |
| 60s                      |                              |           |              |     |          |                     |      |          | 8     |            |                                                                           |                  |
| 22s                      |                              |           |              |     |          |                     |      |          | 9     |            | pos'n in HA & DEC<br>fields.                                              | 14.9K<br>→       |
| —                        |                              |           |              |     |          |                     |      |          | 1     |            | CCDT = $-101.7^{\circ}\text{C}$                                           |                  |
| 60                       |                              |           |              |     |          |                     |      |          | 10    |            |                                                                           |                  |
| 22                       |                              |           |              |     |          |                     |      |          | 11    |            | spec. controller reset before this set<br>(inev. table with such a move.) | 15.9K<br>→ 15.2K |
| —                        |                              |           |              |     |          |                     |      |          | 1     |            |                                                                           |                  |
| 60                       |                              |           |              |     |          |                     |      |          | 12    |            |                                                                           |                  |
| 40/75                    | $T = 21.4^{\circ}\text{C}$   |           |              |     |          |                     |      |          | 13/14 | focus test | same as zenith focus                                                      |                  |
| "                        | $T = 21.3^{\circ}\text{C}$   |           |              |     |          |                     |      |          | 15/16 | "          | 1 pixel shift in pos'n from last test<br>same as zenith focus.            |                  |

pg 42 183

Date 1995 Aug 21/3..... Observers [Bh]...Tr /Smt.....

Emulsion Batches:

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| Plate No.  | Object                     | R.A.<br>1900                                       | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|------------|----------------------------|----------------------------------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34403/0A | Inboard/outboard           |                                                    |                     | 223459                  |                       | 000               | 000054      | Fear<br>clear             | 40/75 |
| 05/06      | " "                        |                                                    |                     | 224536                  |                       | 000               | +11 4812    | "                         | "     |
| 07         | BIAS(4)                    |                                                    |                     |                         |                       | "                 | "           |                           |       |
| (1) 08     | Comp                       |                                                    |                     | 225407                  |                       | "                 | "           | Fear<br>clear             | 60s   |
| 09/11      | FLATS x 3                  |                                                    |                     | 2257                    |                       | "                 | "           | FLATS<br>clear            | 22s   |
| 12/13      | Inboard/outboard @ 4500Å   |                                                    |                     | 2305                    |                       | "                 | "           | Fear<br>clear             | 40/75 |
| (2) 14     | BIAS(4)                    |                                                    |                     |                         |                       |                   |             |                           |       |
| 15         | Comp                       |                                                    |                     | 2312                    |                       |                   |             | Fear<br>clear             | 60s   |
| 16/18      | FLATS x 3                  | [Not done by usual "Repeat. Flat... Bat"]          |                     |                         |                       |                   |             | Tung<br>clear             | 20s   |
| 19/20      | Inboard/outboard @ 24535 Å |                                                    |                     |                         |                       |                   |             | Fear<br>clear             | 40/60 |
| (3) 21/23  | FLATS x 3                  | "Not done by Repeat, Batch," ie individually fixed |                     |                         |                       |                   |             | Tung<br>clear             | 18s   |
| 24         | BIAS(4)                    |                                                    |                     |                         |                       |                   |             |                           |       |
| 25         | Comp                       |                                                    |                     |                         |                       |                   |             | Fear<br>clear             | 60s   |
| 26/27      | Inboard/outboard for 24570 |                                                    |                     |                         |                       |                   |             | "                         | 40/60 |
| (4) 28-30  | FLATS x 3                  |                                                    |                     |                         |                       |                   |             | Tung<br>clear             | 17s   |
| 31         | BIAS(4)                    |                                                    |                     |                         |                       |                   |             |                           | -     |



CCD Spectr. Temp.  $-101.3^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+21.3^{\circ}\text{C}$   $74.8\%$  Transparency Conditions *cloudy out* .....

Focus ...  $6.67$  .....

Spectr. Temp. .... Dome Temp./Hum. .... *c. Limbaldi*

184  
MAX

| Exp. Mtr. | Seeing                      | Ptg. Mag. | Sp. | Inst.                     | Grating/Tilt                            | Slit | Emulsion | P.H.  | Program    | Remarks                                                                                                   | Quality                             |
|-----------|-----------------------------|-----------|-----|---------------------------|-----------------------------------------|------|----------|-------|------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------|
| 40/75     | $21.3^{\circ}\text{C}$      | Set 6.67  |     | CASS CCD                  | 1800 $\text{\AA}/\text{mm}$<br>$G=4585$ | 306  | 4463A    | 17/16 | focus test | <u>note we had to go</u><br><u>Back to West and</u><br><u><math>0^{\circ}</math> dec posing for focus</u> |                                     |
|           | $+21.3^{\circ}\text{C}$     |           |     | <u>START of "Test #1"</u> |                                         |      | "        | 19/20 | " "        |                                                                                                           |                                     |
|           |                             |           |     |                           |                                         |      | "        | 1/2   |            |                                                                                                           |                                     |
|           |                             |           |     |                           |                                         |      | "        | 21    |            |                                                                                                           |                                     |
|           |                             |           |     |                           |                                         |      | "        | 22    |            |                                                                                                           | 15.5K<br>$\rightarrow 14.7\text{K}$ |
|           |                             |           |     |                           | 1800 $\text{\AA}/\text{mm}$<br>$G=4610$ |      | 4500A    | 23/24 | focus test |                                                                                                           |                                     |
|           |                             |           |     |                           |                                         |      | "        |       |            |                                                                                                           |                                     |
|           |                             |           |     |                           |                                         |      | "        | 25    |            |                                                                                                           | (15.1K)<br>14.9K                    |
|           |                             |           |     |                           |                                         |      | "        | 26    |            |                                                                                                           |                                     |
|           | $T = +21.1^{\circ}\text{C}$ |           |     |                           | 1800 $\text{\AA}/\text{mm}$<br>$G=4635$ |      | 4535A    | 23/24 | focus test |                                                                                                           |                                     |
|           |                             |           |     |                           |                                         |      |          | 27    |            |                                                                                                           | (15K)<br>$\rightarrow 14.7$         |
|           |                             |           |     |                           |                                         |      |          | 1/2   |            |                                                                                                           |                                     |
|           |                             |           |     |                           |                                         |      |          | 28    |            |                                                                                                           |                                     |
|           |                             |           |     |                           | 1800 $\text{\AA}/\text{mm}$<br>$G=4660$ |      | 4570     | 23/24 | focus test |                                                                                                           |                                     |
|           |                             |           |     |                           |                                         |      |          | 22    |            |                                                                                                           | 15.6K<br>$\rightarrow 14.8K$        |
|           |                             |           |     |                           |                                         |      |          | 1     |            |                                                                                                           |                                     |

pg #3 185

Date 1995 Aug 2/3 Observers [Bin] Tn / Smt

### Emulsion Batches:

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[illegible]

CD  
Spectr. Te

## Focus . . .

Spectr. Te

Exp. Mur.

 $T = 2$ 

$T = 21$



Spectr. Temp. . . . .

Dome Temp./Hum. ....

Transparency Conditions *cloudy... dome closed....*

186  
410 0 50 1024 4 1 credit

| Exp. Mtr. | Seeing   | Ptg. Mag. | Sp. | Inst.        | Grating/Tilt       | Slit | Emulsion | P.H.  | Program       | Remarks                        | Quality         |
|-----------|----------|-----------|-----|--------------|--------------------|------|----------|-------|---------------|--------------------------------|-----------------|
| 60        |          |           |     | CHSS<br>(CD) | 1800 l/m<br>G=4660 | 300μ | ~4570 Å  | 25    |               |                                |                 |
| 40/60     | T=21.1°C |           |     |              | 1800 l/m<br>G=4685 |      | ~4610 Å  | 23/24 | FOCUS<br>TEST | seems to be in focus<br>still. |                 |
| 15s       |          |           |     |              |                    |      |          | 26    |               |                                | 15.2K<br>→14.3K |
| -         |          |           |     |              |                    |      |          | 1     |               |                                |                 |
| 60        |          |           |     |              |                    |      |          | 27    |               |                                |                 |
| 40/70     | T=21.0°C |           |     |              | 1800 l/m<br>G=4710 |      | ~4650 Å  | 23/24 | FOCUS<br>TEST |                                |                 |
| 13s       |          |           |     |              |                    |      |          | 28    |               |                                | 14.9K<br>→14.3K |
| -         |          |           |     |              |                    |      |          | 1     |               |                                |                 |
| 60        |          |           |     |              |                    |      |          | 29    |               |                                |                 |

Pg#1

Sun / Mon

187

Date . 1975. Aug 6/7. . . . . Observers [Bib] / Dby / Tr. . . . .

Emulsion Batches:

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| Plate No.  | Object                    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.   |
|------------|---------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|--------|
| cc34447/48 | inboard / outboard        |              |                     |                         |                       |                   | +30°        | FeAr<br>Clear             | 60/100 |
| 49         | Bias(4)                   |              |                     |                         |                       |                   |             |                           |        |
| 50         | Comp                      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s    |
| 51         | HD158352                  | 17:23:44     | 00:24:42"           | 22:23:21                |                       | 02 10 W           |             |                           | 1884s  |
| 52         | Comp                      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s    |
| 53         | Comp                      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s    |
| 54         | HD 138629                 | 15:28:12     | 49:14:19"           | 23:17:33                |                       | 04 45 W           |             |                           | 882s   |
| 55         | <del>HD 148283</del> Comp |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s    |
| 56         | Bias(4)                   |              |                     | 23:36                   |                       |                   |             |                           |        |
| 57         | Comp                      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s    |
| 58         | HD148283                  | 16:21:50     | +37:37:18"          | 23:45:28                |                       | 04 30 W           |             |                           | 1576s  |
| 59         | Comp                      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s    |
| 60         | Comp                      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s    |
| 61         | HD152614                  | 16:49:17     | +10° 20'            | 00:21:48                |                       | 04 24 W           |             |                           | 712s   |
| 62         | Comp                      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s    |
| 63         | Bias(4)                   |              |                     | 00:38:35                |                       |                   |             |                           |        |

CCO  
Spectr. Te.

Focus...

Spectr. Te.

Exp. Mtr.

T/6

8639  
F: Hep

4900

1600

16100

4000

1600



CCD Spectr. Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+20^{\circ}\text{C}$  ...  $77.2^{\circ}\text{C}$  Transparency Conditions ... *PAT. CLEAR* .....

Focus .... *6.6 F* .....

Spectr. Temp. .... Dome Temp./Hum. .... *90C gain*  
*C Lamberke* 416 0 50 1024 9 1 CCD FWH

188

| Exp. Mtr.     | Seeing     | Ptg. Mag.                 | Sp.                  | Inst.       | Grating/Tilt    | Slit        | Emulsion     | P.H. Si     | Program                                 | Remarks                       | Quality     |
|---------------|------------|---------------------------|----------------------|-------------|-----------------|-------------|--------------|-------------|-----------------------------------------|-------------------------------|-------------|
| <i>60/100</i> |            |                           |                      | <i>CHSS</i> | <i>1800 h/m</i> | <i>306u</i> | <i>4463A</i> | <i>3/4c</i> | <i>focus</i>                            |                               |             |
|               |            |                           | <i>-21.8^{\circ}</i> | <i>CCD</i>  | <i>G-4585</i>   |             |              |             |                                         |                               |             |
|               |            |                           |                      |             |                 |             |              | <i>1/2</i>  |                                         |                               |             |
|               |            |                           |                      |             |                 |             |              | <i>5</i>    |                                         |                               |             |
| <i>60s</i>    |            |                           |                      |             |                 |             |              | <i>6</i>    | <i>A shell Bln/wde</i>                  |                               | <i>6.3K</i> |
| <i>1004</i>   |            | <i>5.66</i>               | <i>A8V</i>           |             |                 |             |              | <i>7</i>    |                                         |                               |             |
| <i>60s</i>    |            |                           |                      |             |                 |             |              | <i>8</i>    |                                         | <i>after Sp control reset</i> |             |
| <i>60s</i>    |            |                           |                      |             |                 |             |              | <i>9</i>    | <i>A shell Bln/wde (&gt; 300/1 s/n)</i> |                               | <i>11K</i>  |
| <i>882s</i>   | <i>3"</i>  | <i>B<sub>5</sub>.09</i>   | <i>ASV</i>           |             |                 |             |              | <i>10</i>   |                                         |                               |             |
| <i>60s</i>    |            |                           |                      |             |                 |             |              |             |                                         | <i>CCD T = -101.2^{\circ}</i> |             |
| <i>60s</i>    |            | <i>V<sub>5</sub> 5.62</i> | <i>ASV</i>           |             |                 |             |              | <i>11</i>   |                                         |                               |             |
| <i>1576s</i>  | <i>3.5</i> |                           |                      |             |                 |             |              | <i>12</i>   | <i>A shell Bln/wde</i>                  |                               | <i>6.6K</i> |
| <i>60s</i>    |            |                           |                      |             |                 |             |              | <i>13</i>   |                                         |                               |             |
| <i>60s</i>    |            |                           |                      |             |                 |             |              | <i>14</i>   |                                         |                               |             |
| <i>712s</i>   |            | <i>B<sub>5</sub> 4.90</i> | <i>B8V</i>           |             |                 |             |              | <i>15</i>   | <i>Bln</i>                              |                               | <i>5K</i>   |
| <i>60s</i>    |            |                           |                      |             |                 |             |              | <i>16</i>   |                                         |                               |             |

Pg 42

Sun/Mon

189

Date 1995 Aug 6/7 Observers [Bln]/Dby./Tn.....

Emulsion Batches:

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| Plate No. | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End           | Declination          | Comparison<br>Type/Filter | Exp.     |
|-----------|------------------|--------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|---------------------------|----------|
| 64        | Comp             |              |                     |                         |                       | (From H&L circle)<br>03 42W | Dec circle<br>+01 20 | FeAr<br>Clear             | 60s      |
| 65        | HD 164577        | 17:56:41     | +1° 18' 00"         | 00:45:29                |                       |                             |                      |                           | 834s     |
| 66/67     | Comp             |              |                     |                         |                       |                             |                      | FeAr<br>Clear             | 60s      |
| 68        | HD 164852        | 17:58.1      | +20° 49' 60"        | 01:05:08                |                       | 04 12W                      |                      |                           | 1374s    |
| 69        | Comp             |              |                     |                         |                       |                             |                      | FeAr<br>Clear             | 60s      |
| 70        | Bias(4)          |              |                     |                         |                       |                             |                      |                           |          |
| 71        | Comp             |              |                     |                         |                       |                             |                      | FeAr<br>Clear             | 60s      |
| 72        | HD 180316        | 19:11:00     | +27° 46' 00"        | 01:40:15                |                       | 03 59 W                     |                      |                           | 2907s    |
| 73        | Comp             |              |                     |                         |                       |                             |                      | FeAr<br>Clear             | 60s      |
| 74        | Bias(4)          |              |                     |                         |                       |                             |                      |                           |          |
| 75        | Comp             |              |                     |                         |                       |                             |                      | FeAr<br>Clear             | 60s      |
| 76        | HD 192518        | 20:10:08     | +28° 23' 30"        | 02:41:23                |                       |                             |                      |                           | 846s     |
| 77        | Comp             |              |                     |                         |                       |                             |                      | FeAr<br>Clear             | 60s      |
| 78-86     | Flats x 9        |              |                     |                         |                       | 0 0                         | +30°                 | Tung<br>Clear             | 22s      |
| 87/88     | inboard/outboard |              |                     |                         |                       | "                           | "                    | FeAr<br>Clear             | 60s/100s |
| 89        | Bias(4)          |              |                     |                         |                       |                             |                      |                           |          |

CCD

Focus....

Spectr. Ter

Exp. Mtr.

B639  
Filter

14800

15000

7315

2225



CCD Spectr. Temp.  $-99.8^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+17.9^{\circ}\text{C}$   $+82.8$  Transparency Conditions Part Clear ..... (19/)

Dome Temp./Hum. +17.9°C...+82.8

Transparency Conditions Part Clear (19)

Focus . . . 6:67 . . . . .

Dome Temp./Hum. ...  $+17.4^{\circ}\text{C}$   $+8+8$ 

Rapid Crawling is and Humidity  
Rise

| Expansion<br>Det. Exp. | Exp. Mtr.       | Seeing | Pig.<br>Mag. | Sp.  | Inst.       | Grating/<br>Tilt    | Slit      | Emulsion | P.H.  | Program         | Remarks         | Quality         |
|------------------------|-----------------|--------|--------------|------|-------------|---------------------|-----------|----------|-------|-----------------|-----------------|-----------------|
| 60s                    | B639<br>Filleta |        |              |      | CASS<br>CCD | 1800lu/nm<br>G-4585 | 306 $\mu$ | 4463Å    | 17    |                 |                 |                 |
| 834s                   | 14800           |        | B=4.46       | A1V  |             |                     |           |          | 18    | Bln             | (Not doubled)   | 7.5K            |
| 60s                    |                 |        |              |      |             |                     |           |          | 19/20 |                 |                 | 1.5K            |
| 1374s                  | 15000           | 4"     | B=5.19       | B3IV |             |                     |           |          | 20    | Bln             |                 | 9K              |
| 60s                    |                 |        |              |      |             |                     |           |          | 22    |                 |                 |                 |
|                        |                 |        |              |      |             |                     |           |          |       |                 | CCDT = -100.2°C |                 |
| 60s                    |                 |        |              |      |             |                     |           |          | 23    |                 |                 |                 |
| 2907s                  | 7315            |        | B=6.64       | B8   |             |                     |           |          | 24    | Bln             |                 | 3.9K            |
| 60s                    |                 |        |              |      |             |                     |           |          | 25    |                 |                 | 1.3K            |
|                        |                 |        |              |      |             |                     |           |          |       |                 |                 |                 |
| 60s                    |                 |        |              |      |             |                     |           |          | 26    |                 |                 |                 |
| 846s                   | 2225            |        | B=5.36       | A7IV |             |                     |           |          | 27    | A Shell Bln-Wde | = 140/1 S/N     | 1.1K            |
| 60s                    |                 |        |              |      |             |                     |           |          | 28    |                 |                 | <del>1.1K</del> |
| 22s                    |                 |        |              |      |             |                     |           |          | 29    |                 | CCDT = -100.5°C | 15.2K           |
| 60s/100s               |                 |        |              |      |             |                     |           |          |       | focus           |                 |                 |

py#1 Mon/Tues 191

Date 1995 Aug 7/8.... Observers [Bl.]...T.n.....

Emulsion Batches:

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| Plate No.   | Object                      | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.   |
|-------------|-----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|--------|
| CC344 90/91 | Inboard / out board Hartman |              |                     | 2 20 18                 |                       | 00 21 W           | +42°        | FeAr<br>clear             | 60/100 |
| 92          | BIAS(4)                     |              |                     |                         |                       |                   |             |                           |        |
| 93          | Comp                        |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60s    |
| 94          | HD152614                    | 16 49 17     | +10 19 48           | 20 32 43                |                       | 00 49 W           |             |                           | 1407   |
| 95          | Comp                        |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60s    |
| 96          | BIAS(4)                     |              |                     | 20 59                   |                       |                   |             |                           |        |
| 97          | Comp                        |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60s    |
| 98          | HD154528                    | 17 00 54     | +77 48 00           | 21 12 52                |                       | 01 45 W           |             |                           |        |
| 99          | Comp                        |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60s    |
| CG800 38/41 | HD176844                    | 18 57 03     | +40 32 36           | 22 11                   |                       | 00 00             | +40°        | 4x                        | 67ms   |
| 42/43       | n                           |              |                     |                         |                       |                   |             | 2x                        | 133ms  |
| CC34500     | Comp                        |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60s    |
| 501         | HD164852                    | 17 58 07     | 20 50               | 22 28 04                |                       | 01 42 W           |             |                           | 1755   |
| 502         | Comp                        |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60s    |
| 503         | BIAS(4)                     |              |                     |                         |                       |                   |             |                           |        |

Exp. Mtr.  
B639  
Filter  
Spectr. Ten  
Focus...  
Spectr. Ten

Exp. Mtr.

B639  
Filter

13700

3,200

700



CCD Spectr. Temp.  $-100.2^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+20.5^{\circ}\text{C}$   $75.6\% \text{H}$  Transparency Conditions *part cloudy* .....

Focus  $6.70$  .....

Spectr. Temp. ....

Dome Temp./Hum.  $+19.0^{\circ}\text{C}$   $84.5\% \text{H}$  .....

90 C gain

192

C 14 m/s

410 0 50 1024 4 1 CCD FMT

| Exp. Mtr.   | Seeing | Ptg. Mag. | Sp.   | Inst.             | Grating/Tilt         | Slit      | Emulsion | P.H. | Program     | Remarks                                                                                                        | Quality |
|-------------|--------|-----------|-------|-------------------|----------------------|-----------|----------|------|-------------|----------------------------------------------------------------------------------------------------------------|---------|
| BG39 Filter |        |           |       | CHSS CCD          | 1800 l/m<br>G=4585   | 306 $\mu$ | 4463A    | 3/4  | focus test  |                                                                                                                | max AD4 |
|             |        |           |       |                   |                      |           |          | 1/2  |             |                                                                                                                |         |
|             |        |           |       |                   |                      |           |          | 5    |             |                                                                                                                | 1.3K    |
| 13700 2-3"  | B 4.30 |           | B8V   |                   |                      |           |          | 6    | Blu-SB      | > 300% S/N<br>thin cloud here                                                                                  | 8.4K    |
|             |        |           |       |                   |                      |           |          | 7    |             |                                                                                                                | 1.3K    |
|             |        |           |       |                   |                      |           |          | 1/2  | CCD Temp    | $-100.5^{\circ}\text{C}$                                                                                       |         |
|             |        |           |       |                   |                      |           |          | 8    |             |                                                                                                                | 1.3K    |
| 3,200 2-3"  | V 6.66 |           | A0    |                   |                      |           |          | 9    | SB-Blu      | getting too cloudy                                                                                             | 2.2K    |
|             |        |           |       |                   |                      |           |          | 10   |             |                                                                                                                | 1.3K    |
|             | 3"     | V 6.65    | M2III | EEV CCD TV guider | ABOVE 326 $\mu$ slit |           |          |      | Seeing test | some cloud (wind medium East)<br>No FAPS, Dome facing West<br>T = $20.0^{\circ}\text{C}$ H = $84.5\% \text{H}$ |         |
|             |        |           |       |                   |                      |           |          | 10   |             |                                                                                                                | 1.3K    |
| 9,700 3"    | B 5.19 |           | B3IV  |                   |                      |           |          | 11   | SB-Blu      | some cloud                                                                                                     | 5.5K    |
|             |        |           |       |                   |                      |           |          | 12.9 |             |                                                                                                                | 1.3     |
|             |        |           |       |                   |                      |           |          | 1/2  |             |                                                                                                                |         |

pg 2 Mon/Tues 193

Date 1995 Aug 7/8. Observers [B/h] Th.....

Emulsion Batches:

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| Plate No. | Object            | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.   |
|-----------|-------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|--------|
| CC 34504  | Comp              |              |                     |                         |                       |                   |             | Felt<br>Clear             | 60s    |
| 05        | HD 172187         | 18 33 42     | +43 08 12           | 23 06 58                |                       | 01 56 W           |             |                           |        |
| 06        | Comp              |              |                     |                         |                       |                   |             | Felt<br>Clear             | 60s    |
| 07        | Comp              |              |                     |                         |                       |                   |             | "                         | 60s    |
| 08        | HD 187691         | 19 46 14     | +10 09 55           | 23 53 49                |                       | 01 04 W           |             |                           | 847    |
| 09        | Comp              |              |                     |                         |                       |                   |             | Felt<br>Clear             | 60s    |
| 10/18     | BIAS(4) FLATS x 9 |              |                     |                         |                       | 01 08 W           | +10 25      | TUNG<br>Clear             | 22s    |
| 19        | BIAS(4)           |              |                     |                         |                       |                   |             |                           |        |
| 20        | Comp              |              |                     |                         |                       |                   |             | Felt<br>Clear             | 60s    |
| 21        | HD 210459         | 22 05 33     | +32 41 15           | 00 41 53                |                       | 00 12 E           |             |                           | 1719   |
| 22        | Comp              |              |                     |                         |                       |                   |             | Felt<br>Clear             | 60s    |
| 23        | Comp              |              |                     |                         |                       |                   |             | "                         | "      |
| 24        | HD 204867         | 21 26 18     | -06 00 40           | 01 26 16                |                       | 01 W              |             |                           | 410    |
| 25        | Comp              |              |                     |                         |                       |                   |             | Felt<br>Clear             | 60s    |
| 26/27     | inboard/outboard  | HERMAN       |                     |                         |                       | 00 00             | +20°        | Felt<br>Clear             | 60/100 |
| 28        | BIAS(4)           |              |                     |                         |                       |                   |             |                           |        |

CCP  
Spectr. Temp.  
Focus ...  
Spectr. Temp.

Exp. Mir.

2500

1650

11,750

8000



CCD  
Spectr. Temp.  $\sim 100.8^{\circ}\text{C}$

Dome Temp./Hum.  $+19^{\circ}\text{C}$  84.6% H

Transparency Conditions  $\star$  Partly cloudy

Focus 6.70

Dome Temp./Hum.  $+18.6^{\circ}\text{C}$  90% H  
C Lambda

194  
- getting worse

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp.   | Inst.    | Grating/Tilt       | Slit      | Emulsion | P.H.  | Program    | Remarks                        | Quality    |
|-----------|--------|-----------|-------|----------|--------------------|-----------|----------|-------|------------|--------------------------------|------------|
|           |        |           |       | CASS CCD | 1800/n/m<br>G=4585 | 306 $\mu$ | 4463Å    | 13    |            |                                | 12A<br>AD4 |
| 2500      | 2"-3"  | B<br>6.40 | FOV   |          |                    |           |          | 14    | SB-Bln     | * The cloudy part marked HERE  | 1.5K       |
|           |        |           |       |          |                    |           |          | 15    |            |                                |            |
|           |        |           |       |          |                    |           |          | 16    |            |                                | 1.3K       |
| 1,650     | 3"-4"  | V<br>5.11 | F8I   |          |                    |           |          | 17    | std vel    | cloudy                         | 850        |
|           |        |           |       |          |                    |           |          | 18    |            |                                |            |
|           |        |           |       |          |                    |           |          | 19    |            |                                | 14.5K      |
|           |        |           |       |          |                    |           |          | 1/2   |            | CCD = $-101.7^{\circ}\text{C}$ |            |
|           |        |           |       |          |                    |           |          | 20    |            |                                | 1.3K       |
| 11,750    | 3"     | B<br>4.75 | F5III |          |                    |           |          | 21    | Wide Astar |                                | 7.2K       |
|           |        |           |       |          |                    |           |          | 22    |            |                                |            |
|           |        |           |       |          |                    |           |          | 23    |            |                                |            |
| 8,000     |        | V<br>2.91 | G0Ib  |          |                    |           |          | 24    | std vel    |                                | 4K         |
|           |        |           |       |          |                    |           |          | 25    |            |                                |            |
|           |        |           |       |          |                    |           |          | 26/27 | focus lost |                                |            |
|           |        |           |       |          |                    |           |          | 1/2   |            |                                |            |

pg #1

195 -

Emulsion Batches:

Date 1995 ~~Aug~~ Aug. 9/10. Observers [Rm] Smt.....

| Plate No.      | Object                    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|----------------|---------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| cc34529/<br>30 | INBOARD/OUTBOARD HARTMANN |              |                     |                         |                       |                   |             | FeAr<br>clear             | 45/60 |
| 31             | BIAS(4)                   |              |                     |                         |                       |                   |             |                           |       |
| 32             | COMP                      |              |                     |                         |                       |                   |             | "                         | 60    |
| 33             | HD161096                  | 17 38 32     | +4 36 32            | 20 48 57                |                       | 0 02 W            |             |                           | 60    |
| 34             | COMP                      |              |                     |                         |                       |                   |             | "                         | 60    |
| 35             | COMP                      |              |                     |                         |                       |                   |             | "                         | "     |
| 36             | HD180583                  | 19 11 59     | +27 44 59           | 20 59 52                |                       | 1 10 E            |             |                           | 630   |
| 37             | COMP                      |              |                     |                         |                       |                   |             | "                         | 60    |
| 38             | BIAS(4)                   |              |                     | 21 15                   |                       |                   |             |                           | -     |
| 39             | COMP                      |              |                     |                         |                       |                   |             | "                         | 60    |
| 40             | HD187691                  | 19 46 14     | +10 09 55           | 21 25 12                |                       | 1 25 E            |             |                           | 310   |
| 41             | COMP                      |              |                     |                         |                       |                   |             | "                         | 60    |
| 42             | COMP                      |              |                     |                         |                       |                   |             | "                         | "     |
| 43             | HD173297                  | 18 39 24     | -20 45              | 21 43 32                |                       | 0 20 W            |             |                           | 1560  |
| 44             | COMP                      |              |                     | 22 15                   |                       |                   |             | "                         | 60    |
| 45             | BIAS(4)                   |              |                     | 22 17                   |                       |                   |             |                           | -     |

ccd  
Spectr. Tem.

Focus .....

Spectr. Tem.

Exp. Mir.

On 560

FILTER

200

560

4700

2970



CCD  
Spectr. Temp. ... -10.0°C .....  
Focus ..... 6.6 #3 .....  
Spectr. Temp. ....

Dome Temp./Hum. 21.4°C / 70.3%  
@ FOCUS TEST  
Dome Temp./Hum. 19.9°C .....

Transparency Conditions clear @ start, partly cloudy  
pretty full moon  
196  
410 0 50 1024 410

| Exp. | Exp. Mtr.     | Seeing | Ptg. Mag. | Sp.             | Inst.    | Grating/Tilt          | Slit | Emulsion | P.H. | Program    | Remarks                                          | Quality |
|------|---------------|--------|-----------|-----------------|----------|-----------------------|------|----------|------|------------|--------------------------------------------------|---------|
| 60   | OG 560 FILTER |        |           |                 | CASS CCD | 1800 l/mm<br>G = 5942 | 306μ | 6396 Å   | 3/4  | FOCUS TEST |                                                  |         |
| 60   |               |        |           |                 |          |                       |      |          | 1    |            |                                                  |         |
| 60   |               |        |           |                 |          |                       |      |          | 5    |            |                                                  |         |
| 60   | 4200          |        | V 2.77    | K2 III<br>CNO.5 |          |                       |      |          | 6    | Std. Vel.  | cloudy here                                      | 12.7K   |
| 60   |               |        |           |                 |          |                       |      |          | 7    |            | clouds moving up fast                            |         |
| "    |               |        |           |                 |          |                       |      |          | 8    |            | from the south                                   |         |
| 60   | 3560          |        | V 6.19    | F6 I<br>-IIb    |          |                       |      |          | 9    | Rm         | V473 Lyr in some cloud                           | 10.5K   |
| 60   |               |        |           |                 |          |                       |      |          | 10   |            |                                                  |         |
| -    |               |        |           |                 |          |                       |      |          | 1    |            |                                                  |         |
| 60   |               |        |           |                 |          |                       |      |          | 11   |            |                                                  |         |
| 60   | 4700          |        | V 5.11    | F8 V            |          |                       |      |          | 12   | Std. Vel.  | clear now                                        | 12.7K   |
| 60   |               |        |           |                 |          |                       |      |          | 13   |            |                                                  |         |
| "    |               |        |           |                 |          |                       |      |          | 14   |            |                                                  |         |
| 60   | 2870          | 4"     | V 7.48    | 2/60 Ib         |          |                       |      |          | 15   | Rm         | a few faint sky lines<br>V350 Sgr clear here too | 5.8K    |
| 60   |               |        |           |                 |          |                       |      |          | 16   |            | a bit late due to spec<br>controller resets.     |         |
| -    |               |        |           |                 |          |                       |      |          | 1    |            | clouding in now                                  |         |





Spectr. Temp. 5700.9 C.....

Dome Temp./Hum. 40.2.4 13.26

Transparency Conditions. *mostly cloudy*.....

Focus ..... 6.63 .....

Spectr. Temp. ....

Dome Temp./Hum. ....

410 0 50 1024 4 1 ccdhnt

198

[illegible]

pg 1 SAT SUN 199

Date ... 1995 Aug. 12/13 .... Observers [Rm] T. J. / S. J. T.

Emulsion Batches:

.....  
.....

2 BIG SAT Night Tours ... M13 & Ring Nebula

| Plate No. | Object            | R.A.<br>1900 | Declination<br>1900             | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|-------------------|--------------|---------------------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC3A55/66 | inboard/out BOARD |              |                                 |                         |                       |                   | +33°        | Felt<br>clear             | 45/60 |
| 57        | BIAS(4)           |              |                                 |                         |                       |                   |             |                           |       |
| 58        | Comp              |              |                                 |                         |                       |                   |             | Felt<br>clear             | 60    |
| 59        | HD173297          | 18 39 24     | +20 45                          | 22 49 44                |                       | 1 24 W            |             |                           | 765   |
| 60        | COMP              |              | <del>20 45</del> T <sub>u</sub> |                         |                       |                   |             | "                         | 60    |
| 61        | COMP              |              |                                 |                         |                       |                   |             | "                         | "     |
| 62        | HD180583          | 19 11 59     | +27 44 59                       | 23 12 46                |                       | 1 12 W            |             |                           | 525   |
| 63        | COMP              |              |                                 |                         |                       |                   |             | "                         | 60    |
| 64        | COMP              |              |                                 |                         |                       |                   |             | "                         | 60    |
| 65        | HD331970          | 20 08 27     | +32 34 16                       | 23 31 48                |                       | 1 15 W            |             |                           | 2913  |
| 66        | COMP              |              |                                 |                         |                       |                   |             | "                         | 60    |
| 67        | BIAS(4)           |              |                                 |                         |                       |                   |             |                           | -     |
| 68        | Comp              |              |                                 |                         |                       |                   |             | Felt<br>clear             | 60    |
| 69        | HD187691          | 19 46 14     | +10 09 55                       | 00 31 49                |                       | 1 51 W            |             |                           | 180   |
| 70        | Comp              |              |                                 |                         |                       |                   |             | Felt<br>clear             | 60    |

\* note correction + (Header may also be wrong this time)

Spectr. Tem.  
Focus... 6  
Spectr. Tem.

Exp. Mtr.

No 560  
FILTER

60

60

1240

3050



Spectr. Temp.  $\sim 100^\circ\text{C}$  ..... Dome Temp./Hum.  $\pm 20.2^\circ\text{C}$  ..  $69.3\% \text{H}$  Transparency Conditions .. Mostly clear,, just past  
 Focus ..  $6:6.6$  ..... 90 Cguin full moon. 200  
 Spectr. Temp. .... Dome Temp./Hum.  $\pm 19.0^\circ\text{C}$  ..  $74.8\% \text{H}$  410 0 50 1024 4 1 ccd int.

| Exp. Mtr.        | Seeing | Ptg. Mag.               | Sp.          | Inst.    | Grating/Tilt        | Slit      | Emulsion | P.H. | Program    | Remarks                                                   | Quality |
|------------------|--------|-------------------------|--------------|----------|---------------------|-----------|----------|------|------------|-----------------------------------------------------------|---------|
| 06 560<br>FILTER |        |                         |              | CHSS CCD | 1800 l/mm<br>G=5942 | 306 $\mu$ | 6396A    | 3/4  | focus test | grating unchanged from previous night of observing        |         |
|                  |        |                         |              |          |                     |           |          | 1/2  |            |                                                           |         |
|                  |        |                         |              |          |                     |           |          | 5    |            |                                                           |         |
| 1060             |        | <V><br>7.48             | ~G0 Ib       |          |                     |           |          | 6    | Rm         | V350 Sgr a few sky lines very faint                       | 1.9K    |
|                  |        |                         |              |          |                     |           |          | 7    |            |                                                           |         |
|                  |        |                         |              |          |                     |           |          | 8    |            |                                                           |         |
| 3630             | 3"-4"  | <V><br>6.19             | F6 I-IIb     |          |                     |           |          | 9    | Rm         | V473 Lyr                                                  |         |
|                  |        |                         |              |          |                     |           |          | 10   |            |                                                           |         |
|                  |        |                         |              |          |                     |           |          | 11   |            |                                                           |         |
| 1,240            | 3.4"   | $\checkmark$<br>9.1-9.8 | F8-<br>G2 Ib |          |                     |           |          | 12   | Rm         | MW Cyg $\approx 170/1$ S/H                                |         |
|                  |        |                         |              |          |                     |           |          | 13   |            | hot pixel streaked across column & rows but from spectrum | 1.8K    |
|                  |        |                         |              |          |                     |           |          | 1/2  |            | CCD T = $-99.9^\circ\text{C}$                             |         |
|                  |        |                         |              |          |                     |           |          | 14   |            |                                                           | 20K     |
| 3050             |        | $\checkmark$<br>5.11    | F8 V         |          |                     |           |          | 15   | Std Vel    |                                                           | 4.5K    |
|                  |        |                         |              |          |                     |           |          | 16   |            |                                                           |         |

Pg#2.

SAT/Sun 201

Emulsion Batches:

Date 1995 Aug 12/13 Observers [Rm] Tn/Smt

| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC34571   | COMP     |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 72        | HD203156 | 21 15 23     | + 37 48 55          | 0 44 01                 |                       | 00 39W            |             |                           | 430  |
| 73        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 74        | COMP     |              |                     |                         |                       |                   |             | "                         | "    |
| 75        | HD214975 | 22 36 55     | +56 19              | 1 00 24                 |                       | 0 01 E            |             |                           | 1929 |
| 76        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 77        | BIAS(4)  |              |                     | 1 36                    |                       |                   |             |                           | —    |
| 78        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 79        | HD215159 | 22 38 15     | +53 23 08           | 1 44 52                 |                       | 0 14 W            |             |                           | 280  |
| 80        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 81        | Comp     |              |                     |                         |                       |                   |             | "                         | 60   |
| 82        | HD180583 | 19 11 59     | +27 44 59           | 1 59 03                 |                       | 4 00 W            |             |                           | 551  |
| 83        | Comp     |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 84        | Comp     |              |                     |                         |                       |                   |             | "                         | "    |
| 85        | HD187691 | 19 46 14     | +10 09 55           | 2 15 33                 |                       | 3 36 W            |             |                           | 226  |
| 86        | Comp     |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |



Spectr. Temp.  $-100^{\circ}\text{C}$  Dome Temp./Hum.  $19.0^{\circ}\text{C}/75.0\%$  Transparency Conditions *clear, just past full moon...*

Focus  $6.66$

Spectr. Temp. Dome Temp./Hum.  $71.8^{\circ}\text{C}/79.5\%$

202

410 0 50 1024 4 1 CCD

| Exp. Mtr. | Seeing   | Ptg. Mag.  | Sp.      | Inst.       | Grating/Tilt                          | Slit     | Emulsion          | P.H. | Program | Remarks                   | Quality |
|-----------|----------|------------|----------|-------------|---------------------------------------|----------|-------------------|------|---------|---------------------------|---------|
|           |          | V          |          | CASS<br>CCD | 1800 $\text{\AA}/\text{mm}$<br>G=5942 | 30 $\mu$ | 6396 $\text{\AA}$ | 17   |         |                           |         |
| 4000      |          | 5.8<br>5.9 | F2       |             |                                       |          |                   | 18   | Rm      | V1334 Cyg                 | 8.5K    |
|           |          |            |          |             |                                       |          |                   | 19   |         |                           |         |
|           |          |            |          |             |                                       |          |                   | 20   |         |                           |         |
| 1730      | 3-4" (V) | 8.40       | G0 Ib    |             |                                       |          |                   | 21   | Rm      | Z Lac                     | 4.0K    |
|           |          |            |          |             |                                       |          |                   | 22   |         |                           |         |
|           |          |            |          |             |                                       |          |                   | 1    |         |                           |         |
|           |          |            |          |             |                                       |          |                   | 23   |         |                           |         |
| 3420      | 3-4" (V) | 6.19       | K2       |             |                                       |          |                   | 24   | Rm      | Z Lac vel. comparison     |         |
|           |          |            |          |             |                                       |          |                   | 25   |         |                           |         |
|           |          |            |          |             |                                       |          |                   | 26   |         |                           | 2K      |
| 3600      | 4"       | 6.19       | F6 I-IIb |             |                                       |          |                   | 9    | Rm      | 2nd exp of night V473 Cyg |         |
|           |          |            |          |             |                                       |          |                   | 27   |         |                           |         |
|           |          |            |          |             |                                       |          |                   | 14   |         |                           |         |
| 3300      | 4"       | 5.11       | F8 II    |             |                                       |          |                   | 15   | std vel | 2nd exp of night          |         |
|           |          |            |          |             |                                       |          |                   | 16   |         |                           |         |

py#3 SAT/Sun 203

Date 1995 Aug 12/13... Observers [Rm.]... Tn./Swt.....

Emulsion Batches:

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.....  
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| Plate No.                            | Object    | R.A.<br>1900 | Declination<br>1900  | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|--------------------------------------|-----------|--------------|----------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CG 800 <sup>44</sup> / <sub>47</sub> | HD 223094 | 23 41 30     | +28 09 <del>07</del> |                         |                       |                   |             | 4x                        | 67as  |
| 48/ <sub>49</sub>                    | "         | "            | "                    |                         |                       | 00 06E            |             | 2x                        | 133ms |
| CC 34587                             | BIAS(4)   |              |                      |                         |                       |                   |             |                           |       |
| 88                                   | Comp      |              |                      |                         |                       |                   |             | Felt<br>char              | 60s   |
| 89                                   | HD 223094 | 23 41 30     | +28 09 <del>07</del> | 02 3642                 |                       | 00 05W            |             |                           | 545   |
| 90                                   | Comp      |              |                      |                         |                       |                   |             | Felt<br>char              | 60s   |
| 91                                   | Comp      |              |                      |                         |                       |                   |             | "                         | "     |
| 92                                   | WBY Per   | 02 2019      | +58 28 06            | 03 0010                 |                       | 1 29 E            |             |                           | 3030  |
| 93                                   | Comp      |              |                      |                         |                       |                   |             | Felt<br>char              | 60s   |
| 94                                   | BIAS(4)   |              |                      | 3 55                    |                       |                   |             |                           | —     |
| 95                                   | COMP      |              |                      |                         |                       |                   |             | "                         | 60    |
| 96                                   | HD 25361  | 3 56 42      | +58 23               | 3 59 54                 |                       | 2 47 E            |             |                           | 614   |
| 97                                   | COMP      |              |                      |                         |                       |                   |             | "                         | 60    |
| 98                                   | COMP      |              |                      |                         |                       |                   |             | "                         | "     |
| 99                                   | HD 30282  | 4 41 06      | +36 32               | 04 1719                 |                       | 3 11 E            |             |                           | 660   |

CCD  
Spectr. Ten

Focus....

Spectr. Ten

Exp. Mir.

3100

417

1900

2020



CCD Spectr. Temp. .... -100.7°C Dome Temp./Hum. 718.4°C 79.8% Transparency Conditions Clear, just past full moon.

Focus .... 6.46 .....

Spectr. Temp. .... Dome Temp./Hum. ....  $\lambda$  Lambda

204  
max

| Exp. Mtr. | Seeing | Pg. Mag.          | Sp.           | Inst.                             | Grating/<br>Tilt  | Slit                | Emulsion | P.H. | Program        | Remarks              | Quality                   |
|-----------|--------|-------------------|---------------|-----------------------------------|-------------------|---------------------|----------|------|----------------|----------------------|---------------------------|
| 67as      | 4"     | 7.45              | K5III         | <del>CASS CCD</del><br>TV MONITOR |                   | 306u<br>H. ROUESLIT |          | —    | Seeing test    | Dome SW, NE Cam on   |                           |
| 132as     |        |                   |               |                                   |                   |                     |          | —    | Dome in single | DOS window C1 BMA FG |                           |
|           |        |                   |               | CASS<br>CD                        | 1800k/m<br>G=5942 |                     | 6396A    | 1/2  |                |                      |                           |
| 68s       |        |                   |               |                                   |                   |                     |          | 17   |                |                      | 20K                       |
| 595       | 3100   | 7.45              | K5III         |                                   |                   |                     |          | 18   | std Vel        |                      |                           |
| 68s       |        |                   |               |                                   |                   |                     |          | 19   |                |                      |                           |
| "         |        |                   |               |                                   |                   |                     |          | 20   |                |                      | 1.8K                      |
| 3030      | 417    | 10.8<br>-11.66    | F5<br>-F9     |                                   |                   |                     |          | 21   | Rm             | very faint.          | 700<br>HBOVE<br>Backlight |
| 68s       |        |                   |               |                                   |                   |                     |          | 22   |                |                      |                           |
| —         |        |                   |               |                                   |                   |                     |          | 1    |                |                      |                           |
| 60        |        |                   |               |                                   |                   |                     |          | 23   |                |                      |                           |
| 614       | 1900   | V<br>1.30<br>-2.0 | F6Ib-<br>G2Ib |                                   |                   |                     |          | 24   | Rm             | RX Cam               | 5.5K                      |
| 60        |        |                   |               |                                   |                   |                     |          | 25   |                |                      |                           |
| "         |        | B                 |               |                                   |                   |                     |          | 26   |                |                      |                           |
| 660       | 2020   | 4"                | 7.9-8.8       | F6-G1                             |                   |                     |          | 27   | Rm             | AW Per               | 4.8K                      |

pg #4 SAT / Sun 205  
Date 1995 Aug. 12/13 Observers [Pm] In/Seat.....

SAT / Sun

205

Date 1995 Aug. 12/13 Observers Rm/In/Smt

### Emulsion Batches:

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.....

.....

[illegible]



Spectr. Temp. .... Dome Temp./Hum. ....

206

[illegible]

p901

Tues/Wed

[Rm]

207

Emulsion Batches:

Date 1995 Aug 15/16... Observers .../...

\* Acco Time Reset. It was 5 mins ahead.

| Plate No.    | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter Exp. |
|--------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|--------------------------------|
| CC 346 11/2  | in board / out Board |              |                     |                         |                       | 00 29 W           | +26°        | FeAr<br>clear 15/60            |
| 13           | Comp                 |              |                     |                         |                       |                   |             | FeAr<br>clear 60s              |
| 14           | HD 171232            | 18 28 30     | +25 25 00           | 20 52 33                |                       | 00 00             |             | 13/7                           |
| 15           | Comp                 |              |                     |                         |                       |                   |             | FeAr<br>clear 60s              |
| 16           | BIAS (A)             |              |                     |                         |                       |                   |             |                                |
| CG 800 50/53 | HD 171232            | 18 28 30     | +25 25 00           | 21 20                   |                       | 00 02 W           |             | 4x .067s                       |
| CG 800 54/55 | "                    | "            | "                   | 21 22                   |                       |                   |             | 2x .133s                       |
| CC 346 17    | Comp                 |              |                     |                         |                       |                   |             | FeAr<br>clear 60s              |
| 18           | HD 173297            | 18 39 24     | -20 45 00           | 21 29 42                |                       | 00 24 W           |             | 138/1                          |
| 19           | Comp                 |              |                     |                         |                       |                   |             | FeAr<br>clear 60s              |
| 20           | HD 173297            | 18 39 24     | -20 45 00           | 21 57 48                |                       | 00 51 W           |             | * 114/9                        |
| 21           | Comp                 |              |                     |                         |                       |                   |             | FeAr<br>clear 60sec            |
| 22           | BIAS (A)             |              |                     | 22 22                   |                       |                   |             |                                |
| 23           | Comp                 |              |                     |                         |                       |                   |             | FeAr<br>clear 60s              |
| 24           | HD 180583            | 19 11 59     | +27 44 59           | 22 30 43                |                       | 00 43 W           |             | 645                            |
| 25           | Comp                 |              |                     |                         |                       |                   |             | FeAr<br>clear 60s              |

CCP  
Spectr. Temp.

Focus ... 6

CCP  
Spectr. Temp.

Exp. Mtr.

CG 560  
F. 11/2

570

420

3450



CCD Spectr. Temp.  $-100.2^{\circ}\text{C}$

Dome Temp./Hum.  $72.3^{\circ}\text{C}$  61.4% RH

Transparency Conditions *Slightly hazy & cloudy.*

Focus  $6.60$

Dome Temp./Hum.  $72.3^{\circ}\text{C}$  66.5% RH

*90c gain*  
*208*  
*Not bad though*

CCD Spectr. Temp.  $-100.6^{\circ}\text{C}$

Dome Temp./Hum.  $72.3^{\circ}\text{C}$  66.5% RH

*410 0 50 1024 4 1 CCD FWH*

| Exp. Mtr.     | Seeing                                                                 | P.V. Mag. | Sp.                        | Inst. | Grating/Tilt                                                                                  | Slit | Emission | P.H.                      | Program     | Remarks                                                     | Quality |
|---------------|------------------------------------------------------------------------|-----------|----------------------------|-------|-----------------------------------------------------------------------------------------------|------|----------|---------------------------|-------------|-------------------------------------------------------------|---------|
| OG 560 Filter |                                                                        |           |                            |       | 1800 lines<br>G=5942                                                                          | 306u | 6396A    | 3/4                       | Focus test  | <i>** Grating presumably untouched from previous night.</i> |         |
|               |                                                                        |           |                            |       |                                                                                               |      |          | 5                         |             | <i>spectrograph control failures leave "G" field blank</i>  |         |
|               | 3"                                                                     | 7.73      | G811                       |       |                                                                                               |      |          | 6                         | std vel     | <i>* Restated and set Time Right.</i>                       | 2.8K    |
|               |                                                                        |           |                            |       |                                                                                               |      |          | 7                         | (encoders)  | <i>Also normalized on this star.</i>                        | MAX ADU |
|               |                                                                        |           |                            |       |                                                                                               |      |          | 11/2                      |             | <i>CCDT = -100.5°C</i>                                      |         |
|               | 2-3"                                                                   | 7.73      | G811                       |       | ABOVE 306u slit                                                                               |      |          |                           | Seeing test | <i>No FANS, No Wind * Dome SW</i>                           |         |
|               | <i>* (Actually, a good NORTH wind that I didn't note at the time.)</i> |           |                            |       |                                                                                               |      |          |                           |             |                                                             |         |
| 570           | 4"                                                                     | 7.48      | <del>F6I-IIb</del><br>G0Ib |       | <i>Note that previous night's COORD were Hand entered and Dec was not correct in Log book</i> |      |          | 9ci<br>10                 | Rm pgm      | <i>part cloudy here 500nm Above Backed</i>                  |         |
| 420           | 3-4"                                                                   | 7.48      | <del>F6I-IIb</del><br>G0Ib |       |                                                                                               |      |          | 9ci<br>11ci<br>11/2<br>12 | Rm pgm      | <i>clearing here now. (Not really)</i>                      |         |
| 3450          | 3"                                                                     | 6.19      | F6I-IIb                    |       |                                                                                               |      |          | 13<br>14                  | Rm pgm      |                                                             | 67K     |

Pg#2

Tues/Wed

(209)

Date 1995 Aug 15/16..... Observers [Rm] Jn.....

Emulsion Batches:

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| Plate No. | Object                     | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34626   | Comp                       |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 27        | HD203156                   | 21 1523      | +37 48.55           | 22 5601                 |                       | 00 55 E           |             |                           | 547   |
| 28        | Comp                       |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 29        | Comp                       |              |                     |                         |                       |                   |             | "                         | "     |
| 30        | HD214975                   | 22 3655      | +56 18.4            | 23 1544                 |                       | 01 38 E           |             |                           | 1629  |
| 31        | Comp                       |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 32        | BIAS(4)                    |              |                     | 23 4550                 |                       |                   |             |                           |       |
| 33        | Comp                       |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 34        | HD 215159                  | 22 3815      | +53 23.08           | 23 5032                 |                       | 01 26 E           |             |                           | 408   |
| 35        | Comp                       |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 36/44     | FLATS x9                   |              |                     |                         |                       | 01 20 E           | +54°        | TUNG<br>Ap 1/2            | 250   |
| 45/47     | In board/out board Hartman |              |                     |                         |                       | "                 | "           | FeAr<br>Clear             | 45/60 |
| 45        | BIAS(4)                    |              |                     | 00 12                   |                       |                   |             |                           |       |

Spectr. Temp

Focus... 6:  
Ccd  
Spectr. Temp

Exp. Mtr.

3600

2000

3500



Spectr. Temp. .... Dome Temp./Hum.  $+22.1^{\circ}\text{C}$   $66.9\%$  Transparency Conditions ... *PART cloudy* .....

Focus ...  $6.60$  .....

<sup>CCD</sup>  
Spectr. Temp. ...  $100.3^{\circ}\text{C}$  .....

Dome Temp./Hum.  $+21.4^{\circ}\text{C}$   $65.3\%$  .....

*C. Lumbale*

**(210)**

*MOY*

*MAX*

| Exp. Mtr. | Seeing | Pl.<br>Mag. | Sp.         | Inst.   | Grating/<br>Tilt    | Slit | Emulsion | P.H.  | Program                | Remarks | Quality |
|-----------|--------|-------------|-------------|---------|---------------------|------|----------|-------|------------------------|---------|---------|
| 60s       |        |             |             | CHSSCCD | 1800ln/mm<br>G=5742 | 306u | 6396A    | 15    |                        |         |         |
| 547       | 3600   | 3"          | 5.8<br>-5.9 | F2      |                     |      |          | 16    | Rm p9m                 |         | 8.1K    |
| 63        |        |             |             |         |                     |      |          | 17    |                        |         | 20K     |
| "         |        |             |             |         |                     |      |          | 17    |                        |         | 1.7K    |
| 1629      | 2000   | 2.3"        | 8.40        | iGOT6   |                     |      |          | 18    | Rm p9m                 |         | 39K     |
| 60s       |        |             |             |         |                     |      |          | 19    |                        |         | 1.6K    |
|           |        |             |             |         |                     |      |          | 1/2   |                        |         |         |
| 60s       |        |             |             |         |                     |      |          | 20    |                        |         | 1.5K    |
| 408       | 3500   | 3"          | 6.19        | K2      |                     |      |          | 21    | Rm Std Vel for HD14975 |         | 7.2K    |
| 60s       |        |             |             |         |                     |      |          | 22    |                        |         |         |
| 6         |        |             |             |         |                     |      |          | 23    |                        |         | 12.8K   |
| 24        |        |             |             |         |                     |      |          | 24/25 |                        |         |         |
| 15/10     |        |             |             |         |                     |      |          | 1/2   |                        |         |         |

pg # 1

[Wed/Thur]

(211)

Emulsion Batches:

Date 1995 August 16/17 Observers [Blr.] Smt. .... Hdy. as. safety

| Plate No.    | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|--------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 346 48/49 | INBOARD/<br>OUTBOARD | HARTMANN     |                     |                         |                       |                   |             | Fair<br>clear             | 40/75 |
| 50           | BIAS(4)              |              |                     |                         |                       |                   |             |                           | —     |
| 51           | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 52           | HD172187             | 18 33 42     | +43 08 12           | 21 36 51                |                       | 0 36 W            |             |                           | 800   |
| 53           | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 54           | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 55           | HD138629             | 15 28 12     | +41 14 19           | 22 01 22                |                       | 4 00 W            |             |                           | 500   |
| 56           | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 57           | BIAS(4)              |              |                     | 22 12                   |                       |                   |             |                           | —     |
| 58           | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 59           | HD148283             | 16 24 50     | +37 37 18           | 22 19 32                |                       | 3 35 W            |             |                           | 930   |
| 60           | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 61           | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 62           | HD154528             | 17 00 54     | +77 48              | 22 55 04                |                       | 3 34 W            |             |                           | 700   |
| 63           | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 64-83<br>84  | FLAT & 20<br>BIAS(4) |              |                     |                         |                       |                   |             | Turny clear               | 22    |

Exp. Mtr.

Spectr. Temp.

Focus.....

Spectr. Temp.

Exp. Mtr.

Spectr. Temp.

7600

12.6K

12.1K

2.1K



~~Spectr.~~ <sup>CCD</sup> Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $24.9^{\circ}\text{C}/50.7\%$  Transparency Conditions  $\text{cleared up}$  .....  
 Focus .....  $6.64$  (4. bit. cal.) ..... @ FOCUS TEST  
 Spectr. Temp. .... Dome Temp./Hum.  $23.5^{\circ}\text{C}/68.1\%$  @ FLATS ..... FANS ON (212)  
 416 0 50 1024 4 1 1cdhr

| Exp. Mtr.   | Seeing | Ptg. Mag.    | Sp. | Inst.    | Grating/Tilt                       | Slit              | Emulsion                                                | P.H. | Program      | Remarks                                       | ADU max Quality |
|-------------|--------|--------------|-----|----------|------------------------------------|-------------------|---------------------------------------------------------|------|--------------|-----------------------------------------------|-----------------|
| 8639 FILTER |        |              |     | CASS CCD | 1800 $\lambda/\text{mm}$<br>G=4585 | 306 $\mu\text{m}$ | 4466 $\text{\AA}$                                       | 3/4  | FOCUS TEST   | set a bit cool, T should drop                 |                 |
|             |        |              |     |          |                                    |                   | (was 4463 $\text{\AA}$ previously for this tilt G=4585) | 1    |              |                                               |                 |
|             |        |              |     |          |                                    |                   |                                                         | 5    |              |                                               |                 |
| 7600        | 3"     | B<br>6.40    | FOV |          |                                    |                   |                                                         | 6    | Bin SB       | normalized here.                              | 5.0K            |
|             |        |              |     |          |                                    |                   |                                                         | 7    |              |                                               |                 |
|             |        |              |     |          |                                    |                   |                                                         | 8    |              |                                               |                 |
| 12.6K       | 5"     | B<br>5.09    | ASV |          |                                    |                   |                                                         | 9    | Bin A-shell* | centred @ col 21, vack mustn't have centred   | 9.5K            |
|             |        |              |     |          |                                    |                   |                                                         | 10   |              |                                               |                 |
|             |        |              |     |          |                                    |                   |                                                         | 11   |              |                                               |                 |
| 12.1K       | 4"     | B?<br>V=5.52 | ASV |          |                                    |                   |                                                         | 12   | Bin A-shell* | centred on col 21 again!                      | 7.2K            |
|             |        |              |     |          |                                    |                   |                                                         | 13   |              |                                               |                 |
|             |        |              |     |          |                                    |                   |                                                         | 14   |              | 5 FAN OFF NOW<br>Telescope on E side of piers |                 |
| 2.1K        | 4"     | V<br>6.66    | AD  |          |                                    |                   |                                                         | 15   | Bin SB       | cloudy S & zenith, cloud crept up - cut short | 1.8K            |
|             |        |              |     |          |                                    |                   |                                                         | 16   |              | 6/18 error $\therefore$ this one a bit late   |                 |
|             |        |              |     |          |                                    |                   |                                                         | 17   |              | Telescope W side, done                        | 15K             |

p9 #1

[Fri/Sat]

(213)

Date 1995 August 18/19 Observers  $\Sigma$  Vys. Smt. Jks as backup

Emulsion Batches:

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.....  
.....

| Plate No.                  | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|----------------------------|------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| <del>CC34685</del> 86      | INBOARD/OUTBOARD |              |                     |                         |                       |                   |             | FeNe<br>clear             | 20/35 |
| 87                         | BIAS x 4         |              |                     |                         |                       |                   |             | "                         | —     |
| 88                         | COMP             |              |                     |                         |                       |                   |             | "                         | 25    |
| 89                         | BD+45 2743       | 18 32 26     | +45 39 53           | 20 51 31                |                       | ~0 30 W           |             |                           | 1860  |
| 90                         | COMP             |              |                     |                         |                       |                   |             | "                         | 25    |
| 91                         | BIAS x 4         |              |                     | 21 25                   |                       |                   |             |                           | —     |
| 92                         | COMP             |              |                     |                         |                       |                   |             | "                         | 25    |
| 93                         | BD+27 2853 (C?)  | 17 33 15     | +27 57 16           | 21 40 42                |                       | 2 15 W            |             |                           | 2480  |
| 94                         | COMP             |              |                     |                         |                       |                   |             | "                         | 25    |
| 95                         | BIAS x 4         |              |                     | 22 45                   |                       |                   |             |                           |       |
| 96                         | BIAS x 4         |              |                     | 23 30                   |                       |                   |             |                           |       |
| 96                         | COMP             |              |                     |                         |                       |                   |             | "                         | 25    |
| <del>697-704</del> 697-704 | AL+8 147-294     | 19 30 16     | +8 14 48            | <del>22 45 04</del>     | ABORTED DUE TO ACER   |                   |             |                           | ALCER |
| <del>697-704</del> 697-704 | FLAT x 8         |              |                     |                         |                       |                   |             | Turn<br>1/2 Ap            | 5s    |
| CC34705                    | COMP             |              |                     |                         |                       |                   |             | FeNe<br>clear             | 25    |
| 06                         | AL+8 147-294     | 19 30 16     | +8 14 48            | 23 36 23                |                       | 2 09 W            |             |                           | 2201  |
| 07                         | COMP             |              |                     |                         |                       |                   |             | "                         | 25    |

Spectr. Ten

Focus... 6

Spectr. Ten

Exp. Mir.

Filter

806

372

CC03

670



Spectr. Temp. ... -100.45°C

Dome Temp./Hum. 24.9°C/60.1%  
@ FOCUS TEST

Transparency Conditions ... hazy, get clear, no moon

Focus ... 6.62

Spectr. Temp. ....

Dome Temp./Hum. ....

(214)

BOTH DOME FANS ON

416 0 50 1024 4 1 ccd

| Exp. Mtr.        | Seeing         | Ptg. Mag. | Sp.             | Inst.       | Grating/Tilt        | Slit      | Emulsion | P.H. | Program         | Remarks                                               | Quality            |
|------------------|----------------|-----------|-----------------|-------------|---------------------|-----------|----------|------|-----------------|-------------------------------------------------------|--------------------|
| 235<br>NO FILTER |                |           |                 | CASS<br>CCD | 1800 l/mm<br>G=5153 | 306 $\mu$ | 5302 Å   | 3/4  | FOCUS<br>TEST   | set too cool, <del>F</del> @ 6.64<br>changed to 6.62. |                    |
|                  |                |           |                 |             |                     |           |          | 1    |                 |                                                       |                    |
| 25               |                |           |                 |             |                     |           |          | 5    |                 |                                                       |                    |
| 806              | 4"             | V<br>9.83 | MO              |             |                     |           |          | 6    | Marcy Std. Vel. | Vys 182A                                              | 540abc<br>b/g      |
|                  |                |           |                 |             |                     |           |          | 7    |                 |                                                       |                    |
|                  |                |           |                 |             |                     |           |          | 1    |                 |                                                       |                    |
| 25               |                |           |                 |             |                     |           |          | 8    |                 |                                                       |                    |
| 2480<br>372      | 4"             | V<br>11.8 | MO <sub>p</sub> |             |                     |           |          | 9    | {Vys}           | cds: 21-25 27-33<br>Vys 795C + Vys 775AB              | 150abc<br>b/g      |
|                  |                |           |                 |             |                     |           |          | 10   |                 |                                                       |                    |
|                  |                |           |                 |             |                     |           |          | 11   |                 | ALOR reset,                                           |                    |
| 25<br>CCD 3      | PROBLEMS<br>4" | V<br>10.1 | MO              |             |                     |           |          | 3    |                 |                                                       |                    |
|                  |                |           |                 |             |                     |           |          | 4    | {Vys}           | crashed again - ccd3<br>ALOR after<br>reboot          |                    |
|                  |                |           |                 |             |                     |           |          | 5    |                 |                                                       | 11.9K<br>→ 11.1K   |
|                  |                |           |                 |             |                     |           |          | 3    |                 |                                                       |                    |
| 670              | 4"             | V<br>10.4 | MO              |             |                     |           |          | 4    | {Vys}           | after lots of<br>computer problems                    | 1200<br>abc<br>b/g |
|                  |                |           |                 |             |                     |           |          | 5    |                 |                                                       |                    |

Pg #2

(215)

Date 1995 August 18/19 Observers Smt. S. Uys Ihs as backup

Emulsion Batches:

.....  
.....  
.....

| Plate No.  | Object        | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|------------|---------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34708    | BIASx4        |              |                     | 0 15                    |                       |                   |             |                           | —     |
| 09         | COMP          |              |                     |                         |                       |                   |             | FeNe<br>clear             | 25    |
| 10         | AC+18 1074-63 | 22 23 56     | +18 25 18           | 0 25 45                 |                       | 0 05 W            |             |                           | 2200  |
| 11         | COMP          |              |                     |                         |                       |                   |             | "                         | 25    |
| 12         | BIASx4        |              |                     | 1 06                    |                       |                   |             |                           | —     |
| 13         | COMP          |              |                     |                         |                       |                   |             | "                         | 25    |
| 14         | BD+23 4575 C  | 22 32 41     | +23 24 52           | 1 14 27                 |                       | 1 24 W            |             |                           | 4500! |
| 15         | COMP          |              |                     |                         |                       |                   |             | "                         | 25    |
| 16         | BIASx4        |              |                     | 2 33                    |                       |                   |             |                           | —     |
| 17         | COMP          |              |                     |                         |                       |                   |             | "                         | 25    |
| 18         | HD216899      | 22 51 48     | +16 02              | 2 37 07                 |                       | 1 22 W            |             |                           | 600   |
| 19         | COMP          |              |                     |                         |                       |                   |             | "                         | 25    |
| 20         | BIASx4        |              |                     | 2 56                    |                       |                   |             |                           |       |
| CG80055-59 | HD3765 x4     | 0 35 18      | +39 40              |                         |                       |                   |             |                           | .067  |
| 60/61      | " x 2         |              |                     |                         | 2 58                  | 0 11 E            | 86° Alt     |                           | .133  |

Spectr. Tem

Focus....

Spectr. Tem

Exp. Mtr.

10  
FILTER

522

375

752



Spectr. Temp. ....

Dome Temp./Hum. 21.0°C / 72.4%

416 0 50 1024 41  $\text{cm}^2$

| Comparison<br>Mtr. Exp. | Exp. Mtr.    | Seeing | Ptg.<br>Mag. | Sp. | Inst.                | Grating/<br>Tilt        | Slit                | Emulsion | P.H. | Program         | Remarks                                                                                                         | Quality |
|-------------------------|--------------|--------|--------------|-----|----------------------|-------------------------|---------------------|----------|------|-----------------|-----------------------------------------------------------------------------------------------------------------|---------|
| -                       | NB<br>FILTER |        |              |     | CASS<br>CCD          | 1800 $\ell/m$<br>G=5153 | 30 $\mu m$          | 5302 Å   | 1    |                 |                                                                                                                 |         |
| 25                      |              |        |              |     |                      |                         |                     |          | 6    |                 |                                                                                                                 |         |
| 2200                    | 522          | 3.5"   | V<br>10.7    | M0  |                      |                         |                     |          | 7    | $\Sigma V_{ys}$ | V <sub>ys</sub> 841 <sup>356 hung up while ~200 above</sup> Autoguider in progress. V <sub>lg</sub>             |         |
| 25                      |              |        |              |     |                      |                         |                     |          | 8    |                 |                                                                                                                 |         |
| -                       |              |        |              |     |                      |                         |                     |          | 1    |                 |                                                                                                                 |         |
| 25                      |              |        |              |     |                      |                         |                     |          | 9    |                 |                                                                                                                 |         |
| 4500                    | 375          | 3"     | V<br>12.2    | K8  |                      |                         |                     |          | 10   | $\Sigma V_{ys}$ | farther of 2 close   less haze now <sup>some above</sup> V <sub>ys</sub> 893 C   moon or trees. V <sub>lg</sub> |         |
| 25                      |              |        |              |     |                      |                         |                     |          | 11   |                 |                                                                                                                 |         |
| -                       |              |        |              |     |                      |                         |                     |          | 1    |                 |                                                                                                                 |         |
| 25                      |              |        |              |     |                      |                         |                     |          | 12   |                 |                                                                                                                 |         |
| 100                     | 752          | 4"     | V<br>8.66    | M2  |                      |                         |                     |          | 13   | Mariy Std Vel   | V <sub>ys</sub> 854 <sup>crd starting to 300 above</sup> norm -99.0°C <sup>above</sup> at end. V <sub>lg</sub>  |         |
| 25                      |              |        |              |     |                      |                         |                     |          | 14   |                 |                                                                                                                 |         |
|                         |              |        |              |     |                      |                         |                     |          | 1    |                 |                                                                                                                 |         |
| 0.067                   |              | 4"     | V<br>7.36    | OKS | EBI CCD<br>TV GUIDER |                         | above<br>30 $\mu m$ |          | -    | SEEING<br>TEST  | Pure W, clear, no more haze<br>last 1/2 moon just rising<br>above trees, no wind                                |         |
| 0.133                   |              | "      | "            | "   |                      |                         |                     |          | -    |                 |                                                                                                                 |         |
|                         |              |        |              |     |                      |                         |                     |          |      |                 | CCD dewar top up, Ken →                                                                                         |         |

pg #3 217

Date 1995 August 12/19

Date 1995 August 12/19 Observers {Vys} Smt Hdy as backup

### Emulsion Batches:

.....

.....

.....

[illegible]



Spectr. Temp. ...  $-100.4^{\circ}\text{C}$ ....

Dome Temp./Hum. 19.7°C/71.9%

Transparency Conditions: clear, lost  $\frac{1}{4}$  Moon, ~~up~~ new

Focus ..... 6.6.7 .....

Dome Temp./Hum. .... 19.3°C / 67.6%

BOTH FANS OFF NOW.

218

Spectr. Temp. . . . .

416 0 50 1024 4 1 cdnt

[illegible]

pg. #1

Sun/Mon

219

Emulsion Batches:

Date 1995 Aug. 20/21. Observers [Bln]/Dby/Tn.....

| Plate No.                     | Object      | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-------------------------------|-------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 34130<br><del>30</del> -31 | inboard/out |              |                     |                         |                       |                   |             |                           |       |
| 32                            | BIAS(4)     |              |                     |                         |                       |                   |             |                           |       |
| 33                            | Comp        |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 34                            | HD 138629   | 15:28:12     | 41° 14' 19"         | 20:12:27                |                       | 0244 W            |             |                           | 1248s |
| 35                            | Comp        |              |                     |                         |                       |                   |             | clear<br>FeAr             | 60s   |
| 36                            | Comp        |              |                     |                         |                       |                   |             | clear<br>FeAr             | 60s   |
| 37                            | HD 187691   | 19:46:14     | 10° 09' 55"         | 20:47:50                |                       |                   |             |                           | 1300s |
| 38                            | Comp        |              |                     |                         |                       |                   |             | clear<br>FeAr             | 60s   |
| 39                            | Bias(4)     |              |                     |                         |                       |                   |             |                           |       |
| 40                            | Comp        |              |                     |                         |                       |                   |             | clear<br>FeAr             | 60s   |
| 41                            | HD 152614   | 16:49:17     | 10° 19' 48"         | 21 18 51                |                       | 0218 W            |             |                           | 721s  |
| 42                            | Comp        |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 43                            | Comp        |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60s   |
| 44                            | HD 158352   | 17:23:44     | 00° 24' 42"         | 21:39:56                |                       | 0227 W            |             |                           | 2242  |
| 45                            | Comp        |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 46                            | Bias(4)     |              |                     |                         |                       |                   |             |                           |       |



CCD Spectr. Temp.  $-100.7^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+24.8^{\circ}\text{C}$ ,  $+78.8$  Transparency Conditions  $\text{Hazy}$ .....

Focus .....  $6.62$  .....

90C gain

Spectr. Temp.  $-100.7^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+22.8$ ,  $+78.8$

$\lambda$

CCDFMT  
4 1 0 0 50 1024 4 1

MAX  
ADCL

220

Comparison  
Exp.

| Exp. Mtr. | Seeing | Ptg. Mag.     | Sp. | Inst.    | Grating/<br>Tilt    | Slit      | Emulsion | P.H.<br>Ci | Program          | Remarks                                        | Quality |
|-----------|--------|---------------|-----|----------|---------------------|-----------|----------|------------|------------------|------------------------------------------------|---------|
|           |        |               |     | CASS CCD | 1800ln/mm<br>G=4585 | 306 $\mu$ | 4463     | 3/4        | focus            |                                                |         |
|           |        |               |     |          |                     |           |          | 1/2        |                  |                                                |         |
| 60s       |        |               |     |          |                     |           |          | 5          |                  |                                                | 13K     |
| 1249s     | 7044   | B=5.09        | A5V |          |                     |           |          | 6          | A-Shell 3ln/wide | $\approx 200/1$ S/N<br>Clouded over real fast. |         |
| 60s       |        |               |     |          |                     |           |          | 7          |                  |                                                |         |
| 60s       |        |               |     |          |                     |           |          | 8          |                  |                                                |         |
| 1300s     | 4498   | V<br>5.11     | F8V |          |                     |           |          | 9          | Std Vel.         |                                                | 4.3K    |
| 60s       |        |               |     |          |                     |           |          | 10         |                  |                                                |         |
|           |        |               |     |          |                     |           |          | 1/2        |                  |                                                |         |
| 60s       |        |               |     |          |                     |           |          | 11         |                  |                                                |         |
| 721s      | 16300  | B<br>4.30     | B8V |          |                     |           |          | 12         | SB Bl $\lambda$  | $> 300/1$ S/N                                  | 8.7K    |
| 60s       |        |               |     |          |                     |           |          | 13         |                  |                                                |         |
| 60s       |        |               |     |          |                     |           |          | 14         |                  |                                                |         |
| 2242s     | 15898  | B<br>3.4 5.66 | A8V |          |                     |           |          | 15         | A-Shell Bln/wide |                                                | 6.5K    |
| 60s       |        |               |     |          |                     |           |          | 16         |                  |                                                |         |
|           |        |               |     |          |                     |           |          | 1/2        |                  |                                                |         |

pg. #2

Sun/mon

221

Emulsion Batches:

Date 1995 Aug 20/21 Observers [Bln]/Dby./Tn.....

| Plate No.    | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|--------------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| cc34747      | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 48           | HD 164577 | 17:56:41     | 01° 18' 27"         | 22:26:44                |                       | 02 22 W           |             |                           | 1076  |
| 49           | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 50           | Comp      |              |                     |                         |                       |                   |             | "                         | 60s   |
| 51           | HD 164852 | 17 58 07     | +20 50 00           | 22 51 59                |                       | 02 46 W           |             |                           | 1060s |
| 52           | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 53           | Bias (4)  |              |                     |                         |                       |                   |             |                           |       |
| 54           | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 55           | HD 172187 | 18:33:42     | 43° 08' 12"         | 23:18:42                |                       | 03 09 W           |             |                           | 2434s |
| 56           | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 57           | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 58           | HD 180316 | 19 11 00     | +27 46 00           | 00 07 22                |                       | 03 W              |             |                           | 2735s |
| 59           | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| CG 800 62/65 | HD 214946 | 22 36 42     | +44 29 00           |                         |                       |                   |             | 4x                        | 67ms  |
| 60           | Bias (4)  |              |                     |                         |                       | 00 04 W           |             | 2x                        | 133ms |
| 60           | Bias (4)  |              |                     |                         |                       |                   |             |                           |       |



CCD  
Spectr. Temp. .... -100.7 ..... Dome Temp./Hum. +22.8 , +78.8<sup>24</sup> Transparency Conditions Hazy. / Part cloudy .....

Focus ..... 6.62 .....

CCD  
Spectr. Temp. .... -100.7 ..... Dome Temp./Hum. +20.1 °C 73.2<sup>26</sup> H  
C Lambda

(222) MAX

| Exp. Mtr.                                         | Seeing | Ptg. Mag. | Sp.  | Inst.    | Grating/Tilt        | Slit | Emulsion | P.H. CL | Program                | Remarks             | Quality |
|---------------------------------------------------|--------|-----------|------|----------|---------------------|------|----------|---------|------------------------|---------------------|---------|
| 60s<br>BG 39 Filter<br>probably used (to Sept 95) |        |           |      | CASS CCD | 1800 l/mm<br>G=4585 | 306u | 4463A    | 17      |                        |                     |         |
| 1076<br>16,000                                    | 4"     | B<br>4.46 | A1V  |          |                     |      |          | 18      | Bln SB                 |                     | 7.2K    |
| 60s                                               |        |           |      |          |                     |      |          | 19      |                        |                     |         |
| 60s                                               |        |           |      |          |                     |      |          | 20      |                        |                     |         |
| 1060s<br>15415                                    | 3-4"   | B<br>5.19 | B3IV |          |                     |      |          | 21      | SB Bln                 |                     | 7.2K    |
| 60s                                               |        |           |      |          |                     |      |          | 22      |                        |                     |         |
|                                                   |        |           |      |          |                     |      |          | 1/2     |                        |                     |         |
| 60s                                               |        |           |      |          |                     |      |          | 23      |                        |                     |         |
| 2434<br>9675                                      | 3-5"   | B<br>6.40 | F0V  |          |                     |      |          | 24      | SB Bln                 |                     | 4.4K    |
| 60s                                               |        |           |      |          |                     |      |          | 25      |                        | CCDT = -101.7°C     |         |
| 60s                                               |        |           |      |          |                     |      |          | 26      |                        |                     |         |
| 2735<br>7344                                      | 4-5-7" | B<br>6.64 | B8   |          |                     |      |          | 27      | SB Bln                 | cloud at end        | 3K      |
| 60s                                               |        |           |      |          |                     |      |          | 28      |                        |                     |         |
| 4x 67ms<br>7.26                                   |        | B<br>7.26 | A5   |          | ABOV 306u slit      |      |          |         | Seeing test            | In and out of cloud |         |
| 4x 133ms                                          |        |           |      |          |                     |      |          | 1/2     | " "                    | Medium NNW wind     |         |
|                                                   |        |           |      |          | 7m Headers          |      |          |         | Humidity dropping fast |                     |         |

Dome outside of windows: no usual encoder info.

pg#3

Sun/Mon

223

Emulsion Batches:

Date . 1995 . Aug. 20/21... Observers [B/n.] T.n. / R.dg.....

| Plate No. | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 34760  | BIAS(4)   |              |                     |                         |                       |                   |             |                           |       |
| 61        | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 62        | HD 214946 | 22:36:42     | 44°29'00"           | 01 11 18                |                       | 00 55 W           |             |                           | 2797s |
| 63        | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 64        | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 65        | HD 192518 | 20:10:08     | 28°23'30"           | 02:05:48                |                       | 03 54 W           |             |                           | 1382s |
| 66        | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 67        | Bias (4)  |              |                     |                         |                       |                   |             |                           |       |
| 68        | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 69        | HD 210459 | 22:05:33     | 32°41'15"           | 02:37:52                |                       | 02 17 W           |             |                           | 60s   |
| 70        | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 71        | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 72        | HD 154528 | 17:00:54     | 77°48'00"           | 02:59:40                |                       | 08 27 W           |             |                           | 2669  |
| 73        | Comp      |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s   |
| 74        | BIAS(4)   |              |                     |                         |                       |                   |             |                           |       |



Spectr. Temp. <sup>CD</sup> -100.7 ..... Dome Temp./Hum. 20.1°C ... 72.4% H Transparency Conditions ... PART. Cloudy .....

Focus ..... 6.62 .....

Spectr. Temp. .... Dome Temp./Hum. 18.7°C ... 63.8% H

224

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp.     | Inst. | Grating/Tilt          | Slit | Emulsion | P.H. | Program                       | Remarks                                                             | Quality |
|-----------|--------|-----------|---------|-------|-----------------------|------|----------|------|-------------------------------|---------------------------------------------------------------------|---------|
|           |        |           |         | CASCO | 1800 1/4 in<br>G=9585 | 306  | 4463A    | 1/2  |                               |                                                                     |         |
|           |        |           |         |       |                       |      |          | 29   |                               |                                                                     |         |
| 3794      | 5"     | B<br>7.26 | *<br>A5 |       |                       |      |          | 30   | 83 Bln                        | Spectrum looks "late" ?<br>(many narrow lines)<br>PART Cloudy again | 1.7K    |
|           |        |           |         |       |                       |      |          | 5    |                               |                                                                     |         |
|           |        |           |         |       |                       |      |          | 7    |                               |                                                                     |         |
| 16278     | 6"     | B<br>5.36 | A7 IV   |       |                       |      |          | 9    | A-shell Wde/Bln               |                                                                     | 4.6K    |
|           |        |           |         |       |                       |      |          | 10   |                               |                                                                     |         |
|           |        |           |         |       |                       |      |          | 1/2  |                               | CCDT -100.6°                                                        |         |
|           |        |           |         |       |                       |      |          | 11   |                               |                                                                     |         |
| 16035     |        | B<br>4.75 | F5 III  |       |                       |      |          | 12   | A-shell Wde/Bln               |                                                                     |         |
|           |        |           |         |       |                       |      |          | 13   |                               |                                                                     |         |
|           |        |           |         |       |                       |      |          | 14   |                               |                                                                     |         |
| 7000      | 5-8"   | ✓<br>6.66 | A0      |       |                       |      |          | 15   | 582 Bln<br><del>Std Ver</del> |                                                                     |         |
|           |        |           |         |       |                       |      |          | 16   |                               |                                                                     |         |
|           |        |           |         |       |                       |      |          | 1/2. |                               |                                                                     |         |

225

CCP  
Specur. Tem

Focus... 6

Spectr. Tem

Exp. Mtr.

7850

1290



MAX

Comparison  
Filter Exp.

.....

.....

.....

| Plate No. | Object         | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T.         | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp                    |
|-----------|----------------|--------------|---------------------|---------------------------------|-----------------------|-------------------|-------------|---------------------------|------------------------|
| CE09446   | Hartmann - IN  |              |                     |                                 |                       |                   |             | ThA                       | 10                     |
| 9447      | Hartmann - OUT |              |                     |                                 |                       |                   |             |                           | 10                     |
| 9448      | Hartmann - IN  |              |                     | 14:07                           |                       |                   |             | ThA                       | 10                     |
| 9449      | Hartmann - OUT |              |                     |                                 |                       |                   |             |                           | 10                     |
| CE09450   | Hartmann - IN  |              |                     | 1941                            |                       |                   |             | ThA                       | 10                     |
| 9451      | Hartmann - OUT |              |                     |                                 |                       |                   |             | ThA                       | 10 <sub>s</sub>        |
| 9452      | BIAS(4)        |              |                     |                                 |                       | 0215W             | +29 07      |                           |                        |
| 53        | COMP           |              |                     |                                 |                       |                   |             | ThAr                      | 5                      |
| 54        | HD137909       | 15 23 42     | +29 27 01           | 21 29 21<br><del>20 12 11</del> |                       | >4 <sup>h</sup> W |             |                           | 1070<br><del>500</del> |
| 55        | COMP           |              |                     |                                 |                       |                   |             | "                         | 5                      |
| 56        | Bias(4)        |              |                     |                                 |                       |                   |             |                           |                        |
| 57        | Comp           |              |                     |                                 |                       |                   |             | ThAr                      | 4 <sub>s</sub>         |
| 58        | ADS11046 A     | 18 00 24     | +02 32              | 22 00 45                        |                       | 01 46 W           |             |                           | 500                    |
| 59        | Comp           |              |                     |                                 |                       |                   |             | ThAr                      | 4 <sub>s</sub>         |
| 60        | ADS11046 B     | "            | "                   | 22 11 24                        |                       | 02 05 W           |             |                           | 1001                   |
| 61        | Comp           |              |                     |                                 |                       |                   |             | ThAr                      | 4 <sub>s</sub>         |



CCD  
 Spectr. Temp.  $-100.3^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+23.5^{\circ}\text{C}$  ...  $51.0\%$  Transparency Conditions ... Fine, but gusty  
 Focus ...  $2.45$  ..... 90 c/gain  
 Spectr. Temp. .... Dome Temp./Hum.  $+20.3^{\circ}\text{C}$  ...  $56.5\%$   
 CCD FMT for Focus  
 0 0 128 1024 8 1

| Expansion<br>Filter Exp. | Exp. Mtr. | Seeing | Ptg.<br>Mag. | Sp.            | Inst.                    | X Grating/<br>Tilt | Slit                    | Emulsion | -P.H. | Program    | Remarks                               | Quality     |
|--------------------------|-----------|--------|--------------|----------------|--------------------------|--------------------|-------------------------|----------|-------|------------|---------------------------------------|-------------|
| 10                       |           |        |              |                | echelle<br>18-02         | 300 l/mm<br>579 v  | 60u = .277 v<br>6300 Å? |          |       |            | 0 0 256 1024 4 1<br>T = 21.0 F = .245 | max<br>404  |
| 10                       |           |        |              |                |                          |                    | 400u length = .225 v    |          |       |            |                                       |             |
| 10                       |           |        |              |                | echelle rest<br>to 17.92 | 300 l/mm<br>579    | 6300 Å                  |          |       |            | 0 0 128 0 1024 8 1<br>T = +23.5       |             |
| 10                       |           |        |              |                |                          |                    |                         |          |       |            |                                       |             |
| 10                       |           |        |              |                |                          |                    |                         |          |       |            | T = $+3.5^{\circ}$ (w/ 4000 Å filter) |             |
| 10                       |           |        |              |                |                          |                    |                         |          |       |            | Good for slightly cooler Temp.        |             |
| 5                        |           |        |              |                |                          |                    |                         |          | 1/2   |            | CCD FMT<br>0 0 256 1024 4 1           |             |
| 5                        | 705       | 4"     | 3.66         | F <sub>p</sub> |                          |                    |                         |          | 3     |            |                                       |             |
| 5                        |           |        |              |                |                          |                    |                         |          | 4     | KK         | BCBr                                  | max<br>7.8K |
| 5                        |           |        |              |                |                          |                    |                         |          | 3     |            |                                       |             |
| 4                        |           |        |              |                |                          |                    |                         |          | 3     |            |                                       |             |
| 500                      | 184       | 3"     | 4.20         | KaV            |                          |                    |                         |          | 4     | KK Vis Ben | NORTH and Brighter                    | 3K          |
| 4                        |           |        |              |                |                          |                    |                         |          | 3     |            | *Scans well separated                 |             |
| 100                      | 90        | 3-4"   | 5.99         | KaV            |                          |                    |                         |          | 5     |            | (South and slightly)                  | 1.3K        |
| 4                        |           |        |              |                |                          |                    |                         |          | 3     |            | (HARD to separate)                    |             |

pg #2

Mon/Tues

229

Emulsion Batches:

Date 1995 Aug. 21/22..... Observers [KH] / T.A. / Smt.....

| Plate No. | Object      | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CE09462   | ADS 11046 A | 18 00 24     | 02 32 00            | 22 30 11                |                       | 2 16 W            |             |                           | 500  |
| 63        | Comp        |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 64        | BIAS(4)     |              |                     | 22 40                   |                       |                   |             |                           |      |
| 65        | Comp        |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 66        | ADS 13256 A | 19 56 42     | +10 28 00           | 22 47 51                |                       | 0 53 W            |             |                           | 1436 |
| 67        | Comp        |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 68        | ADS 13256 B |              |                     | 23 14 00                |                       | 1 24 W            |             |                           | 1700 |
| 69        | Comp        |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 70        | ADS 13256 A |              |                     | 23 44 42                |                       | 1 50 W            |             |                           | 1430 |
| 71        | COMP        |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 72        | BIAS(4)     |              |                     | 0 11                    |                       |                   |             |                           | —    |
| 73        | COMP        |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 74        | HD 187691   | 19 46 14     | +10 09 55           | 0 19 12                 |                       | 2 33 W            |             |                           | 1300 |
| 75        | COMP        |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 76        | BIAS(4)     |              |                     | 0 42                    |                       |                   |             |                           | —    |



Spectr. Temp.  $-169.4^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+19.7^{\circ}\text{C}$   $56.8\% \text{H}$  Transparency Conditions  $\text{Fine}$  ..... 230

Focus  $\dots 24.5 \dots$

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1 Max ADU

| Exp. Mtr. | Seeing | Mag. | Sp.           | Inst.            | Grating/<br>Tilt          | Slit                                      | Emulsion | P.H. | Program    | Remarks                                                        | Quality |
|-----------|--------|------|---------------|------------------|---------------------------|-------------------------------------------|----------|------|------------|----------------------------------------------------------------|---------|
| 143       | 3"     | 420  | KOV           | Eckelle<br>17.92 | 300 $\mu\text{m}$<br>.579 | 60 $\mu\text{m}$ W<br>100 $\mu\text{m}$ H | 6300A    | 4c1  | KK Vis Bin | OK separation for guiding                                      |         |
|           |        |      |               |                  |                           |                                           |          | 3c1  |            |                                                                |         |
|           |        |      |               |                  |                           |                                           |          | 1/2  |            |                                                                |         |
|           |        |      |               |                  |                           |                                           |          | 3    |            |                                                                |         |
| 5         | 3"     | F60  | F2            |                  |                           |                                           |          | 6    | KK Vis Bin | good separation<br>Brighter and South                          | 450     |
|           |        |      |               |                  |                           |                                           |          | 3    |            |                                                                |         |
| 0         | 4"     | F80  | not indicated |                  |                           |                                           |          | 4    | KK Vis Bin | Looks obviously fainter.<br>(Only 150 ADU above<br>Background) |         |
|           |        |      |               |                  |                           |                                           |          | 3    |            |                                                                |         |
| 0         |        | F60  | F2            |                  |                           |                                           |          | 6    | "          | same strength as last star                                     |         |
|           |        |      |               |                  |                           |                                           |          | 3    |            |                                                                |         |
|           |        |      |               |                  |                           |                                           |          | 1    |            |                                                                |         |
|           |        |      |               |                  |                           |                                           |          | 3    |            |                                                                |         |
| 101       | 5"     | 5.11 | F8V           |                  |                           |                                           |          | 5    | Std. Vel.  | really close to last pair.                                     | P.4K    |
|           |        |      |               |                  |                           |                                           |          | 3    |            |                                                                |         |
|           |        |      |               |                  |                           |                                           |          | 1    |            |                                                                |         |

pg #3

Mon / Tues

231

Emulsion Batches:

Date 1995 August 21/22 Observers [KK] T.H./Sant.....

| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC09477   | COMP     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 78        | HD8890 A | 01 22 34     | +88 46 26           | 0 55 05                 |                       | 3 59 E            |             | "                         | 222  |
| 79        | COMP     |              |                     |                         |                       |                   |             | "                         | 4    |
| 80        | HD8890 A |              |                     | 01 01 17                |                       | 3 51 E            |             | "                         | 360  |
| 81        | COMP     |              |                     |                         |                       |                   |             | "                         | 4    |
| 82        | HD8890 A |              |                     | 1 09 12                 |                       | 3 40 E            |             | "                         | 525  |
| 83        | COMP     |              |                     |                         |                       |                   |             | "                         | 4    |
| 84        | COMP     |              |                     |                         |                       |                   |             | "                         | "    |
| 85        | HD197964 | 20 42 01     | 15 45 50            | 01 26 29                |                       | 2 38 W            |             | "                         | 900  |
| 86        | COMP     |              |                     |                         |                       |                   |             | "                         | "    |
| 87        | HD197963 |              |                     | 1 44 47                 |                       | 3 06 W            |             | "                         | 1500 |
| 88        | Comp     |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 89        | HD197964 |              |                     | 2 12 11                 |                       | 3 24 W            |             | "                         | 900  |
| 90        | Comp     |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 91        | BIAS (4) |              |                     | 2 29                    |                       |                   |             | "                         | —    |



Spectr. Temp.  $-101.7^{\circ}\text{C}$  Dome Temp./Hum.  $+18^{\circ}\text{C}$  66/71 Transparency Conditions hazy & still gusty

Focus  $24.5$

Spectr. Temp. Dome Temp./Hum.

00256 1024 41 ccd flat

232

| Exp. Mtr. | Seeing | Ptg. Mag.    | Sp.              | Inst.            | Grating/Tilt                          | Slit                                  | Emulsion           | P.H. | Program    | Remarks                                                       | Quality |
|-----------|--------|--------------|------------------|------------------|---------------------------------------|---------------------------------------|--------------------|------|------------|---------------------------------------------------------------|---------|
| 4         |        |              |                  | ECHERLE<br>17.92 | 300 $\mu\text{m}$<br><del>0.577</del> | 60 $\mu\text{m}$<br>400 $\mu\text{m}$ | G300A <sup>o</sup> | 3    |            |                                                               |         |
| 222       | 542    | V=2          | F8 Ib            |                  | .579                                  |                                       |                    | 4    | KK         | $\Delta$ RA 00 18 19 for 4th E<br>$\Delta$ Dec $\infty$ 01 21 | 6.0K    |
| 4         | 4-5"   | <del>Y</del> | <del>F8 Ib</del> |                  |                                       |                                       |                    | 3    |            |                                                               |         |
| 360       | 610    | 1            | "                |                  |                                       |                                       |                    | 4    | KK         |                                                               | 6.0K    |
| 4         |        | <del>1</del> | "                |                  |                                       |                                       |                    | 3    |            |                                                               |         |
| 525       | 738    | "            | "                |                  |                                       |                                       |                    | 4    | KK         |                                                               | 8.1K    |
| 4         |        |              |                  |                  |                                       |                                       |                    | 3    |            |                                                               |         |
| "         |        |              |                  |                  |                                       |                                       |                    | 3    |            |                                                               |         |
| 900       | 130    | V<br>4.50    | K1 IV            |                  |                                       |                                       |                    | 5    | KK Vis Bin | ADS14279 A, brighter & SE                                     | 2.0K    |
| "         |        |              |                  |                  |                                       |                                       |                    | 3    |            |                                                               |         |
| 500       | 82     | 5"           | V<br>5.50 F7 V   |                  |                                       |                                       |                    | 5    | KK Vis Bin | losing the seeing even more                                   |         |
| 4         |        |              |                  |                  |                                       |                                       |                    | 3    |            |                                                               |         |
| 900       | 130    | 5"           | V<br>4.50 K1 IV  |                  |                                       |                                       |                    | 5    | KK Vis Bin |                                                               |         |
| 4         |        |              |                  |                  |                                       |                                       |                    | 3    |            |                                                               |         |
| 4         |        |              |                  |                  |                                       |                                       |                    | 1    |            |                                                               |         |

pg #4 <sup>A</sup>233 Mon/Tues

Date 1995 August 21/22 Observers [KK]/Tn/Smr

Emulsion Batches:

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| Plate No. | Object                | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce09492   | COMP                  |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 93        | HD201091              | 21 02 25     | +38 15 27           | 2 36 51                 |                       | 3 29 W            |             |                           | 945  |
| 94        | COMP                  |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 95        | HD201092              | 21 02 26     | +38 15 14           | 02 54 20                |                       | 3 51 W            |             |                           | 1214 |
| 96        | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 97        | HD201091              | 21 02 25     | +38 15 27           | 03 16 43                |                       | 4 09 W            |             |                           | 930  |
| 98        | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 99        | BIAS(4)               |              |                     | 3 34                    |                       |                   |             |                           | —    |
| ce09500   | Comp                  |              |                     |                         |                       |                   |             | "                         | 4s   |
| 01        | ADS15600A<br>HD209791 | 22 00 54     | +64 08 00           | 3 45 08                 |                       | 3 38 W            |             |                           | 777  |
| 02        | COMP                  |              |                     |                         |                       |                   |             | "                         | 4    |
| 03        | ADS15600B             |              |                     | 4 00 11                 |                       | 4 02 W            |             |                           | 1300 |
| 04        | COMP                  |              |                     |                         |                       |                   |             | "                         | 4    |
| 05        | HD209791<br>ADS15600A |              |                     | 4 24 03                 |                       | 4 14 W            |             |                           | 600  |
| 06        | COMP                  |              |                     |                         |                       |                   |             |                           |      |

CCO  
Spectr. Ter

Focus....  
Spectr. Ter

Exp. Mtr.

107

65

84

77

1

55



<sup>CCD</sup>  
 Spectr. Temp. .... -100.6°C .... Dome Temp./Hum. 17.3°C/68.7% Transparency Conditions *hazy* ..... 234 .....  
 Focus ..... 245 .....  
 Spectr. Temp. .... Dome Temp./Hum. ....  
 FANS OFF  
 0 0 256 1024 4 1 count

| Exp. Mtr. | Seeing | Ptg. Mag.                 | Sp. | CCD Inst.        | <input checked="" type="checkbox"/> Grating/<br>Tilt | Slit          | Emulsion | P.H. | Program    | Remarks                                              | max. duv<br>Quality |
|-----------|--------|---------------------------|-----|------------------|------------------------------------------------------|---------------|----------|------|------------|------------------------------------------------------|---------------------|
| 4         |        |                           |     | ECHELLE<br>17.92 | 300 <del>RT</del><br>579                             | 400uH<br>60uW | 6300 Å   | 3    |            |                                                      |                     |
| 945       | 107    | 4" <sup>V</sup><br>5.22   | K5V |                  |                                                      |               |          | 4    | KK Vis Bin | brighter & NW, ADS14636A                             | 2.2K                |
| 4         |        |                           |     |                  |                                                      |               |          | 3    |            |                                                      |                     |
| 1214      | 65     | 3-4" <sup>V</sup><br>6.04 | K7V |                  |                                                      |               |          | 5    | KK Vis Bin | fainter one ADS 14636B                               | 1.7K                |
| 4c        |        |                           |     |                  |                                                      |               |          | 3    |            |                                                      |                     |
| 930       | 84     | 3-4" <sup>V</sup><br>5.22 | K5V |                  |                                                      |               |          | 4    | KK Vis Bin |                                                      |                     |
| 4c        |        |                           |     |                  |                                                      |               |          | 3    |            |                                                      |                     |
| -         |        |                           |     |                  |                                                      |               |          | 1    |            |                                                      |                     |
| 4s        |        |                           |     |                  |                                                      |               |          | 3    |            | Telescope on E side                                  |                     |
| 777       | 77     | 4" <sup>V</sup><br>4.80   | A3m |                  |                                                      |               |          | 6    | KK Vis Bin | brighter & E, ADS15600A                              | 1.8K                |
| 4         |        |                           |     |                  |                                                      |               |          | 3    |            |                                                      |                     |
| 1300      | 1      | 4" <sup>V</sup><br>5.30   | AF1 |                  |                                                      |               |          | 6    | KK Vis Bin | seems much fainter than<br>5.30, oh, some cloud here | 400<br>above<br>1.3 |
| 4         |        |                           |     |                  |                                                      |               |          | 3    |            |                                                      |                     |
| 600       | 55     | <sup>V</sup><br>4.80      | A3m |                  |                                                      |               |          | 6    | "          |                                                      | 1.3                 |

Date 1995 August 21/22 Observers [KK]/Tn/Smt

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[illegible]

Focus....  
Spectr. Te

Exp. Mtr.



[illegible]

Pg. #1 237 Tues/Wed

Date 1995 August 22/23 Observers [kk] Tn/Smt

Emulsion Batches:

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.....  
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| Plate No.      | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T.         | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|----------------|------------------|--------------|---------------------|---------------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC09524/<br>25 | INBOARD/OUTBOARD | HARTMANN     |                     |                                 |                       | 02 45 W           | +20°        | ThAr                      | 4/14 |
| 26             | BIAS(4)          |              |                     |                                 |                       |                   |             |                           |      |
| 27             | Comp             |              |                     |                                 |                       |                   |             | ThAr                      | 4s   |
| 28             | HD131156         | 14 46 46     | +19 30 57           | 20 04 50                        |                       | 3 11 W            |             |                           | 693  |
| 29             | Comp             |              |                     |                                 |                       |                   |             | ThAr                      | 4s   |
| 30             | ADS 9413 B       | 14 46 46     | +19 30 57           | 20 18 18                        |                       | 3 42 W            |             |                           | 1726 |
| 31             | Comp             |              |                     | 20 59                           |                       |                   |             | ThAr                      | 4s   |
| 32             | HD131156         | 14 46 46     | +19 30 57           | 21 00 19<br><del>20 48 33</del> |                       | 4 10 W            |             |                           | 892  |
| 33             | Comp             |              |                     |                                 |                       |                   |             | ThAr                      | 4s   |
| 34             | BIAS(4)          |              |                     |                                 |                       |                   |             |                           | —    |
| 35             | COMP             |              |                     |                                 |                       |                   |             | ThAr                      | 4    |
| 36             | HD137909         | 15 23 42     | +29 27 01           | 21 23 00                        |                       | 3 47 W            |             |                           | 330  |
| 37             | COMP             |              |                     |                                 |                       |                   |             | ThAr                      | 4    |
| 38             | HD137909         |              |                     | 21 30 32                        |                       | 3 55 W            |             |                           | 330  |
| 39             | COMP             |              |                     |                                 |                       |                   |             | ThAr                      | 4    |



Spectr. Temp.  $-100$  ..... Dome Temp./Hum.  $19.0^{\circ}\text{C}/58.3\%$  Transparency Conditions  $\text{clear}$  .....

Focus  $243$  .....  $90\text{C gain}$   $238$

Spectr. Temp. .... Dome Temp./Hum. ....

$c \text{ double } ci$

| Exp. Mtr. | Seeing | Mag. | Sp.  | Inst.   | Grating/Tilt     | Slit   | Emulsion | P.H. | Program       | Remarks                                                                                    | Quality |
|-----------|--------|------|------|---------|------------------|--------|----------|------|---------------|--------------------------------------------------------------------------------------------|---------|
| 4/14      |        |      |      | CCD     | X                |        |          |      |               |                                                                                            |         |
|           |        |      |      | ECHELLE | 300.81m          | 60u W  |          |      |               | 0 0 128 1024 8 1 CCD                                                                       |         |
|           |        |      |      | 17.92   | <del>17.92</del> | 400u W | 6300A    |      |               |                                                                                            |         |
|           |        |      |      |         | .579             |        |          | 1/2  |               | 0 0 256 1024 4 1 CCD                                                                       |         |
| 4s        |        |      |      |         |                  |        |          | 3    |               |                                                                                            |         |
| 693       | 177    | 3"   | 4.74 | G8V     |                  |        |          | 4    | Vis Bin KK    | ADS 9413A                                                                                  | 3.3K    |
| 4s        |        |      |      |         |                  |        |          | 3    |               |                                                                                            |         |
| 1726      | 31     | 2.4" | 6.90 | K5V     |                  |        |          | 5    | Vis Bin KK    | ADS 9413B filters                                                                          |         |
| 4s        |        |      |      |         |                  |        |          | 1    |               | GP1B/I/O errors & finally a Herion reset. Lost original comp. This one is 10 minutes later |         |
| 892       | 133    | 4"   | 4.74 | G8V     |                  |        |          | 2    |               |                                                                                            | 2.8K    |
| 4s        |        |      |      |         |                  |        |          | 3    |               |                                                                                            |         |
| 4         |        |      |      |         |                  |        |          | 1    |               |                                                                                            |         |
| 4         |        |      |      |         |                  |        |          | 3    |               |                                                                                            |         |
| 330       | 173    | 4"   | 3.66 | Fp      |                  |        |          | 4    | KK $\beta$ CB |                                                                                            | 1.9K    |
| 4         |        |      |      |         |                  |        |          | 3    |               |                                                                                            |         |
| 330       | 217    |      |      |         |                  |        |          | 4    | "             |                                                                                            | 2.9K    |
| 4         |        |      |      |         |                  |        |          | 3    |               |                                                                                            |         |

pg #2 2391 Tues/wed

Date 1995 August 22/23 Observers [KK]/Tn/Smt

Emulsion Batches:

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| Plate No. | Object                | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| 609540    | HD137909              | 15 23 42     | +29 27 01           | 21 38 17                |                       | 4 02 W            |             |                           | 175  |
| 41        | COMP                  |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 42        | BIAS(4)               |              |                     | 21 46                   |                       |                   |             |                           | -    |
| 43        | COMP                  |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 44        | ADS10345A<br>HD154906 | 17 03 15     | +54 36 07           | 21 56 22                |                       | 02 52 W           |             |                           | 860  |
| 45        | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 46        | ADS10345B<br>HD154905 | 17 03 15     | +54 36 07           | 22 12 56                |                       | 03 11 W           |             |                           | 1038 |
| 47        | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 48        | ADS10345A<br>HD154906 | 17 03 15     | +54 36 07           | 22 34 07                |                       | 03 31 W           |             |                           | 955  |
| 49        | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 50        | BIAS(4)               |              |                     |                         |                       |                   |             |                           | .    |
| 51        | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 52        | ADS12889A             | 19 41 48     | +33 22 00           | 23 06 50                |                       | 01 37 W           |             |                           | 1745 |
| 53        | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 54        | ADS12889B             | 19 41 48     | +33 22 00           | 23 37 58                |                       | 2 10 W            |             |                           | 1830 |
| 55        | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4s   |

Spectr. Ten

Focus....

Spectr. Ten

Exp. Mtr.

70

100

60

1

0



Spectr. Temp. .... Dome Temp./Hum. 16.6°C/66:17% Transparency Conditions clear - slightly hazy .....

Focus ..... 243 .....

240

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1 ccd fnt

| Exp. Mtr. | Seeing | <input checked="" type="checkbox"/> Mag. | Sp.  | Inst.                   | X Grating/<br>Tilt | Slit          | Emulsion | P.H. | Program    | Remarks                                                                             | Quality    |
|-----------|--------|------------------------------------------|------|-------------------------|--------------------|---------------|----------|------|------------|-------------------------------------------------------------------------------------|------------|
| 175       | 4"     | 3.66                                     | Fp   | CCD<br>ELMELLE<br>17.92 | 300 lmm<br>.579    | 60µW<br>400µH | 6300Å    | 3    | KK β CB    |                                                                                     | 27K        |
| 4s        |        |                                          |      |                         |                    |               |          | 4    |            |                                                                                     |            |
| -         |        |                                          |      |                         |                    |               |          | 1    |            |                                                                                     |            |
| 4s        |        |                                          |      |                         |                    |               |          | 3    |            |                                                                                     |            |
| 860       | 70     | 4-3"                                     | 5.65 | F7V                     |                    |               |          | 5    | KK Vis Bin | <del>separation</del> <sup>separation</sup> to separate<br>The NE of pair sometimes | 1.4K       |
| 4s        |        |                                          |      |                         |                    |               |          | 3    |            |                                                                                     |            |
| 1030      | 100    | 3"                                       | 5.70 | F                       |                    |               |          | 6    | KK Vis Bin | good<br>separation is seen better                                                   | 1.7K       |
| 4s        |        |                                          |      |                         |                    |               |          | 3    |            |                                                                                     |            |
| 955       | 60     | 3"                                       | 5.65 | F7V                     |                    |               |          | 5    | KK Vis Bin | separation OK<br>The NE one again                                                   |            |
| 4s        |        |                                          |      |                         |                    |               |          | 3    |            |                                                                                     |            |
|           |        |                                          |      |                         |                    |               |          | 1    |            |                                                                                     |            |
| 4s        |        |                                          |      |                         |                    |               |          | 3    |            |                                                                                     |            |
| 170       | 1      | 2-4"                                     | 8.3  | K3V                     |                    |               |          | 2    | KK Vis Bin | NE slightly west<br>NORTH, (slightly brighter?)                                     | max<br>576 |
| 4s        |        |                                          |      |                         |                    |               |          | 3    |            |                                                                                     |            |
| 1830      | 0      | 3"                                       | 8.4  |                         |                    |               |          | 4    | K Vis Bin  | The south one                                                                       |            |
| 4s        |        |                                          |      |                         |                    |               |          | 3    |            |                                                                                     |            |

Pg#3 (241) Tues/Wed

Date ... 1995 Aug. 22/23 Observers [K.K.] Th./Sun

Emulsion Batches:

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| Plate No. | Object                  | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| 1009556   | ADS12889 A              | 19 41 48     | +33 22 00           | 0 13 08                 |                       | 2 44 W            |             |                           | 1760 |
| 57        | COMP                    |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 58        | BIAS(4)                 |              |                     | 0 46                    |                       |                   |             |                           | —    |
| 59        | COMP                    |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 60        | HD187691                | 19 46 14     | +10 09 55           | 0 52 05                 |                       | 3 02 W            |             |                           | 850  |
| 61        | COMP                    |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 62        | Comp                    |              |                     |                         |                       |                   |             | "                         | "    |
| 63        | ADS15971 A<br>HD 213052 | 22 23 41     | -0 31 56            | 1 14 21                 |                       | 0 49 W            |             |                           | 518  |
| 64        | Comp                    |              |                     |                         |                       |                   |             | ThAr                      | 45   |
| 65        | ADS15971 B<br>HD 213051 |              | "                   | 1 25 03                 |                       | 0 59 W            |             |                           | 1072 |
| 66        | Comp                    |              | "                   |                         |                       |                   |             | ThAr                      | 45   |
|           | HD 213052               |              | "                   |                         |                       |                   |             |                           | 1    |
| 65        | Comp                    |              |                     | 1 54 26                 |                       |                   |             | ThAr                      | 4    |
| 66        | ADS15971 B<br>HD 213051 | 22 23 41     | -0 31 56            | 1 58 06                 |                       | 1 31 W            |             |                           | 900  |
| 67        | COMP                    |              |                     |                         |                       |                   |             | ThAr                      | 4    |



CCD Spectr. Temp.  $-100.3^{\circ}\text{C}$

Dome Temp./Hum.  $15.7^{\circ}\text{C}/70.8\%$

Transparency Conditions  $\text{clear} \rightarrow \text{some thin clouds}$

Focus  $\dots 243 \dots$

Spectr. Temp.  $\dots$

Dome Temp./Hum.  $\dots$  *cloudy*

242

| Exp. Mtr. | Seeing | Pl. Mag. | Sp.         | Inst.             | Grating/Tilt          | Slit                                 | Emulsion | P.H. | Program    | Remarks                                                                                      | Quality                     |
|-----------|--------|----------|-------------|-------------------|-----------------------|--------------------------------------|----------|------|------------|----------------------------------------------------------------------------------------------|-----------------------------|
| 0         | 3"     | 8.3      | K3V         | Edelle tilt 17.92 | 300 $\mu\text{m}$ 579 | 60 $\mu\text{m}$ 400 $\mu\text{m}$ H | 6300A    | 4    | KK Vis Bin |                                                                                              | max 400 575 or 420 abax. 45 |
|           |        |          |             |                   |                       |                                      |          | 3    |            |                                                                                              |                             |
|           |        |          |             |                   |                       |                                      |          | 1    |            |                                                                                              |                             |
|           |        |          |             |                   |                       |                                      |          | 3    |            |                                                                                              |                             |
| 73        | 3"     | 5.11     | F8V         |                   |                       |                                      |          | 5    | Sld. Vel   |                                                                                              | 1.5 K                       |
|           |        |          |             |                   |                       |                                      |          | 3    |            |                                                                                              |                             |
|           |        |          |             |                   |                       |                                      |          | 3    |            |                                                                                              |                             |
| 175       | 4.5"   | 4.31     | F3V         |                   |                       |                                      |          | 6    | KK Vis Bin | poor separation NORTH one                                                                    | 24 K                        |
|           |        |          |             |                   |                       |                                      |          | 3    |            |                                                                                              |                             |
| 90        | 3.4"   | 4.51     | F           |                   |                       |                                      |          | 4    |            | South one LOST                                                                               |                             |
|           |        |          |             |                   |                       |                                      |          | 3    |            | (more Accr/CCD3 Hazy up)                                                                     |                             |
|           |        |          |             |                   |                       |                                      |          |      |            | GPB problems - Resol/Haz. has                                                                |                             |
|           |        |          |             |                   |                       |                                      |          | 3    |            | so much for symmetry.                                                                        |                             |
| 106       | 4"     | 4.51     | (BSC) F2 IV |                   |                       |                                      |          | 2    | KK Vis Bin | barely separable - sometimes blended together - not surprising though since sep in Y is < 2" | 4.0K!                       |
|           |        |          |             |                   |                       |                                      |          | 3    |            |                                                                                              |                             |

pg #4 243

Emulsion Batches:

Date 1995 August 22/23 Observers [KK] Tn/Smt

| Plate No. | Object                   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp  |
|-----------|--------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce09568   | (ADS15971A)<br>HD 213052 | 22 23 41     | -0 31 56            | 2 16 58                 |                       | 1 42 W            |             |                           | 365  |
| 69        | COMP                     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 70        | BIAS(4)                  |              |                     | 2 28                    |                       |                   |             |                           | -    |
| 71        | Comp                     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 72        | HD 224635<br>ADS17149A   | 23 5424      | +33 1000            | 02 36 42                |                       | 0 40 W            |             |                           | 970  |
| 73        | Comp                     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 74        | HD 224636<br>ADS17149B   | 23 5424      | +33 1000            | 02 54 49                |                       | 0 56 W            |             |                           | 800  |
| 75        | Comp                     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 76        | HD 224635<br>ADS17149A   | 23 5424      | +33 1000            | 03 12 06                |                       | 1 13 W            |             |                           | 806  |
| 77        | Comp                     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 78        | HD 224636<br>ADS17149B   | "            | "                   | 3 29 14                 |                       | 1 41 W            |             |                           | 1422 |
| 79        | COMP                     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 80        | HD 224635<br>ADS17149A   | "            | "                   | 3 55 12                 |                       | 1 56 W            |             |                           | 797  |
| 81        | COMP                     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 82        | BIAS(4)                  |              |                     | 4 09                    |                       |                   |             |                           | -    |



Spectr. Temp. ....

Dome Temp./Hum. ....

14.9°C / 75.0%

Transparency Conditions

some thin clouds, else where  
it's clear

Focus ..... 243

Spectr. Temp. ....

Dome Temp./Hum. ....

climber

(244)

| Exp. Mtr. | Seeing | Mag. | Sp.  | CCD Inst.    | Grating/Tilt     | Slit          | Emulsion | P.H. | Program    | Remarks                                                 | Quality |
|-----------|--------|------|------|--------------|------------------|---------------|----------|------|------------|---------------------------------------------------------|---------|
| 365       | 111    |      |      | 17.92        | 300.21mm<br>.579 | 80μH<br>400μH | 6300Å    | 4    | KK Vis Bin |                                                         | 1.6K    |
| 4         |        |      |      |              |                  |               |          | 3    |            |                                                         |         |
| -         |        |      |      |              |                  |               |          | 1    |            |                                                         |         |
| 4         |        |      |      |              |                  |               |          | 3    |            |                                                         |         |
| 970       | 49     | 2-3" | 6.50 | GOV          |                  |               |          | 5    | KK Vis Bin | SE on. pretty good separation                           | 1.7K    |
| 4         |        |      |      |              |                  |               |          | 3    |            |                                                         |         |
| 800       | 52     | 2-3" | 6.70 | (BSC)<br>GOV |                  |               |          | 5    | KK Vis Bin | NW                                                      | 1.2K    |
| 4         |        |      |      |              |                  |               |          | 3    |            |                                                         |         |
| 806       | 57     |      | 6.50 | GOV          |                  |               |          | 5    | KK Vis Bin | SE on                                                   |         |
| 4         |        |      |      |              |                  |               |          | 3    |            |                                                         |         |
| 1422      | 40     |      | 6.70 | GOV          |                  |               |          | 5    | "          | lots of re-focussing at start<br>good separation again. | 1.5K    |
| 4         |        |      |      |              |                  |               |          | 3    |            |                                                         |         |
| 797       | 54     |      | 6.50 | GOV          |                  |               |          | 5    | "          |                                                         | 1.2K    |
| 4         |        |      |      |              |                  |               |          | 3    |            |                                                         |         |
|           |        |      |      |              |                  |               |          | 1    |            |                                                         |         |

p9 #5 245

Date 1995 August 22/23 Observers [kk]/Tr/Smt.....

Emulsion Batches:

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| Plate No.  | Object                    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|------------|---------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce09583    | COMP                      |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 84         | HD8890 A                  | 1 22 34      | +88 46 26           | 4 16 21                 |                       | 0 32 E            |             |                           | 141  |
| 85         | COMP                      |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 86         | HD8890 A                  |              |                     | 4 20 28                 |                       | 0 28 E            |             |                           | 117  |
| 87         | COMP                      |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 88         | HD8890 A                  |              |                     | 4 24 02                 |                       | 0 23 E            |             |                           | 154  |
| 89         | COMP                      |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 90         | COMP                      |              |                     |                         |                       |                   |             | "                         | 4    |
| 91         | HD3712                    | 0 34 50      | +55 59 20           | 4 32 03                 |                       | 1 40 W            |             |                           | 94   |
| 92         | COMP                      |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 93         | HD3712                    |              |                     | 4 35 11                 |                       | 1 43 W            |             |                           | 81   |
| 94         | COMP                      |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 595-601    | FLAT x 7                  |              |                     |                         |                       | 1 47 W            | +56"        | Tung                      | 2    |
| ce09602/63 | INBOARD/OUTBOARD HARTMANN |              |                     |                         |                       | "                 | "           | ThAr                      | 4/14 |
| 604        | BIAS(4)                   |              |                     | 4 57                    |                       |                   |             |                           | —    |



<sup>CCO</sup>  
Spectr. Temp. ... 100.7°C.

Dome Temp./Hum. 15.2°C/74.8%

Transparency Conditions *some clouds*.....

Focus . . . . . 243 . . . . .

Spectr. Temp. . . . .

Dome Temp./Hum. ....

0 0 256 1024 4 1 credit

| Comparison<br>Star | Exp. | Exp. Mtr. | Seeing | Ptg.<br>Mag. | Sp.     | Inst.<br>CCD | Grating/<br>Tilt | Slit        | Emulsion | P.H. | Program  | Remarks                       | APD<br>Quality |
|--------------------|------|-----------|--------|--------------|---------|--------------|------------------|-------------|----------|------|----------|-------------------------------|----------------|
|                    | 4    |           |        |              |         | ECHELLE      | 300 lines        | 400 $\mu$ H |          |      |          |                               |                |
|                    |      |           |        |              |         | 17.92        | 5.579            | 60 $\mu$ W  | 6300 Å   | 3    |          |                               |                |
|                    | 141  | 550       | 4"     | 2            | F816    |              |                  |             |          | 6    | KK       | a bit of cloud.               | 10 K           |
|                    | 4    |           |        |              |         |              |                  |             |          | 3    |          |                               |                |
|                    | 117  | 522       | 3"     | "            | "       |              |                  |             |          | 6    | KK       | no cloud.                     | 10 K           |
|                    | 4    |           |        |              |         |              |                  |             |          | 3    |          |                               |                |
|                    | 154  | 455       | 3"     | "            | "       |              |                  |             |          | 6    | KK       | most of cloud so far was here | ~10 K          |
|                    | 4    |           |        |              |         |              |                  |             |          | 3    |          |                               |                |
|                    | 4    |           |        |              |         |              |                  |             |          | 3    |          |                               |                |
|                    | 94   | 410       | 3"     | 2.23         | ko IIIa |              |                  |             |          | 4    | Std Vel. | sky getting bright now        | 9 K            |
|                    | 4    |           |        |              |         |              |                  |             |          | 3    |          |                               |                |
|                    | 81   | 907       |        | 2.23         | "       |              |                  |             |          | 4    | Std. Vel |                               |                |
|                    | 4    |           |        |              |         |              |                  |             |          | 3    |          |                               |                |
|                    | 2    |           |        |              |         |              |                  | 600 $\mu$ H |          | 3    |          |                               | 13.5K          |
|                    |      |           |        |              |         |              |                  | 60 $\mu$ W  |          |      |          |                               |                |
|                    | 4/14 |           |        |              |         |              |                  | 400 $\mu$ H |          | 7/8  |          | 0 0 128 1024 8 1 ccd hit      |                |
|                    |      |           |        |              |         |              |                  | 60 $\mu$ W  |          |      |          | T = 15.4°C F = .243           |                |
|                    |      |           |        |              |         |              |                  |             |          | 1    |          | 7A focus nicely               |                |
|                    |      |           |        |              |         |              |                  |             |          |      |          | 0 0 256 1024 4 1 ccd hit      |                |
|                    |      |           |        |              |         |              |                  |             |          |      |          |                               |                |

All to ~~the stars~~ & D:1  
 EXABYTE (last night's too)

19 #1 247 wed / Thurs

Date 1995 August 23/24 Observers [KK] / Tn / Smt.....

Emulsion Batches:

echelle rotated 90°  
(spectrograph).....

| Plate No.  | Object                | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|------------|-----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce09605/06 | INBOARD / OUTBOARD    | HARTMANN     |                     |                         |                       | 2 34 W            | + 23°       | ThAr                      | 4/9  |
| 07         | BIAS(4)               |              |                     | 20 24                   |                       |                   |             |                           |      |
| 08         | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 09         | HD137909              | 15 23 42     | +29 27 01           | 20 27 59                |                       | 3 02 W            |             |                           | 630  |
| 10         | COMP                  |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 11         | HD137909              |              |                     | 20 41 07                |                       | 3 12 W            |             |                           | 545  |
| 12         | COMP                  |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 13         | HD137909              |              |                     | 20 51 57                |                       | 3 23 W            |             |                           | 552  |
| 14         | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 15         | Comp                  |              |                     |                         |                       |                   |             | 4                         | 4    |
| 16         | HD146361<br>ADS9979 A | 16 10.9      | +34 07              | 21 06 11                |                       | 3 00 W            |             |                           | 1127 |
| 17         | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 18         | HD146362<br>ADS9979 B | "            | "                   | 21 27 49                |                       | 3 32 W            |             |                           | 1757 |
| 19         | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 20         | HD146363<br>ADS9979 A | "            | "                   | 21 58 59                |                       | 3 51 W            |             |                           | 977  |
| 21         | Comp                  |              |                     |                         |                       |                   |             | ThAr                      | 4    |



Spectr. Temp. . . . .

Dome Temp./Hum. 23.1°C / 60.1%  
 @ FOCUS TEST

Transparency Conditions... *clear... getting gusty*

248-

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst.                                                    | Grating/Tilt | Emulsion | P.H.   | Program    | Remarks                                       | Quality |
|-----------|--------|------|-----|----------------------------------------------------------|--------------|----------|--------|------------|-----------------------------------------------|---------|
| 4/9       |        |      |     | ECHELLE                                                  | 300 l/mm     | 60μ W    | 1/2    | FOCUS TEST | 0 0 128 1024 8 1 ccd                          | -36     |
|           |        |      |     | 17.92                                                    | .579         | 400μ H   | 6300 Å |            |                                               |         |
|           |        |      |     | May have been 18.42 previous nights (check actual frame) |              |          |        | 1          | 0 0 256 1024 4 1 ccd                          | fit     |
| 197       | 3"     | 3.66 | Fp  |                                                          |              |          | 4      | KK β CBr   |                                               | 4.6K    |
| 545       |        | 3.66 | Fp  |                                                          |              |          | 4      | KK β CBr   |                                               | 4.7K    |
| 168       | 3"     | 3.66 | Fp  |                                                          |              |          | 4      |            |                                               | 5 K     |
| 50        | 75"    | 5.58 | GOV |                                                          |              |          | 2      | KK Vis Bin | Separation OK despite seeing NE and brightest |         |
| 3         |        | 6.59 | GI  |                                                          |              |          | 2      | KK Vis Bin | SW and fainter                                | 1.3K    |
| 23        | 75"    | 5.58 | GOV |                                                          |              |          | 2      | "          | NE and brighter                               |         |

pg #2 249 Wed Thurs

Wed Thurs

Date 1995 August 23/24 Observers [KK]/Tn/Smt

### Emulsion Batches:

.....

.....

.....

[illegible]



Spectr. Temp. ....

Dome Temp./Hum. 21.8°/65.4

Transparency Conditions Some clouds, windy.....

Focus ..... 250

→ mostly cloudy.  
Then Rain

(250)

Spectr. Temp. ....

Dome Temp./Hum. ....

0 0 256 1024 4 1 ccd unit

| Exp. Mtr. | Seeing     | Mag.                          | Sp.   | Inst.   | Grating/<br>Tilt | N-S<br>Slit | Emulsion                        | P.H. | Program                                       | Remarks                                   | Quality          |
|-----------|------------|-------------------------------|-------|---------|------------------|-------------|---------------------------------|------|-----------------------------------------------|-------------------------------------------|------------------|
| -         |            |                               |       | ECHELLE | 300 Rlum         | 600 W       | 6300 Å                          | 1    |                                               |                                           |                  |
| 4         |            |                               |       | 17.92   | .579             | 400 M       |                                 | 3    |                                               |                                           |                  |
| 218       | 45         | 4"-5" 3.50                    | MSIB  |         |                  |             |                                 | 5    | KK Vis Bin                                    | cloud a bit here.                         | 2. OK            |
| 4         |            |                               |       |         |                  |             |                                 | 3    |                                               |                                           |                  |
| 435       | 5          | 4"-5" 5.40                    | GSIII |         |                  |             |                                 | 6    | KK Vis Bin                                    | hard to see in glare of A 500             |                  |
| 4         |            |                               |       |         |                  |             |                                 | 3    |                                               | some cloud on right off R and ON          |                  |
| 323       | 12         | ? 3.50                        | MSIB  |         |                  |             |                                 | 5    |                                               | cut short due to fast moving cloud cover. |                  |
| 4         |            |                               |       |         |                  |             |                                 | 3    |                                               | mostly cloud.                             |                  |
| 4         |            |                               |       |         |                  |             |                                 | 3    |                                               |                                           |                  |
| 488       | 0          | ? 4.13                        | F7II  |         |                  |             |                                 | 2    | Std Vol.                                      | mostly cloud - not much signal.           | 10 400 above 6/9 |
| 82        |            |                               |       |         |                  |             |                                 | 3    |                                               |                                           |                  |
| 4         |            |                               |       |         |                  |             |                                 | 1    |                                               |                                           |                  |
| 25        |            |                               |       |         |                  |             |                                 | 3    | Note for exact λ centering                    |                                           | 10.7K            |
|           | Restarted. | (Not much Rain and dig again) |       |         |                  |             | 600 width<br>6000 Height = .205 | 1    | needs. Line 6303.250 is at col # 136, Row 524 |                                           |                  |
| 45        |            |                               |       |         |                  |             | 400 width = .225                | 3    | Center of Chip                                |                                           |                  |

pg 43 (251) Wed- Thurs  
 Date 1995 August 23/24 Observers [KK] / Tn / Smt

Emulsion Batches:

| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce09613   | HD187691 | 19 46 14     | 10 09 55            | 01 28 54                |                       | 3 37 W            |             |                           | 514  |
| 44        | Comp     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 45        | HD187691 | "            | "                   | 1 40 56                 |                       | 3 54 W            |             |                           | 779  |
| 46        | Comp     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 47        | Comp     |              |                     |                         |                       |                   |             | "                         | 4    |
| 48        | HD8890A  | 01 22 34     | +88 46 26           | 2 03 33                 |                       | 2 43 E            |             |                           | 160  |
| 49        | Comp     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 50        | HD8890A  |              |                     | 2 08 34                 |                       | 2 38 E            |             |                           | 160  |
| 51        | Comp     |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 52        | HD8890A  |              |                     | 2 13 04                 |                       | 2 33 E            |             |                           | 161  |
| 53        | Comp     |              |                     |                         |                       |                   |             | "                         | 4    |
| 54        | BIAS (4) |              |                     | 2 18                    |                       |                   |             |                           | -    |
| 55        | HD8890B  | 01 22 34     | +88 46 26           | 2 27 18                 |                       | 2 01 E            |             |                           | 1498 |
| 56        | Comp     |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 57        | HD8890A  |              |                     | 2 50 42                 |                       | 1 55 E            |             |                           | 184  |
| 58        | Comp     |              |                     |                         |                       |                   |             | ThAr                      | 4    |

Spectr. Ten

Focus.....

Spectr. Ten

Exp. Mtr.

34

41

283

245

320

0

255



Spectr. Temp. .... Dome Temp./Hum.  $+21.4^{\circ}\text{C}$   $74.0\%$  Transparency Conditions ... *clearing quickly* ...  
 Focus .....  $250$  .....  
 Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1 ccd int

| Exp. Mtr. | Seeing | ✓<br>Mag. | Sp.  | Inst.                   | X Grating/<br>Tilt | <u>N-S</u><br>Slit                                             | Emulsion | P.H.     | Program | Remarks            | Quality           |
|-----------|--------|-----------|------|-------------------------|--------------------|----------------------------------------------------------------|----------|----------|---------|--------------------|-------------------|
| 34        | 5"     | 5.12      | F8V  | CCD<br>ECHELLE<br>17.92 | 300 l/m<br>.579    | 60 $\mu$ W<br>400 $\mu$ H<br>6300 Å<br>(actually 5<br>~6300 Å) | 4        | Std Vel  |         |                    | 1.3K              |
| 41        | 5"     | 5.11      | F8V  |                         |                    |                                                                | 3        |          |         |                    |                   |
| 41        | 5"     | 5.11      | F8V  |                         |                    |                                                                | 4        | Std Vel. |         |                    | 2.0K              |
|           |        |           |      |                         |                    |                                                                | 3        |          |         |                    |                   |
|           |        |           |      |                         |                    |                                                                | 3        |          |         |                    |                   |
| 283       | 3'     | 2         | F8Ib |                         |                    |                                                                | 5        | KK       |         |                    | 10.7K             |
|           |        |           |      |                         |                    |                                                                | 3        |          |         |                    |                   |
| 245       |        | 2         | F8Ib |                         |                    |                                                                | 5        | KK       |         |                    | 7.8K              |
|           |        |           |      |                         |                    |                                                                | 3        |          |         |                    |                   |
| 320       | 4'     | "         | "    |                         |                    |                                                                | 5        | KK       |         |                    | 11.1K             |
|           |        |           |      |                         |                    |                                                                | 3        |          |         |                    |                   |
|           |        |           |      |                         |                    |                                                                | 1        |          |         |                    |                   |
| 0         | 4"     | 3.9       | A?   |                         |                    |                                                                | 5        |          |         | Looks good on slit | 200 above<br>blg. |
|           |        |           |      |                         |                    |                                                                | 3        |          |         |                    |                   |
| 255       |        | 2         | F8Ib |                         |                    |                                                                | 5        |          |         |                    |                   |
|           |        |           |      |                         |                    |                                                                | 3        |          |         |                    |                   |

pg #4 253

Date 1995 August 23/24 Observers [KK]/Tn/Smt

Emulsion Batches:

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.....

.....

| Plate No. | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce09659   | COMP                 |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 60        | ADS 2390A (B?)       | 3 05 48      | +36 50              | 3 03 57                 |                       | 1 50 E            |             |                           | 1640 |
| 61        | COMP                 |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 62        | ADS 2390B (A?)       |              |                     | 3 35 52                 |                       |                   |             |                           | 1650 |
| 63        | Comp                 |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 64        | ADS 2390A (B?)       |              |                     | 4 08 20                 |                       | 0 47 E            |             |                           | 1526 |
| 65        | Comp                 |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 66        | BIAS(4)              |              |                     | 4 37                    |                       |                   |             |                           | -    |
| 67        | Comp                 |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 68        | HD 224 84            | 3 31 46      | +0 05 04            | 4 41 39                 |                       | 0 53 E            |             |                           | 630  |
| 69        | Comp                 |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 70        | BIAS(4)              |              |                     | 5 04                    |                       |                   |             |                           | -    |
| 71/72     | in board / out board |              |                     | 5 10                    |                       | 3 00W +20°        |             | ThAr                      | 4/9  |
|           |                      |              |                     |                         |                       |                   |             |                           |      |
|           |                      |              |                     |                         |                       |                   |             |                           |      |
|           |                      |              |                     |                         |                       |                   |             |                           |      |
|           |                      |              |                     |                         |                       |                   |             |                           |      |
|           |                      |              |                     |                         |                       |                   |             |                           |      |
|           |                      |              |                     |                         |                       |                   |             |                           |      |
|           |                      |              |                     |                         |                       |                   |             |                           |      |
|           |                      |              |                     |                         |                       |                   |             |                           |      |

Ccd  
Spectr. Temp

Focus.....

Ccd  
Spectr. Temp

Exp. Mtr.

35



• 0 0 256 1024 4 1 ccdmt.

[illegible]

pg #1 (255) Thurs / Fri

Date 1995 August 24/25 Observers [kk] Tn / Smt

Emulsion Batches:

.....  
 .....  
 .....

| Plate No. | Object                      | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| 609673/74 | Inboard / outboard Hartmann |              |                     |                         |                       |                   |             | ThAr                      | 4/3  |
| 75        | BIAS(4)                     |              |                     | 21 49                   |                       |                   |             |                           | —    |
| 76        | Comp                        |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 77        | HD137909                    | 15 23 42     | +29 27 01           | 21 57 45                |                       | 4 39 W            |             |                           | 870  |
| 78        | Comp                        |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 79        | HD137909                    | "            | "                   | 22 15 20                |                       | 4 49 W            |             |                           | 400  |
| 80        | comp                        |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 81        | HD137909                    | "            | "                   | 22 24 40                |                       | 5 06 W            |             |                           | 900  |
| 82        | Comp                        |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 83        | BIAS(4)                     |              |                     | 22 46                   |                       |                   |             |                           | —    |
| 84        | COMP                        |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 85        | HD8890 A                    | 01 22 34     | 188 46 26           | 22 49 23                |                       | 5 53 E            |             |                           | 320  |
| 86        | Comp                        |              |                     |                         |                       |                   |             | ThAr                      | A    |
| 87        | HD 8890A                    | "            | "                   | 22 56 44                |                       | 5 46 E            |             |                           | 320  |
| 88        | Comp                        |              |                     |                         |                       |                   |             | ThAr                      |      |

CCD  
Spectr. Ten  
Focus.....  
Spectr. Ten

Exp. Mtr.

61

31

6

145

210



<sup>CCD</sup>  
 Spectr. Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+16.5^{\circ}\text{C}$   $65.5\%$  Transparency Conditions *Part cloudy* .....  
 Focus .....  $249$  .....  $90\text{cc gain}$  ..... *FANS ON* ..... 256  
 Spectr. Temp. .... Dome Temp./Hum.  $+15.7^{\circ}\text{C}$   $66.2\%$

| Comparison<br>Exp. | Exp. Mtr. | Seeing | Mag. | Sp.            | Inst.<br>CCD | Grating/<br>Tilt | Slit | Emulsion | P.H. | Program       | Remarks                                                                                 | max<br>ADU<br>Quality |
|--------------------|-----------|--------|------|----------------|--------------|------------------|------|----------|------|---------------|-----------------------------------------------------------------------------------------|-----------------------|
| 4/3                |           |        |      |                | ECHELLE      | 3000 lines       | 600W | 6300A    | 1/2  | FOCUS<br>TEST | 0 0 128 1024 8 1<br>set just a bit cool. Strengths not<br>same as last night or others. | -.29                  |
| -                  |           |        |      |                | 17.92        | .529             | 400W |          | 1    |               | 0 0 256 1024 4 1                                                                        |                       |
| 4s                 |           |        |      |                |              |                  |      |          | 3    |               | Had to wiggle wires to raise<br>under.                                                  |                       |
| 870                | 61        | 3"-4"  | 3.66 | F <sub>p</sub> |              |                  |      |          | 4    | kk pgm        | Thick cloud here @ start.<br>B CBr                                                      | 2K                    |
| 4s                 |           |        |      |                |              |                  |      |          | 3    |               |                                                                                         |                       |
| 400                | 31        | "      | "    | "              |              |                  |      |          | 4    | kk            | weaker                                                                                  | 800                   |
| 4s                 |           |        |      |                |              |                  |      |          | 3    |               |                                                                                         |                       |
| 900                | 6         | 5"     | "    | "              |              |                  |      |          | 4    | kk            |                                                                                         |                       |
| 4s                 |           |        |      |                |              |                  |      |          | 3    |               |                                                                                         |                       |
| -                  |           |        |      |                |              |                  |      |          | 1    |               |                                                                                         |                       |
| 4                  |           |        |      |                |              |                  |      |          | 3    |               |                                                                                         |                       |
| 320                | 145       | 3"     | 2    | F816           |              |                  |      |          | 5    | kk pgm        |                                                                                         | 5.5K                  |
| 4                  |           |        |      |                |              |                  |      |          | 3    |               |                                                                                         |                       |
| 320                | 210       |        | 2    | "              |              |                  |      |          | 5    |               |                                                                                         |                       |
| 4                  |           |        |      |                |              |                  |      |          | 3    |               |                                                                                         |                       |

pg#2 (257) Thurs / Fri

Emulsion Batches:

Date 1995 Aug. 24/25... Observers [HK].. Th / Smt.....

| Plate No. | Object                    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|---------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce09689   | HD8890A                   | 01 22 34     | +88 46 26           | 23 03 37                |                       | 5 39 E            |             |                           | 324  |
| 90        | Comp                      |              |                     |                         |                       |                   |             | ThAr                      | 45   |
| 91        | Comp                      |              |                     |                         |                       |                   |             | "                         | 4    |
| 92        | (ADS15600A)<br>HD209791 * | 22 00 54     | +64 08              | 23 19 49                |                       | 0 38 E            |             |                           | 720  |
| 93        | Comp                      |              |                     |                         |                       |                   |             | "                         | 4    |
| 94        | (ADS15600B) *<br>HD209790 | 22 00 54     | +64 08              | 23 38 06                |                       | 0 02 E            |             |                           | 1791 |
| 95        | Comp                      |              |                     |                         |                       |                   |             | "                         | 4    |
| 96        | (ADS15600A)<br>HD209791 * | "            | "                   | 0 10 50                 |                       | 0 14 W            |             |                           | 727  |
| 97        | Comp                      |              |                     |                         |                       |                   |             | "                         | 4    |
| 98        | (ADS15600B) *<br>HD209790 | "            | "                   | 0 25 54                 |                       | 0 45 W            |             |                           | 1734 |
| 99        | Comp                      |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| ce09700   | (ADS15600A)<br>HD209791 * | "            | "                   | 0 57 48                 |                       | 0 58 W            |             |                           | 593  |
| 01        | Comp                      |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 02        | BIAS(4)                   |              |                     | 1 09                    |                       |                   |             |                           |      |
| 03        | Comp                      |              |                     |                         |                       |                   |             | ThAr                      | 4    |



Spectr. Temp. <sup>CD</sup> ... 100.6 °C

Dome Temp./Hum. 15.6 °C / 66.1 %

Transparency Conditions medium cloud, patchy, but nearly overcast

Focus ... 24.9

FANS ON

258

Spectr. Temp. ....

Dome Temp./Hum. ....

C. Kambale

0 0 256 1024 4 1 ccd/bk

| Exp. Mtr. | Seeing | Mag. | Sp.   | Inst. | Grating/Tilt | Slit    | Emulsion        | P.H.   | Program | Remarks    | Quality                                                          |
|-----------|--------|------|-------|-------|--------------|---------|-----------------|--------|---------|------------|------------------------------------------------------------------|
| 324       | 263    | 3"   | 2     | F816  | 17.92        | 300 l/m | 60 x W<br>400 H | 6300 Å | 5       | KK pgr     |                                                                  |
| 4         |        |      |       |       |              |         |                 |        | 3       |            |                                                                  |
| 4         |        |      |       |       |              |         |                 |        | 3       |            |                                                                  |
| 720       | 77     | 4"   | 4.80  | A3m   |              |         |                 |        | 4       | KK Vis Bin | Done on Aug 21/22 with E-W slit. Some cloud here, too. 1.8 K     |
| 4         |        |      |       |       |              |         |                 |        | 3       |            | exp. mtr counts REALLY low, but signal is same strength, approx. |
| 1791      | 4      | 3"   | 5.30* | dF7   |              |         |                 |        | 4       | KK Vis Bin | * BSC lists it at V=6.47 and this looks about right 9000 Å       |
| 4         |        |      |       |       |              |         |                 |        | 3       |            | further and W, sky improving                                     |
| 727       | 104    | 4"   | 4.80  | A3m   |              |         |                 |        | 4       | KK Vis Bin |                                                                  |
| 4         |        |      |       |       |              |         |                 |        | 3       |            |                                                                  |
| 1734      | 8      | 4"   | 5.30* | dF7   |              |         |                 |        | 4       | KK Vis Bin | * looks like BSC-listed V=6.5                                    |
| 4         |        |      |       |       |              |         |                 |        | 3       |            |                                                                  |
| 593       | 86     | 4"   | 4.80  | A3m   |              |         |                 |        | 4       | KK Vis Bin |                                                                  |
| 4         |        |      |       |       |              |         |                 |        | 3       |            |                                                                  |
| 4         |        |      |       |       |              |         |                 |        | 3       |            |                                                                  |

\* Note Sep 15/95. Found HD CATALOG  
(Old Hearn copy gives Brighter as HD 209790)

Had to jiggle prism motor wires

pg# 3 259 Thurs/Fri

Emulsion Batches:

Date 1995..Aug 24/25... Observers [K.H.]... T.G./Sent.....

| Plate No. | Object     | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce 09704  | HD 187691  | 19 46 14     | +10 09 55           | 01 17 35                |                       | 3 39 W            |             |                           | 1045 |
| 05        | Comp       |              |                     | * 01 39 33              |                       |                   |             | ThAr                      | 4s   |
| 06        | HD 187691  | 19 46 14     | +10 09 55           | 01 40 49                |                       | 4 09 W            |             |                           | 1431 |
| 07        | Comp       |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 08        | BIAS(4)    |              |                     | 02 07                   |                       |                   |             |                           |      |
| 09        | Comp       |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 10        | HD 222368  | 23 34 48     | +05 05 03           | 02 13 36                |                       | 0 37 W            |             |                           | 498  |
| 11        | Comp       |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 12        | HD 222368  | "            | "                   | 02 25 10                |                       | 0 49 W            |             |                           | 501  |
| 13        | Comp       |              |                     |                         |                       |                   |             | ThAr                      | 4s   |
| 14        | BIAS(4)    |              |                     | 02 44                   |                       |                   |             |                           |      |
| 15        | COMP       |              |                     |                         |                       |                   |             | "                         | 4    |
| 16        | ADS 2122 A | 2 41 48      | +18 57              | 2 50 29                 |                       | 1 33 E            |             |                           | 1650 |
| 17        | COMP       |              |                     |                         |                       |                   |             | "                         | 4    |
| 18        | ADS 2122 B | "            | "                   | 3 24 41                 |                       | 0 58 E            |             |                           | 1763 |



CCD Spectr. Temp.  $-101.7^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+13^{\circ}\text{C}$   $67.7\%$  Transparency Conditions *Fine* ..... now .....

Focus .....  $249$  .....

Spectr. Temp. .... Dome Temp./Hum. .... *c. Lambda*

(260)

MAX

| companion<br>filter | Exp. | Exp. Mtr. | Seeing                          | P.V.<br>Mag. | Sp. | Inst.<br>eclatle | Grating/<br>Tilt                   | Slit                                      | Emulsion | P.H. | Program    | Remarks                                                                                  | Quality |
|---------------------|------|-----------|---------------------------------|--------------|-----|------------------|------------------------------------|-------------------------------------------|----------|------|------------|------------------------------------------------------------------------------------------|---------|
| 1045                |      | 38        | 5"                              | 5.12         | F8V | 17.92            | 300 $\mu\text{m}/\text{mm}$<br>579 | 60 $\mu\text{m}$ W<br>100 $\mu\text{m}$ H | 6300A    | 5    | stdvel     |                                                                                          |         |
| 4s                  |      | 500       | (no prism problem for this one) |              |     |                  |                                    |                                           |          | 1    |            | * Repeated after Resetting Heuristics                                                    |         |
| 143                 |      | 38        |                                 | 5.12         | F8V |                  |                                    |                                           |          | 2    | stdvel     |                                                                                          | 1.7K    |
| 4s                  |      | 500       | no prism problem e. Her         |              |     |                  |                                    |                                           |          | 3    |            |                                                                                          |         |
|                     |      |           |                                 |              |     |                  |                                    |                                           |          | 1    |            |                                                                                          |         |
| 4s                  |      | 480       |                                 |              |     |                  |                                    |                                           |          | 3    |            |                                                                                          |         |
| 496                 |      | 80        | 3"                              | 4.13         | F7V |                  |                                    |                                           |          | 4    | stdvel     |                                                                                          | 2K      |
| 4s                  |      | 470       |                                 |              |     |                  |                                    |                                           |          | 3    |            |                                                                                          |         |
| 501                 |      | 74        |                                 | 4.13         | F7V |                  |                                    |                                           |          | 4    | stdvel     |                                                                                          | 1.8K    |
| 4s                  |      | ~400      |                                 |              |     |                  |                                    |                                           |          | 3    |            |                                                                                          |         |
|                     |      |           |                                 |              |     |                  |                                    |                                           |          | 1    |            |                                                                                          |         |
| 4                   |      | ~300      |                                 |              |     |                  |                                    |                                           |          | 3    |            | manually moved prism                                                                     |         |
| 1650                |      | 0         | 4-5"                            | 7.40         | df9 |                  |                                    |                                           |          | 5    | Kk Vis Bz  | brighter SE - seeing not too good anymore - very close and barely separable, light focus | 500     |
| 4                   |      |           |                                 |              |     |                  |                                    |                                           |          | 3    |            | Opt. manually fainter and NW                                                             |         |
| 176                 |      | 0         | 4"                              | 8.20         | ?   |                  |                                    |                                           |          | 5    | Kk Vis Bin |                                                                                          | 900     |

pg #4

1 hrs / Fr

261

### Emulsion Batches:

Date 1995 Aug. 24/25..... Observers [KF] Tn / Smt.....

.....

.....

.....

[illegible]



Spectr. Temp. ....

Dome Temp./Hum. .... +11.7°C 69.2% H

Transparency Conditions Five.....

Focus . . . . . 249 . . . . .

Specr. Temp. . . . .

Dome Temp./Hum. 71/50.....

002561024 4 1 redhat

[illegible]

Friday (263)

Date 1995 Aug 25 Observers KK

Emulsion Batches:

.....  
.....  
.....

| Plate No. | Object     | R.A.<br>1900                     | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|------------|----------------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CE09734   | Comparison |                                  |                     |                         |                       |                   |             |                           |      |
| 35        | Sky        | 2 <sup>h</sup> 30 <sup>m</sup> W | +35°                |                         |                       | 2 <sup>h</sup> 30 |             |                           | 60   |
| 36        | Sky        |                                  |                     | 10:53                   |                       |                   |             |                           | 120  |
| 37        | "          |                                  |                     |                         |                       |                   |             |                           |      |
| 38        | "          |                                  |                     |                         |                       |                   |             |                           |      |
| 39        | "          |                                  |                     |                         |                       |                   |             |                           | 240  |
| 40        | Comparison |                                  |                     |                         |                       |                   |             |                           | 4    |
| 41        | Bias (4)   |                                  |                     |                         |                       |                   |             |                           |      |
| 42        | Comparison |                                  |                     |                         |                       |                   |             |                           | 4    |
| 43        | Sky        |                                  |                     |                         |                       |                   |             |                           | 60   |
| 44        | "          |                                  |                     |                         |                       |                   |             |                           | 120  |
| 45        | "          |                                  |                     |                         |                       |                   |             |                           | 120  |
| 46        | "          |                                  |                     |                         |                       |                   |             |                           | 120  |
| 47        | Comparison |                                  |                     |                         |                       |                   |             |                           |      |
| 48        | Bias (4)   |                                  |                     |                         |                       |                   |             |                           |      |









Spectr. Temp.  $-100.5^{\circ}\text{C}$  Dome Temp./Hum.  $+16.9^{\circ}\text{C}$  57% H Transparency Conditions Part Cloudy  
Focus 6.70  
Spectr. Temp. Dome Temp./Hum.  $+16.9^{\circ}\text{C}$  67% H Increasing Cloud  
266

| Exp. Mtr. | Seeing    | P.V.<br>Mag. | Sp. | Inst.       | Grating/<br>Tilt   | Slit | Emulsion | P.H.   | Program      | Remarks                             | Quality |
|-----------|-----------|--------------|-----|-------------|--------------------|------|----------|--------|--------------|-------------------------------------|---------|
| 6/10      | no filter |              |     | CASS<br>CCD | 1800 h/m<br>G=6100 | 306  | 6800A    | 3/4 ci |              |                                     |         |
|           |           |              |     |             |                    |      |          | 1/2    |              |                                     |         |
|           |           |              |     |             |                    |      |          | 5      |              |                                     |         |
| 6/13      | 500       | 2-3"         | 210 |             |                    |      |          | 6      | Type II ceph | 755/1 S/N <sup>Too</sup> cloudy     |         |
| 6/13      |           |              |     |             |                    |      |          | 7      |              |                                     |         |
| 6/13      |           |              |     |             |                    |      |          | 8      |              |                                     | 1A      |
|           |           |              |     |             |                    |      |          | 1      |              |                                     |         |
|           |           |              |     |             |                    |      |          | 9      |              |                                     |         |
|           |           |              |     |             |                    |      |          | 10     | Std Vel      | Too Cloudy<br><del>same cloud</del> | 3.6A    |

Pg#1

Sun/Mon 267

Emulsion Batches:

Date ..1995. Aug. 27/28... Observers ..Vuk. / Tn + Z. Balog...

| Plate No.               | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-------------------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 348 <sup>19/20</sup> | In board / Out board |              |                     |                         |                       | 0                 | +46°        | Felt<br>clear             | 60/60 |
| CC 34821                | BIAS(4)              |              |                     |                         |                       |                   |             |                           |       |
| 22                      | Comp                 |              |                     |                         |                       |                   |             | Felt<br>clear             | 60s   |
| 23                      | HD 187691            | 19 4614      | +10 0955            | 19 5511                 |                       | 01 47 E           |             |                           | 145   |
| 24                      | Comp                 |              |                     |                         |                       |                   |             | Felt<br>clear             | 60s   |
| 25                      | Comp                 |              |                     |                         |                       |                   |             | "                         | "     |
| 26                      | HD 37827             | 17 3649      | +19 15              | 20 1142                 |                       | 00 56 W           |             |                           | 2357  |
| 27                      | Comp                 |              |                     |                         |                       |                   |             | Felt<br>clear             | 60s   |
| 28                      | BIAS(4)              |              |                     |                         |                       |                   |             |                           |       |
| 29                      | Comp                 |              |                     |                         |                       |                   |             | Felt<br>clear             | 60s   |
| 30                      | HD 229414            | 18 4100      | +12 1400            | 21 1039                 |                       | 01 01 W           |             |                           | 1821  |
| 31                      | Comp                 |              |                     | <del>22 00 12</del>     | 21 44 26              |                   |             | Felt<br>clear             | 60s   |
| 32                      | Comp                 |              |                     | 22 00 42                |                       |                   |             | "                         | "     |
| 33                      | HD 229680            | 18 4558      | +15 4900            | 22 03 23                |                       | 2 03 W            |             |                           | 2627  |
| 34                      | Comp                 |              |                     |                         |                       |                   |             | Felt<br>clear             | 60s   |
| 35                      | BIAS(4)              |              |                     |                         |                       |                   |             |                           |       |

CCD  
Spectr. Ten

Focus....

Spectr. Ten

Exp. Mtr.

No Filter

4500

560

612

515



Spectr. Temp. <sup>CCD</sup> 100.5°C ..... Dome Temp./Hum. <sup>70% H</sup> 18.9°C ..... Transparency Conditions ... Fine ... increasing here ...

Focus ... 6.70 .....

Spectr. Temp. .... Dome Temp./Hum. <sup>80%</sup> 116.3°C .....

90C gain

(slit rotated very slightly CCW from absolute limit) <sup>268 MAX</sup> 404

| Exp. Mtr. | Seeing    | Mag. | Sp.             | Inst.  | Grating/<br>Tilt | Slit             | Emulsion | P.H. | Program                      | Remarks                                            | Quality |
|-----------|-----------|------|-----------------|--------|------------------|------------------|----------|------|------------------------------|----------------------------------------------------|---------|
| 60/60     | No Filter |      |                 | CHSSCD | 1800nm<br>G=6100 | 306 <sub>n</sub> | 6600R    | 3/4  | Focus                        | 410, 0.50, 1024, 4, CCDFMT                         |         |
|           |           |      |                 |        |                  |                  |          | 1/2  |                              |                                                    |         |
| 60s       |           |      |                 |        |                  |                  |          | 5    |                              |                                                    | 3.5K    |
| 45        | 4500      | 5.12 | F8V             |        |                  |                  |          | 6    | Starvel                      |                                                    | 5.5K    |
| 64        |           |      |                 |        |                  |                  |          | 7    |                              |                                                    |         |
| 4         |           |      |                 |        |                  |                  |          | 8    |                              |                                                    | 3.5K    |
| 235       | 560       | <3"  | 210. 3 F        |        |                  |                  |          | 9    | Cepheid                      | BLHer<br>V <sub>1</sub> K = 75/1 S/N               |         |
| 60s       |           |      |                 |        |                  |                  |          | 10   |                              | After sp control failure                           |         |
|           |           |      |                 |        |                  |                  |          | 1/2  |                              |                                                    |         |
| 60s       |           |      |                 |        |                  |                  |          | 11   |                              | Rad out in 9ci                                     |         |
| 1821      | 612       | 3"   | 210             |        |                  |                  |          | 12   | Cepheid.                     | BB Her = 100/1 S/N 630                             |         |
| 60s       |           |      |                 |        |                  |                  |          | 13?  | (not sure now if comp works) |                                                    |         |
| 4         |           |      |                 |        |                  |                  |          | 1.   |                              | "non GPIB glitch" ?<br>(no, my fault & small) mean |         |
| 262       | 515       | <3"  | 10119<br>-11.18 |        |                  |                  |          | 2    | Cepheid V <sub>1</sub> K     | APHer 780/1 S/N                                    |         |
|           |           |      |                 |        |                  |                  |          | 3    |                              |                                                    |         |
|           |           |      |                 |        |                  |                  |          | 1    |                              |                                                    |         |

p942

Sun/Mon

269

Emulsion Batches:

Date 1995 Aug. 27/28... Observers Vnk/Tu + Z Balog...

| Plate No. | Object      | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC34836   | Comp        |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s  |
| 37        | HD 356404   | 19 52 48     | +10 46              | 22 56 37                |                       |                   |             |                           | 1460 |
| 38        | Comp        |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s  |
| 39        | Comp        |              |                     |                         |                       |                   |             | "                         | "    |
| 40        | HD 354511   | 19 56 35     | +15 31 00           | 23 32 59                |                       | 2 16 W            |             |                           | 2274 |
| 41        | Comp        |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s  |
| 42        | BIAS (4)    |              |                     |                         |                       |                   |             |                           |      |
| 43        | Comp        |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s  |
| 44        | V 383 Cyg   | 20 25 03     | +13 48              | 60 25 45                |                       | 2 43 W            |             |                           | 2377 |
| 45        | Comp        |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s  |
| 46        | Comp        |              |                     |                         |                       |                   |             | "                         | "    |
| 47        | BD +17 4572 | 21 19 21     | +17 51              | 01 13 55                |                       | 2 17 W            |             |                           | 1201 |
| 48        | Comp        |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60   |
| 49        | BIAS (4)    |              |                     |                         |                       |                   |             |                           |      |
| 50        | Comp        |              |                     |                         |                       |                   |             | FeAr<br>Clear             | 60s  |

Cep  
Spectr. TenFocus...  
Cep  
Spectr. Ten

Exp. Mtr.

550

560

40

860



<sup>CCP</sup>  
 Spectr. Temp. .... -101.5°C ... Dome Temp./Hum. ~~2~~ +16°C ... 81.2H Transparency Conditions ... Slight haze, some cloud...

Focus ... 6.70 .....

<sup>CCP</sup>  
 Spectr. Temp. ... -100.3°C ... Dome Temp./Hum. +15.3°C .....

270 <sup>ADG</sup>  
MAX

| Exp. Mtr. | Seeing | P.V.<br>Mag.   | Sp. | Inst.    | Grating/<br>Tilt   | Slit | Emulsion | P.H. | Program | Remarks  | Quality |
|-----------|--------|----------------|-----|----------|--------------------|------|----------|------|---------|----------|---------|
|           |        |                |     | CASS CCD | 1800A/mm<br>G=6100 | 306K | 6600A    | 4    |         |          | 3.7K    |
| 550       | 3"     | 9.76<br>-10.46 |     |          |                    |      |          | 5    | Cepheid | V733 Ag1 |         |
|           |        |                |     |          |                    |      |          | 6    |         |          |         |
|           |        |                |     |          |                    |      |          | 7    |         |          |         |
| 560       | 3"     | 9.8<br>-10.6   |     |          |                    |      |          | 8    | Cepheid | KL Ag1   |         |
|           |        |                |     |          |                    |      |          | 9    |         |          |         |
|           |        |                |     |          |                    |      |          | 1    |         |          |         |
|           |        |                |     |          |                    |      |          | 10   |         |          |         |
| 400       | 2"-3"  | 10.6<br>-11.2  |     |          |                    |      |          | 11   | Cepheid |          |         |
|           |        |                |     |          |                    |      |          | 12   |         |          |         |
|           |        |                |     |          |                    |      |          | 13   |         |          | 3.7K    |
| 860       | 3"     | 8.9<br>-9.5    |     |          |                    |      |          | 14   |         |          |         |
|           |        |                |     |          |                    |      |          | 15   |         |          |         |
|           |        |                |     |          |                    |      |          | 1    |         |          |         |
|           |        |                |     |          |                    |      |          | 16   |         |          |         |

pg #3      Scan/mon      271

Scn/mon 271

Date 1995 Aug. 27/28 Observers VnK./Tn.....

### Emulsion Batches:

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[illegible]



272 MAX

| Comparison<br>ter. Exp. | Exp. Mtr. | Seeing | P.V.<br>Mag. | Sp.              | Inst.                         | Grating/<br>Tilt | Slit             | Emulsion          | P.H.  | Program      | Remarks       | Quality |
|-------------------------|-----------|--------|--------------|------------------|-------------------------------|------------------|------------------|-------------------|-------|--------------|---------------|---------|
| 236                     | 5000      | 3"     | 5.56         | AOJ <sub>n</sub> | CASS CCD                      | 18° 26' 14"      | 306 <sub>u</sub> | GGDA <sub>P</sub> | 17    | Telluric Std | AIR MASS 1.12 | 5K      |
| 60s                     |           |        |              |                  |                               |                  |                  |                   | 18    |              |               |         |
| 4                       |           |        |              |                  |                               |                  |                  |                   | 19    |              |               |         |
| 123                     | 8500      |        | 4.13         | F7Z              |                               |                  |                  |                   | 20    | std vel      |               | 10K     |
| 6s                      |           |        |              |                  |                               |                  |                  |                   | 21    |              |               |         |
| 8s                      |           |        |              |                  |                               |                  |                  |                   | 22    |              |               | 4K      |
| 60/60                   |           |        | 15.2°        | set 6.70         |                               |                  |                  |                   | 23/24 | focus test   |               |         |
|                         |           |        |              | All to           | D. To - CORON CASS & PERSONS. |                  |                  |                   |       |              |               |         |

p4#1

Mon/Tues

273

Emulsion Batches:

Date 1995..Aug.28/29...

Observers Vnk / Tn.....

| Plate No.                           | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp   |
|-------------------------------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 348 <sup>68/</sup> <sub>70</sub> | In board / out Board |              |                     |                         |                       | 00 17W            | 379         | Fair<br>clear             | 60/60 |
| 71                                  | BIASCA)              |              |                     |                         |                       |                   |             | Fair<br>clear             | 65    |
| 72                                  | HD 187 691           | 19 46 15     | +10 09 55           | 19 43 28                |                       | E                 |             |                           | 189   |
| 73                                  | Comp                 |              |                     |                         |                       |                   |             | Fair<br>clear             | 65    |
| 74                                  | HD 187 691           | "            | "                   | 19 50 17                |                       | 1 48 E            |             |                           | 180   |
| 75                                  | Comp                 |              |                     |                         |                       |                   |             | Fair<br>clear             | 65    |
| 76                                  | Comp                 |              |                     |                         |                       |                   |             | "                         | "     |
| 77                                  | HD 347 827           | 17 56 49     | 19 15 00            | 20 03 34                |                       | 0 40 W            |             |                           | 1688  |
| 78                                  | Comp                 |              |                     |                         |                       |                   |             | Fair<br>clear             | 65    |
| 79                                  | Comp                 |              |                     |                         |                       |                   |             | "                         | "     |
| 80                                  | HD 229 414           | 18 41 18     | +12 14 00           | 20 40 05                |                       | 0 31 W            |             |                           | 1616  |
| 81                                  | Comp                 |              |                     |                         |                       |                   |             | Fair<br>clear             | 65    |
| 82                                  | BIASCA)              |              |                     | 21 09                   |                       |                   |             |                           |       |
| CG 800 <sup>68/</sup> <sub>71</sub> | HD 187 120           | 19 43 12     | +45 29              | = 21 20                 |                       | 00 18 E           |             | 4x                        | 67ms  |
| CG 800 <sup>72/</sup> <sub>73</sub> | "                    | "            | "                   |                         |                       |                   |             | 2x                        | 133ms |



CCD Spectr. Temp.  $-100.0^{\circ}\text{C}$  Dome Temp./Hum.  $+20.6^{\circ}\text{C}$  60% H Transparency Conditions Fine - part cloudy.....

Focus  $6.78$

CCD Spectr. Temp.  $-$

Dome Temp./Hum.  $+19.2^{\circ}\text{C}$  66% H

274

410 050 1024 4 1 CCD FWH MAX

| Exp. Mtr.        | Seeing    | Plg Mag. | Sp. | Inst.          | Grating/Tilt                                                   | Slit | Emulsion | P.H.                                  | Program            | Remarks             | Quality |
|------------------|-----------|----------|-----|----------------|----------------------------------------------------------------|------|----------|---------------------------------------|--------------------|---------------------|---------|
| 60/60            | 100 f/100 |          |     | CASS CCD       | 1800 l/m<br>G=6100                                             | 306  | 6600R    | 3/4                                   | Focus test         |                     |         |
|                  |           |          |     |                | [Slit Rotation Temp at A/R<br>* Adj CW 1/4 turn<br>Looks good] |      |          | 1/2                                   |                    |                     |         |
|                  |           |          |     |                |                                                                |      |          | 5                                     |                    |                     | 3.7h    |
| 84               | 6500      | 3"       | 512 | F8V            |                                                                |      |          | 6                                     | Std vel            | column 22 strongest |         |
| 64               |           |          |     |                |                                                                |      |          | 7                                     |                    |                     |         |
| 120              | 6600      | "        | "   |                |                                                                |      |          | 6                                     | std vel            | column 24 strongest |         |
| 63               |           |          |     |                |                                                                |      |          | 8                                     |                    |                     |         |
| "                |           |          |     |                |                                                                |      |          | 9                                     |                    |                     |         |
| 188              | 610       | 2.3"     | 210 |                |                                                                |      |          | 10                                    | Cepheid VnK Bl Her |                     |         |
| 62               |           |          |     |                |                                                                |      |          | 11                                    |                    |                     |         |
| "                |           |          |     |                |                                                                |      |          | 12                                    |                    |                     |         |
| 116              | 580       | 3"       | 9.7 |                |                                                                |      |          | 13                                    | Cepheid VnK        |                     |         |
| 60               |           | -10.4    |     |                |                                                                |      |          | 14                                    |                    |                     |         |
|                  |           |          |     |                |                                                                |      |          | 1/2                                   |                    |                     |         |
| 2.3" 7.52 K0 III |           |          |     | Above 306 slit |                                                                |      |          | Some worst seeing test only NE Fan on |                    |                     |         |

Pg#2      mon/Tues      275  
 Date .. 1995 Aug. 28/29....      Observers Van K. / Tr.....

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[illegible]



Spectr. Temp. .... Dome Temp./Hum.  $+19.5^{\circ}\text{C}$   $66\% \text{RH}$  Transparency Conditions  $\text{Partly Cloudy}$  .....

Focus .....  $6.70$  .....

Spectr. Temp.  $102.00^{\circ}\text{C}$  .....

Dome Temp./Hum. ....  $27.6$   $\text{max ADU}$

Comparison  
Filter Exp

| Exp. Mtr. | Seeing | Mag.          | Sp.              | Inst.  | Grating/<br>Tilt   | Slit | Emulsion | P.H.          | Program                  | Remarks                        | Quality |
|-----------|--------|---------------|------------------|--------|--------------------|------|----------|---------------|--------------------------|--------------------------------|---------|
|           |        |               |                  | CASSIO | 18006/1m<br>G-6100 | 306u | 6600R    | 15            |                          | After Sp contr failure         |         |
| 12K       |        | 2.99          | H0V <sub>m</sub> |        |                    |      |          | 16            | Telluric Std             |                                | 9K      |
|           |        |               |                  |        |                    |      |          | 17            |                          |                                |         |
|           |        |               |                  |        |                    |      |          | 18            |                          | After another Sp Contr failure | 3K      |
| 610       | 2.3"   | 9.7<br>-10.2  |                  |        |                    |      |          | 19            | Cepheid V <sub>1</sub> K |                                |         |
|           |        |               |                  |        |                    |      |          | 20            |                          |                                |         |
|           |        |               |                  |        |                    |      |          | 1/2           |                          |                                |         |
|           |        |               |                  |        |                    |      |          | 21            |                          |                                |         |
| 450       | 2.3"   | 11.0<br>-11.4 |                  |        |                    |      |          | 22            | Cepheid V <sub>1</sub> K | increasing cloud               |         |
|           |        |               |                  |        |                    |      |          | 23            |                          | After another Sp CONTR Failure |         |
|           |        |               |                  |        |                    |      |          | 24            |                          |                                |         |
| 5500      | 4"     | 4.3           | F7V              |        |                    |      |          | 25            | Std Vel                  |                                | 7K      |
|           |        |               |                  |        |                    |      |          | <del>26</del> |                          |                                |         |
|           |        |               |                  |        |                    |      |          | 26            |                          |                                |         |
| 525       | 4.3"   | 10.6<br>-11.2 |                  |        |                    |      |          | 27            | Cepheid V <sub>1</sub> K |                                |         |
|           |        |               |                  |        |                    |      |          | 28            |                          |                                |         |

Pg#3 Mon/Tues 277

Emulsion Batches:

Date 1995 Aug 28/29.. Observers V.A.K./T.A.....

| Plate No.                | Object                | R.A.<br>1900    | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|--------------------------|-----------------------|-----------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34899<br>900<br>TO 908 | BIAS(4)<br>FLATS x 9* |                 |                     |                         |                       | 2 30E             | +54°        | Tung<br>Ap/4              | 8     |
|                          | Comp -                |                 |                     |                         |                       |                   |             |                           |       |
| CC34909/10               | Inboard/outboard      |                 |                     | 01 52                   |                       | 00                | +32°        | Felt<br>clan              | 60/60 |
| 11                       | Comp                  |                 |                     |                         |                       |                   |             | "                         | 60s   |
| 12                       | Nova Cas 95           | 200<br>01 05 37 | +54 00 40           | 03 09 49 ✓              |                       | 0 22W             |             |                           | 383   |
| 13                       | Comp                  |                 |                     |                         |                       |                   |             | Felt<br>clan              | 60s   |
| 14                       | Nova Cas 95           | "               | "                   | 03 20 23 ✓              |                       | 0 29W             |             |                           | 795   |
| 15                       | Comp                  |                 |                     |                         |                       |                   |             | Felt<br>clan              | 60s   |
| 16                       | BIAS(4)               |                 |                     |                         |                       |                   |             |                           |       |

Note CC34901 and CC34907 are small  
files and were probably corrupted by  
a CC031 windows problem

Corrected  
After Acc.  
crash

CD  
Emultr. Tem  
ous...6  
spectr. Tem

up. Mtr.

T=+1

123

350



Focus ..... 670

Spectr. Temp. . . . .

Dome Temp./Hum. ....  $+17.9^{\circ}\text{C}$  73.5%RH

Dome Temp./Hum. .... 18.0°C 74%  
c Lambdale

Transparency Conditions ... *Part Cloudy* ... (278) ...

Then quickly very slowly  
max

[illegible]

pg #1

[Tues/Wed)

(279)

Emulsion Batches:

Date 1995 August 29/30 Observers Vnk / Sat + Rm + Ilana Pashevsky  
until 21:45

| Plate No.  | Object                    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|------------|---------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34917/18 | INBOARD/OUTBOARD HARTMANN |              |                     |                         |                       |                   |             | Fc clear                  | 60/60 |
| 19         | BIAS(4)                   |              |                     |                         |                       |                   |             | "                         | —     |
| 20         | COMP                      |              |                     |                         |                       |                   |             | "                         | 60    |
| 21         | HD187691                  | 19 46 14     | +10 09 55           | 20 29 53                | 1 04                  | E →               |             |                           | 181   |
| 22         | COMP                      |              |                     |                         |                       |                   |             | "                         | 60    |
| 23         | COMP                      |              |                     |                         |                       |                   |             | "                         | "     |
| 24         | HD347827                  | 17 56 30     | +19 15              | 20 45 49                | 1 22                  | W →               |             |                           | 1385  |
| 25         | COMP                      |              |                     |                         |                       |                   |             | "                         | 60    |
| 26         | BIAS(4)                   |              |                     |                         |                       |                   |             |                           | —     |
| 27         | COMP                      |              |                     |                         |                       |                   |             | "                         | 60    |
| 28         | HD177724                  | 19 00 49     | +13 42 53           | 21 26 26                |                       | ~0 40" W          |             |                           | 78    |
| 29         | COMP                      |              |                     |                         |                       |                   |             | "                         | 60    |
| 30         | COMP                      |              |                     |                         |                       |                   |             | "                         | "     |
| 31         | HD229414                  | 18 41 18     | 12 14               | 21 42 07                |                       | 1 40 W            |             |                           | 1800  |
| 32         | COMP                      |              |                     |                         |                       |                   |             | "                         | "     |



CCD  
 Spectr. Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $19.5^{\circ}\text{C}/62.7\%$  Transparency Conditions *clear* ..... 280  
 Focus .....  $6.70$  ..... FANS OFF .....  
 Spectr. Temp. .... Dome Temp./Hum. ....  
 410 0 50 1024 4 1 ccdEnt

| Exp. Mtr. | Seeing | Mag.           | Sp.  | Inst.       | Grating/<br>Tilt   | Slit      | Emulsion | P.H. | Program       | Remarks           | Quality |
|-----------|--------|----------------|------|-------------|--------------------|-----------|----------|------|---------------|-------------------|---------|
| no filter |        |                |      | CASS<br>CCD | 1800 l/m<br>G=6100 | 306 $\mu$ | 6600A    | 3/4  |               |                   |         |
|           |        |                |      |             |                    |           |          | 1    |               |                   |         |
|           |        |                |      |             |                    |           |          | 5    |               |                   |         |
| 5200      |        | 5.11           | F8V  |             |                    |           |          | 6    | Std Vel       | <del>BL Her</del> |         |
|           |        |                |      |             |                    |           |          | 7    |               |                   |         |
|           |        |                |      |             |                    |           |          | 8    |               |                   |         |
| 576       | 4"-5"  | 9.70<br>-10.62 |      |             |                    |           |          | 9    | Vnk Cepheid   | SN ~ 70:1 BL Her  |         |
|           |        |                |      |             |                    |           |          | 10   |               |                   |         |
|           |        |                |      |             |                    |           |          | 1    |               |                   |         |
|           |        |                |      |             |                    |           |          | 11   |               |                   |         |
| 14.7K     |        | 2.99           | A0Vn |             |                    |           |          | 12   | Telluric Std. |                   |         |
|           |        |                |      |             |                    |           |          | 13   |               |                   |         |
|           |        |                |      |             |                    |           |          | 14   |               |                   |         |
| 505       | 4"     | 9.76<br>-16.46 |      |             |                    |           |          | 15   | Vnk Cepheid   | BB Her            |         |
|           |        |                |      |             |                    |           |          | 16   |               |                   |         |

pg # 2

281

Date 1995 August 29/30 Observers Vnk / Smt That's all now.

Emulsion Batches:

| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC34933   | BIAS(4)  |              |                     | 22 16                   |                       |                   |             |                           | —    |
| 34        | COMP     |              |                     |                         |                       |                   |             | Fed<br>clear              | 60   |
| 35        | HD229680 | 18 45 54     | +15 49              | 22 25 27                |                       | ?                 |             |                           | 2003 |
| 36        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 37        | BIAS(4)  |              |                     | 23 11                   |                       |                   |             |                           | —    |
| 38        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 39        | HD356404 | 19 52 48     | +10 46              | 23 15 15                |                       | 1 56 W            |             |                           | 1233 |
| 40        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 41        | COMP     |              |                     |                         |                       |                   |             | "                         | "    |
| 42        | HD354511 | 19 56 35     | +15 31              | 23 50 11                |                       | 2 24 W            |             |                           | 1234 |
| 43        | COMP     |              |                     |                         |                       |                   |             | "                         | "    |
| 44        | BIAS(4)  |              |                     | 0 14                    |                       |                   |             |                           | —    |
| 45        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 46        | V383 Cyg | 20 25 03     | +33 48              | 0 29 28                 |                       |                   |             |                           | 1864 |
| 47        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |



CCD Spectr. Temp.  $-100.5^{\circ}\text{C}$  Dome Temp./Hum.  $17.8^{\circ}\text{C}/74.1\%$  Transparency Conditions  $\text{clear}$ , no Moon

Focus  $6.70$

Spectr. Temp. Dome Temp./Hum.  $21.0^{\circ}\text{C}/55\%$

282

| Exp. Mtr. | Seeing | Ptg. Mag.       | Sp. | Inst.    | Grating/Tilt         | Slit             | Emulsion | P.H. | Program     | Remarks  | Quality |
|-----------|--------|-----------------|-----|----------|----------------------|------------------|----------|------|-------------|----------|---------|
| no filter |        |                 |     | CASS CCD | 1800 lines<br>G=6100 | 30 $\mu\text{m}$ | 6600A    | 1    |             |          |         |
|           |        |                 |     |          |                      |                  |          | 17   |             |          |         |
| ~300      | 4"     | 10.19<br>-11.18 |     |          |                      |                  |          | 18   | Vnk Cepheid | AP Her   |         |
|           |        |                 |     |          |                      |                  |          | 19   |             |          |         |
|           |        |                 |     |          |                      |                  |          | 1    |             |          |         |
|           |        |                 |     |          |                      |                  |          | 20   |             |          |         |
| 525       |        | 9.73 -<br>10.16 |     |          |                      |                  |          | 21   | Vnk Cepheid | V733 Aql |         |
|           |        |                 |     |          |                      |                  |          | 22   |             |          |         |
|           |        |                 |     |          |                      |                  |          | 23   |             |          |         |
| 520       |        | 9.82<br>-10.56  |     |          |                      |                  |          | 24   | Vnk Cepheid | KL Aql   |         |
|           |        |                 |     |          |                      |                  |          | 25   |             |          |         |
|           |        |                 |     |          |                      |                  |          | 1    |             |          |         |
|           |        |                 |     |          |                      |                  |          | 26   |             |          |         |
| 500       |        | 10.60<br>-11.17 |     |          |                      |                  |          | 27   | Vnk Cepheid |          |         |
|           |        |                 |     |          |                      |                  |          | 28   |             |          |         |

pg #3

Date 1995 August 29/30

283

Observers Vnk / Smt

Emulsion Batches:

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| Plate No.  | Object     | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|------------|------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC 34948   | BIAS (4)   |              |                     | 1 20                    |                       |                   |             |                           | —    |
| 49         | COMP       |              |                     |                         |                       |                   |             | Fed<br>clear              | 60   |
| 50         | BD+17 4572 | 21 19 21     | +17 51              | 1 30 21                 |                       | 2 37 W            |             |                           | 950  |
| 51         | COMP       |              |                     |                         |                       |                   |             | "                         | 60   |
| 52         | BD+17 4572 |              |                     | 1 51 43                 |                       | 2 59 W            |             |                           | 1000 |
| 53         | COMP       |              |                     |                         |                       |                   |             | "                         | 60   |
| 54         | BIAS (4)   |              |                     | 2 14                    |                       |                   |             |                           | —    |
| C480074-77 | HD 3765 x4 | 0 35 18      | +39 40              |                         |                       |                   |             |                           | .067 |
| 78/79      | " x2       |              |                     | <del>2 15</del>         | 2 25 50               | 0 0 E             | 86° Alt     |                           | .133 |
| 55         | COMP       |              |                     |                         |                       |                   |             | Fed<br>clear              | 60   |
| 56         | HD 3765    | 0 35 18      | +39 40              | 2 30 16                 |                       | 0 16 W            |             |                           | 703  |
| 57         | COMP       |              |                     |                         |                       |                   |             | "                         | 60   |
| 58         | COMP       |              |                     |                         |                       |                   |             | "                         | "    |
| 59         | DQ And.    | 0 53 54      | +44 52              | 2 57 02                 |                       | 0 42 W            |             |                           | 1800 |
| 60         | COMP       |              |                     |                         |                       |                   |             | "                         | "    |



Spectr. Temp.  $-100^{\circ}\text{C}$  Dome Temp./Hum.  $15.3^{\circ}\text{C}/71.6\%$  Transparency Conditions  $\text{clear}$   
 Focus  $6.70$   
 Spectr. Temp. Dome Temp./Hum.  $14.8^{\circ}\text{C}/71.6\%$  <sup>SEEING TEST</sup> FANS OFF 284

| Exp. Mtr. | Seeing | Ptg. Mag.       | Sp. | Inst.                | Grating/Tilt                       | Slit                      | Emulsion | P.H. | Program     | Remarks                                                                              | Quality |
|-----------|--------|-----------------|-----|----------------------|------------------------------------|---------------------------|----------|------|-------------|--------------------------------------------------------------------------------------|---------|
|           |        |                 |     | CASS CCD             | 1800 $\lambda/\text{mm}$<br>G=6100 | 30 $\mu\text{m}$          | 6600A    | 1    |             |                                                                                      |         |
|           |        |                 |     |                      |                                    |                           |          | 29   |             |                                                                                      |         |
| 680       |        | 8.98<br>-9.47   |     |                      |                                    |                           |          | 30   | Vnk Cepheid | most likely AU Peg emission! $\sim 90:1$                                             |         |
|           |        |                 |     |                      |                                    |                           |          | 31   |             |                                                                                      |         |
| 775       |        | "               |     |                      |                                    |                           |          | 32   | "           | 2nd exp. AU Peg.                                                                     |         |
|           |        |                 |     |                      |                                    |                           |          | 33   |             |                                                                                      |         |
|           |        |                 |     |                      |                                    |                           |          | 1    |             |                                                                                      |         |
|           | 5"     | 7.36            | dk5 | EEV CCD<br>TV GUIDER |                                    | above<br>30 $\mu\text{m}$ |          | -    | SEEING TEST | Dome SW, light NW wind, it was windier earlier, 85% at 5°C drop since start of night |         |
|           | "      | "               | "   |                      |                                    |                           |          | -    | "           |                                                                                      |         |
|           |        |                 |     | CASS CCD             |                                    |                           |          | 5    |             |                                                                                      |         |
| 2800      | 4"-5"  | 7.36            | dk5 |                      |                                    |                           |          | 6    | Std Vel.    |                                                                                      |         |
|           |        |                 |     |                      |                                    |                           |          | 7    |             |                                                                                      |         |
|           |        |                 |     |                      |                                    |                           |          | 8    |             |                                                                                      |         |
| 160       |        | 11.23<br>-12.00 |     |                      |                                    |                           |          | 9    | Vnk Cepheid | very faint. perhaps some emission but lost in the noise                              |         |
|           |        |                 |     |                      |                                    |                           |          | 10   |             |                                                                                      |         |

pg #4

285

Date 1995 August 29/30 Observers Vnk/Smt

Emulsion Batches:

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| Plate No. | Object                      | R.A.<br>1900 | Declination<br>1900            | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|-----------------------------|--------------|--------------------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34961   | BIAS(4)                     |              |                                | 3 31                    |                       |                   |             |                           | —     |
| 62        | COMP                        |              |                                |                         |                       |                   |             | Fair<br>clear             | 60    |
| 63        | BD Cas                      | 0 04 39      | +60 57                         | 3 47 21                 |                       | 2 26 W            |             |                           | 2000  |
| 64        | COMP                        |              |                                |                         |                       |                   |             | "                         | 60    |
| 65        | BIAS(4)                     |              |                                | 4 24                    |                       |                   |             |                           | —     |
| 66        | COMP                        |              |                                |                         |                       |                   |             | "                         | 60    |
| 67        | Nova Cas 95                 | 1 05 37      | <sup>2000.0</sup><br>+54 00 40 | 4 31 49                 |                       | 1 45 W            |             |                           | 160   |
| 68        | COMP                        |              |                                |                         |                       |                   |             | "                         | 60    |
| 69        | Nova Cas 95                 |              |                                | 4 39 11                 |                       | 1 59 W            |             |                           | 600   |
| 70        | COMP                        |              |                                |                         |                       |                   |             | "                         | 60    |
| 71        | COMP                        |              |                                |                         |                       |                   |             | "                         | "     |
| 72        | H022484                     | 3 31 46      | +0 05 04                       | 4 56 49                 |                       | 0 22 E            |             |                           | 180   |
| 73        | COMP                        |              |                                |                         |                       |                   |             | "                         | 60    |
| 74-79     | FLAT x 16                   |              |                                |                         |                       | 0"                | 0"          | Tung<br>K4 Ap             | 8     |
| 80        | BIAS(4)                     |              |                                | 5 13                    |                       |                   |             | "                         | —     |
| 81/82     | INBOARD / OUTBOARD HARTMANN |              |                                |                         |                       |                   |             | Fair<br>clear             | 60/70 |



Spectr. Temp. .... Dome Temp./Hum.  $14.1^{\circ}\text{C} / 70.8\%$  Transparency Conditions .. *clear* ..  
 Focus .....  $6.70$  .....  
 Spectr. Temp. .... Dome Temp./Hum.  $13.0^{\circ}\text{C} / 71.6\%$  @ ending focus test 286

| Exp. Mtr. | Seeing | ✓<br>Mag. | Sp.             | Inst.       | Grating/<br>Tilt            | Slit             | Emulsion | P.H.          | Program       | Remarks                   | Quality          |
|-----------|--------|-----------|-----------------|-------------|-----------------------------|------------------|----------|---------------|---------------|---------------------------|------------------|
| -         |        |           |                 | CASS<br>CCD | 1800 $\text{\AA}$<br>G=6100 | 30 $\mu\text{m}$ | 6600 A   | 1             |               |                           |                  |
| 60        |        |           |                 |             |                             |                  |          | 11            |               |                           |                  |
| 2000      | 414    | 4"        | 10.84-<br>11.21 |             |                             |                  |          | 12            | Vnk Cepheid.  | weak                      |                  |
| 60        |        |           |                 |             |                             |                  |          | 13            |               |                           |                  |
| -         |        |           |                 |             |                             |                  |          | 1             |               |                           |                  |
| 60        |        |           |                 |             |                             |                  |          | 14            | Vnk / Nova    |                           |                  |
| 160       | 134    | 3"        | ~9.3            | e           |                             |                  |          | 15            | ↓             | HUGE H $\alpha$ emission. | 2K               |
| 60        |        |           |                 |             |                             |                  |          | 16            |               |                           |                  |
| 600       | 540    | 3"        | ~9.3            | e           |                             |                  |          | 17            | Vnk / Nova    |                           | 6.8K             |
| 60        |        |           |                 |             |                             |                  |          | <del>18</del> |               |                           |                  |
| "         |        |           |                 |             |                             |                  |          | 20            |               |                           |                  |
| 180       | 9.8K   | 5"        | 4.28            | F9 IV-V     |                             |                  |          | 21            | Std. Vel.     |                           | 10K              |
| 60        |        |           |                 |             |                             |                  |          | 22            |               |                           |                  |
| 8         |        |           |                 |             |                             |                  |          | 23            |               |                           | 14.6K<br>→ 14.02 |
| -         |        |           |                 |             |                             |                  |          | 1             |               |                           |                  |
| 60        |        |           |                 |             |                             |                  |          | 3/4           | FOCUS<br>TEST | in focus.                 |                  |

pg #1 287

Date 1995 August 30/31 Observers Vnk / Smt

Emulsion Batches:

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.....  
.....

| Plate No.  | Object             | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|------------|--------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC34983/84 | INBOARD / OUTBOARD |              |                     |                         |                       |                   |             | Fed<br>clear              | 60/65 |
| 85         | BIAS(4)            |              |                     | 19 47                   |                       |                   |             | "                         | —     |
| 86         | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 87         | HD136202           | 15 14 12     | +2 08 37            | 19 52 12                |                       | 2 57 W            |             |                           | 400   |
| 88         | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 89         | COMP               |              |                     |                         |                       |                   |             | "                         | "     |
| 90         | HD159139           | 17 27 54     | +28 28 47           | 20 12 34                |                       | 1 03 W            |             |                           | 300   |
| 91         | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 92         | BIAS(4)            |              |                     | 20 21                   |                       |                   |             |                           | —     |
| 93         | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 94         | HD347827           | 17 56 49     | +19 15              | 20 28 47                |                       | 1 05 W            |             |                           | 1200  |
| 95         | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 96         | HD347827           |              |                     | 20 55 03                |                       | 1 32 W            |             |                           | 1200  |
| 97         | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 98         | BIAS(4)            |              |                     | 21 23                   |                       |                   |             |                           | —     |



Spectr. Temp.  $\sim 100.5^{\circ}\text{C}$  ..... Dome Temp./Hum.  $18.8^{\circ}\text{C}/67.7\%$  Transparency Conditions  $a \dots \text{couple of clouds}$  .....  
 Focus .....  $6.72$  .....  
 Spectr. Temp. .... Dome Temp./Hum. ....  
 @ FOCUS TEST FANS ON 288  
 416 0 50 1024 4 1 ccd fast

| Exp. Mtr.         | Seeing | ✓<br>Mag.      | Sp.    | Inst.       | Grating/<br>Tilt            | Slit             | Emulsion | P.H. | Program       | Remarks                                                                            | Quality |
|-------------------|--------|----------------|--------|-------------|-----------------------------|------------------|----------|------|---------------|------------------------------------------------------------------------------------|---------|
| 6065<br>no filter |        |                |        | CASS<br>CCD | 1800 $\text{\AA}$<br>G=6100 | 30 $\mu\text{m}$ | G600A    | 3/4  | FOCUS<br>TEST | set a bit cool, in<br>focus @ $\sim 800 \mu\text{x}$ .<br>hot pixel @ <u>cd 27</u> |         |
| 60                |        |                |        |             |                             |                  |          | 1    |               |                                                                                    |         |
| 60                |        |                |        |             |                             |                  |          | 5    |               |                                                                                    |         |
| 400<br>7700       | 3"     | 5.06           | F8IV-V |             |                             |                  |          | 6    | Std. Vel.     | centred on cd 22-23                                                                | 10.4K   |
| 60                |        |                |        |             |                             |                  |          | 7    |               |                                                                                    |         |
| "                 |        |                |        |             |                             |                  |          | 8    |               |                                                                                    |         |
| 300<br>6370       | 3"     | 5.62           | A1V    |             |                             |                  |          | 9    | Telluric Std. | western most of list, not too<br>high airmass but lots of lines                    | 5K      |
| 60                |        |                |        |             |                             |                  |          | 10   |               |                                                                                    |         |
| 60                |        |                |        |             |                             |                  |          | 11   |               |                                                                                    |         |
| 1200<br>608       | 3"     | 9.70<br>-10.62 |        |             |                             |                  |          | 12   | Vnk Cepheid   | emission<br>BL Her                                                                 |         |
| 60                |        |                |        |             |                             |                  |          | 13   |               |                                                                                    |         |
| 1200<br>595       | 2-3"   | 9.70<br>-10.62 |        |             |                             |                  |          | 14   | Vnk Cepheid   | BL Her                                                                             |         |
| 60                |        |                |        |             |                             |                  |          | 15   |               |                                                                                    |         |
| 60                |        |                |        |             |                             |                  |          | 1    |               |                                                                                    |         |

pg #2 289

Date 1995 August 30/31 Observers Vnk/Smt

Emulsion Batches:

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| Plate No. | Object      | R.A.<br>1900              | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-------------|---------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| cc34999   | COMP        |                           |                     |                         |                       |                   |             | FaAr<br>clear             | 60   |
| cc35000   | HD229414    | 18 41 18                  | +12 14              | 21 26 34                |                       | 1 22 W            |             |                           | 1411 |
| 01        | COMP        |                           |                     |                         |                       |                   |             | "                         | 60   |
| 02-07     | FLAT x 6    |                           |                     |                         |                       | 4 35 E            | +54°        | Tung<br>4/1p              | 8    |
| 08        | COMP        |                           |                     |                         |                       |                   |             | FaAr<br>clear             | 60   |
| 09        | Nova Cas 95 | 1 05 37 <sup>2000.0</sup> | +54 00 40           | 22 14 30                |                       | 4 15 E            |             |                           | 1026 |
| 10        | COMP        |                           |                     |                         |                       |                   |             | "                         | 60   |
| 11        | BIAS(4)     |                           |                     | 22 35                   |                       |                   |             |                           | -    |
| 12        | COMP        |                           |                     |                         |                       |                   |             | "                         | 60   |
| 13        | HD229680    | 18 45 54                  | +15 49              | 22 45 59                |                       | ?                 |             |                           | 2053 |
| 14        | COMP        |                           |                     |                         |                       |                   |             | "                         | 60   |
| 15        | BIAS(4)     |                           |                     | 0 05                    |                       |                   |             | "                         | "    |
| 16        | COMP        |                           |                     |                         |                       |                   |             | "                         | "    |
| 17        | HD356404    | 19 52 48                  | +10 46              | 0 06 13                 |                       | 2 44 W            |             |                           | 465  |
| 18        | COMP        |                           |                     |                         |                       |                   |             | "                         | 60   |
| 19        | COMP        |                           |                     |                         |                       |                   |             | "                         | "    |



Spectr. Temp. .... Dome Temp./Hum. *18.1°C / 73.2%* Transparency Conditions *HAZY, partly cloudy...*

Focus ..... *6.72* .....

*N FAN ON ONLY*

*(290)*

Spectr. Temp. .... Dome Temp./Hum. ....

*416 0 50 1024 4 1 ccd fnt*

| Exp. Mtr.   | Seeing     | Mag.        | Sp.                     | Inst.               | Grating/<br>Tilt            | Slit        | Emulsion     | P.H.      | Program            | Remarks                                                        | Quality<br>(max)        |
|-------------|------------|-------------|-------------------------|---------------------|-----------------------------|-------------|--------------|-----------|--------------------|----------------------------------------------------------------|-------------------------|
| <i>60</i>   |            |             |                         | <i>CASS<br/>CCD</i> | <i>1800 l/mm<br/>G=6100</i> | <i>306μ</i> | <i>6600Å</i> | <i>16</i> |                    |                                                                |                         |
| <i>1411</i> | <i>50b</i> | <i>2-3"</i> | <i>9.76<br/>-10.46</i>  |                     |                             |             |              | <i>17</i> | <i>Vnk Cepheid</i> | <i>BB Her</i>                                                  | <i>600<br/>above Vg</i> |
| <i>60</i>   |            |             |                         |                     |                             |             |              | <i>18</i> |                    | <i>cloudy now but will clear</i>                               |                         |
| <i>8</i>    |            |             |                         |                     |                             |             |              | <i>19</i> |                    |                                                                | <i>NOK<br/>→ 13.5K</i>  |
| <i>60</i>   |            |             |                         |                     |                             |             |              | <i>20</i> |                    |                                                                |                         |
| <i>1026</i> | <i>600</i> | <i>3"</i>   | <i>~9</i>               | <i>e</i>            |                             |             |              | <i>21</i> | <i>Vnk / Nova</i>  | <i>cloudy just here now,<br/>figures. ara -20°, dur @ 7:20</i> | <i>11.3K</i>            |
| <i>60</i>   |            |             |                         |                     |                             |             |              | <i>22</i> |                    |                                                                |                         |
| <i>-</i>    |            |             |                         |                     |                             |             |              | <i>1</i>  |                    |                                                                |                         |
| <i>60</i>   |            |             |                         |                     |                             |             |              | <i>23</i> |                    |                                                                |                         |
| <i>2053</i> | <i>400</i> | <i>2-3"</i> | <i>10.19<br/>-11.18</i> |                     |                             |             |              | <i>24</i> | <i>Vnk Cepheid</i> | <i>AP Her</i>                                                  |                         |
| <i>60</i>   | <i>400</i> |             |                         |                     |                             |             |              | <i>25</i> |                    |                                                                |                         |
| <i>"</i>    |            |             |                         |                     |                             |             |              | <i>26</i> |                    |                                                                |                         |
| <i>465</i>  | <i>230</i> |             | <i>9.73<br/>-10.16</i>  |                     |                             |             |              | <i>27</i> | <i>Vnk Cepheid</i> | <i>V733 Aql, cut short by<br/>cloud.</i>                       | <i>100 above<br/>Vg</i> |
| <i>60</i>   |            |             |                         |                     |                             |             |              | <i>28</i> |                    |                                                                |                         |
| <i>"</i>    |            |             |                         |                     |                             |             |              | <i>29</i> |                    | <i>very cloudy here.</i>                                       |                         |

pg #3 (291)

Date 1995 August 30/31 Observers Vnk / Smt

### Emulsion Batches:

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[illegible]





pg #1

[Thu/~~Wed~~ Fri]

(293)

Emulsion Batches:

Date 1995 August 31 / September 1 Observers Vnk. / Smt

| Plate No.  | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End  | Declination | Comparison<br>Type/Filter | Exp.  |
|------------|------------------|--------------|---------------------|-------------------------|-----------------------|--------------------|-------------|---------------------------|-------|
| CC35025/26 | INBOARD/OUTBOARD | HARTMAN      |                     |                         |                       |                    |             | Fel Ar<br>clear           | 60/65 |
| 27         | BIAS(4)          |              |                     | 19 50                   |                       |                    |             | "                         | —     |
| 28         | COMP             |              |                     |                         |                       |                    |             | "                         | 60    |
| 29         | HD136202         | 15 14 12     | + 2 08 37           | 19 56 54                |                       | ~ 3 <sup>h</sup> W |             | "                         | 231   |
| 30         | COMP             |              |                     |                         |                       |                    |             | "                         | 60    |
| 31         | COMP             |              |                     |                         |                       |                    |             | "                         | "     |
| 32         | HD130109         | 14 41 12     | + 2 18 51           | 20 08 56                |                       | 3 46 W             |             | "                         | 226   |
| 33         | COMP             |              |                     |                         |                       |                    |             | "                         | 60    |
| 34         | COMP             |              |                     |                         |                       |                    |             | "                         | 60    |
| 35         | HD145001         | 16 03 34     | + 17 18 48          | 20 26 58                |                       | 2 43 W             |             | "                         | 160   |
| 36         | COMP             |              |                     |                         |                       |                    |             | "                         | 60    |
| 37         | COMP             |              |                     |                         |                       |                    |             | "                         | 60    |
| 38         | HD347827         | 17 56 49     | + 19 15             | 20 39 23                |                       | 1 26 W             |             | "                         | 1600  |
| 39         | COMP             |              |                     |                         |                       |                    |             | "                         | 60    |
| 40         | BIAS(4)          |              |                     | 21 13                   |                       |                    |             | "                         | —     |



CCP  
Spectr. Temp. .... -100.5°C ..... Dome Temp./Hum. 20.2°C/59.1% Transparency Conditions .. clear, windy .....  
Focus ..... 6.68 ..... @ FOCUS TEST  
Spectr. Temp. .... Dome Temp./Hum. .... cλ c: FANS OFF 294  
416 0 50 1024 4 1 ccd int

| Exp. Mtr.         | Seeing | V <sub>dis</sub><br>Mag. | Sp.    | Inst.       | Grating/<br>Tilt   | Slit | Emulsion | P.H. | Program       | Remarks                  | Quality            |
|-------------------|--------|--------------------------|--------|-------------|--------------------|------|----------|------|---------------|--------------------------|--------------------|
| 6.6S<br>no filter |        |                          |        | CASS<br>CCD | 1800 l/m<br>G=6100 | 306μ | 6600A    | 3/4  | FOCUS<br>TEST | set a bit cool.          |                    |
| —                 |        |                          |        |             |                    |      |          | 1    |               |                          |                    |
| 60                |        |                          |        |             |                    |      |          | 5    |               |                          |                    |
| 231<br>6300       | 5"     | 5.06                     | F8IV-V |             |                    |      |          | 6    | Std. Vel      |                          | 7.5K               |
| 60                |        |                          |        |             |                    |      |          | 7    |               |                          |                    |
| "                 |        |                          |        |             |                    |      |          | 8    |               |                          |                    |
| 120<br>7000       | 5"     | 3.72                     | A0V    |             |                    |      |          | 9    | Telluric Std  | just above platform      | 8.1K               |
| 60                |        |                          |        |             |                    |      |          | 10   |               |                          |                    |
| 60                |        |                          |        |             |                    |      |          | 11   |               |                          |                    |
| 160<br>5800       | 3-4"   | 5.00                     | G5III  |             |                    |      |          | 12   | Std. Vel      | brighter of 2 close ones | 8K                 |
| 60                |        |                          |        |             |                    |      |          | 13   |               |                          |                    |
| 125               |        |                          |        |             |                    |      |          | 14   |               |                          |                    |
| 160<br>500        | 2-3"   | 9.70<br>-10.62           |        |             |                    |      |          | 15   | Vnk Cepheid   | BL Her, emission?        | 400<br>more<br>b/g |
| 60                |        |                          |        |             |                    |      |          | 16   |               |                          |                    |
| —                 |        |                          |        |             |                    |      |          | 1    |               |                          |                    |

pg #2 295

Date 1995 Aug 31 / Sep 1. Observers Vnk / Smt

Emulsion Batches:

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| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| cc35041   | COMP     |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 42        | HD229414 | 18 41 18     | +12 14              | 21 21 30                |                       | ~1 30 W           |             |                           | 1641 |
| 43        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 44        | COMP     |              |                     |                         |                       |                   |             | "                         | "    |
| 45        | HD229680 | 18 45 54     | +15 49              | 21 59 46                |                       | 2 13 W            |             |                           | 2497 |
| 46        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 47        | BIAS(4)  |              |                     | 22 46                   |                       |                   |             |                           | —    |
| 48        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 49        | HD356404 | 19 52 48     | +10 46              | 22 54 15                |                       | 1 35 W            |             |                           | 980  |
| 50        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 51        | COMP     |              |                     |                         |                       |                   |             | "                         | "    |
| 52        | V572 Aql | 19 51 27     | +0 25               | 23 26 39                |                       | 2 20 W            |             |                           | 2400 |
| 53        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 54        | BIAS(4)  |              |                     | 0 04                    |                       |                   |             |                           | —    |
| 55        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |



CCD Spectr. Temp.  $-101.7^{\circ}\text{C}$  Dome Temp./Hum.  $19.0^{\circ}\text{C}/59.9\%$  Transparency Conditions  $\text{clear, bit of wind}$

Focus  $6.68$

Spectr. Temp. Dome Temp./Hum.  $17.7^{\circ}\text{C}/64.9\%$  @  $1^{\text{st}}$  BIAS(4) FANS OFF 296

| Exp. Mtr. | Seeing | Ptg. Mag.       | Sp. | Inst.    | Grating/Tilt         | Slit      | Emulsion | P.H. | Program      | Remarks                 | max. Adv. Quality |
|-----------|--------|-----------------|-----|----------|----------------------|-----------|----------|------|--------------|-------------------------|-------------------|
| no filter |        |                 |     | CASS CCD | 1800 l/mm<br>G=6/100 | 306 $\mu$ | 6600 Å   | 17   |              |                         |                   |
| 800       | 3"     | 9.76<br>-10.46  |     |          |                      |           |          | 18   | Vnk Cepheid. | thin wispy clouds here. | 1 K               |
|           |        |                 |     |          |                      |           |          | 19   |              |                         |                   |
|           |        |                 |     |          |                      |           |          | 20   |              |                         |                   |
| 463       | 2-3"   | 10.19<br>-11.18 |     |          |                      |           |          | 21   | Vnk Cepheid. | a bit of thin cloud.    | 500 above 6/9     |
|           |        |                 |     |          |                      |           |          | 22   |              |                         |                   |
|           |        |                 |     |          |                      |           |          | 1    |              |                         |                   |
|           |        |                 |     |          |                      |           |          | 23   |              |                         |                   |
| 476       | 2-3"   | 9.73<br>-10.16  |     |          |                      |           |          | 24   | Vnk Cepheid. | noisy, not much here    | 550 above 6/9     |
|           |        |                 |     |          |                      |           |          | 25   |              |                         |                   |
|           |        |                 |     |          |                      |           |          | 26   |              |                         |                   |
| 361       | 2-3"   | 11.00<br>-11.44 |     |          |                      |           |          | 27   | Vnk Cepheid. | noisy & weak            | 300 above 4/9     |
|           |        |                 |     |          |                      |           |          | 28   |              |                         |                   |
|           |        |                 |     |          |                      |           |          | 1    |              |                         |                   |
|           |        |                 |     |          |                      |           |          | 29   |              |                         |                   |

pg #3 297

Date 1995 Aug. 31 / Sep 1 Observers Vnk / Smt

Emulsion Batches:

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| Plate No.  | Object      | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|------------|-------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC35056    | HD354511    | 19 56 35     | +15 31              | 0 12 13                 |                       | 2 56 W            |             |                           | 1388 |
| 57         | COMP        |              |                     |                         |                       |                   |             | FoAr<br>clear             | 60   |
| 58         | COMP        |              |                     |                         |                       |                   |             | "                         | "    |
| 59         | HD187691    | 19 46 14     | +10 09 55           | 0 43 14                 |                       | 3 19 W            |             |                           | 240  |
| 60         | COMP        |              |                     |                         |                       |                   |             | "                         | 60   |
| 61         | BIAS(4)     |              |                     | 0 50                    |                       |                   |             |                           | —    |
| 62         | COMP        |              |                     |                         |                       |                   |             | "                         | 60   |
| 63         | V383 (yg)   | 20 25 03     | +33 48              | 0 58 21                 |                       | 3 29 W            |             |                           | 2220 |
| 64         | COMP        |              |                     |                         |                       |                   |             | "                         | 60   |
| 65         | BIAS(4)     |              |                     | 1 43                    |                       |                   |             |                           | —    |
| 66         | COMP        |              |                     |                         |                       |                   |             | "                         | 60   |
| 67         | BD+17° 4572 | 21 19 21     | +17 51              | 1 46 38                 |                       | 2 59 W            |             |                           | 800  |
| 68         | COMP        |              |                     |                         |                       |                   |             | "                         | 60   |
| CG80086-89 | HD3765 x4   | 0 35 18      | +39 40              |                         |                       |                   |             |                           | .067 |
| 90/91      | " x2        |              |                     |                         |                       | 0 09 E            | 86° Act     |                           | .133 |

Spectr. Tem

Focus.....

Spectr. Tem

Exp. Mtr.

500

8650

100

516



Spectr. Temp. .... Dome Temp./Hum. 17.0°C / 64.6% Transparency Conditions .. clear... → thin clouds..  
 Focus ..... 6.68 .....  
 Spectr. Temp. .... Dome Temp./Hum. 15.8°C / 68.7% @ SEEING TEST FANS OFF 298  
 END 416 0 50 1024 4 1 ccd/at

| Exp. Mtr. | Seeing | √ Pgr. Mag.     | Sp. | Inst.                   | Grating/ Tilt     | Slit          | Emulsion | P.H. | Program        | Remarks                                            | Quality       |
|-----------|--------|-----------------|-----|-------------------------|-------------------|---------------|----------|------|----------------|----------------------------------------------------|---------------|
| 500       | 3"     | 9.82<br>-10.56  |     | CASS CCD                | 1800 Lm<br>G=6100 | 306μ          | 6600Å    | 30   | Vnk Cepheid    | KL Agl                                             | 500 above b/g |
|           |        |                 |     |                         |                   |               |          | 31   |                |                                                    |               |
|           |        |                 |     |                         |                   |               |          | 32   |                |                                                    |               |
| 5650      | 4"-3"  | 5.11            | F8V |                         |                   |               |          | 33   | Std Vel        |                                                    | 6.8K          |
|           |        |                 |     |                         |                   |               |          | 34   |                |                                                    |               |
|           |        |                 |     |                         |                   |               |          | 1    |                |                                                    |               |
|           |        |                 |     |                         |                   |               |          | 5    |                |                                                    |               |
| 400       | 3"     | 10.60<br>-11.17 |     |                         |                   |               |          | 6    | Vnk Cepheid    | some thin clouds<br>cosmic ray in spectrum         | 400 above b/g |
|           |        |                 |     |                         |                   |               |          | 7    |                |                                                    |               |
|           |        |                 |     |                         |                   |               |          | 1    |                |                                                    |               |
|           |        |                 |     |                         |                   |               |          | 8    |                |                                                    |               |
| 516       | 3"     | 8.98-<br>9.47   |     |                         |                   |               |          | 9    | Vnk Cepheid    | some thin clouds.<br>AU Peg emission?              | 500 above b/g |
|           |        |                 |     |                         |                   |               |          | 10   |                |                                                    |               |
|           | 3"-4"  | 7.36            | AK5 | EEV CCD<br>TV<br>GUIDER |                   | above<br>306μ |          | —    | SEEING<br>TEST | Dome W, med W wind, thin<br>clouds, getting worse. |               |
|           |        |                 |     |                         |                   |               |          | —    | "              |                                                    |               |

pg # 4 299

Date 1995 Aug 31 / Sep 1 Observers Vnk / Smt

Emulsion Batches:

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| Plate No. | Object             | R.A.<br>1900              | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|--------------------|---------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC35069   | COMP               |                           |                     |                         |                       |                   |             | FeAr<br>clear             | 60    |
| 70        | HP3765             | 0 35 18                   | +39 40              | 2 12 53                 |                       | 0 01 W            |             |                           | 400   |
| 71        | COMP               |                           |                     |                         |                       |                   |             | "                         | 60    |
| 72-77     | FLAT x 6           |                           |                     |                         |                       | 0 07 E            | + 45°       | Tung<br>1/4 Ap            | 8     |
| 78        | BIAS(4)            |                           |                     | 2 30                    |                       |                   |             |                           | —     |
| 79        | COMP               |                           |                     |                         |                       |                   |             | FeAr<br>clear             | 60    |
| 80        | NOVA CAS 95        | 1 05 37 <sup>2000.0</sup> | +54 00 40           | 2 38 56                 |                       | 0 22 W            |             |                           | 1550  |
| 81        | COMP               |                           |                     |                         |                       |                   |             | "                         | 60    |
| 82        | COMP               |                           |                     |                         |                       |                   |             | "                         | "     |
| 83        | IX CAS             | 23 59 42                  | +49 41              | 3 32 21                 |                       | 2 30 W            |             |                           | 2416  |
| 84        | COMP               |                           |                     |                         |                       |                   |             | "                         | 60    |
| 85        | BIAS(4)            |                           |                     | 4 25                    |                       |                   |             |                           | —     |
| 86        | COMP               |                           |                     |                         |                       |                   |             | "                         | 60    |
| 87        | BD CAS             | 0 04 39                   | +60 57              | 4 29 01                 |                       |                   |             |                           | 1700  |
| 88        | COMP               |                           |                     |                         |                       |                   |             | "                         | 60    |
| 89/90     | INBOARD / OUTBOARD | HARTMANN                  |                     |                         |                       |                   |             | FeAr<br>clear             | 60/65 |



CCD Spectr. Temp.  $-100.7^{\circ}\text{C}$  Dome Temp./Hum.  $15.8^{\circ}\text{C}/68.8\%$  Transparency Conditions *thin cloud*

Focus  $6.68$

Spectr. Temp. ....

Dome Temp./Hum.  $15.2^{\circ}\text{C}/77.4\%$  @ BD CAS

FANS OFF

300

416 0 50 1024 4 1ccd/nt

| Exp. Mtr.                          | Seeing | Ptg. Mag.       | Sp. | Inst.      | Grating/Tilt      | Slit | Emulsion | P.H. | Program      | Remarks                                                                  | Quality             |
|------------------------------------|--------|-----------------|-----|------------|-------------------|------|----------|------|--------------|--------------------------------------------------------------------------|---------------------|
|                                    |        |                 |     | CAS<br>CCD | 1800-lm<br>G=6100 | 30um | 6600A    | 11   |              |                                                                          |                     |
| 1040                               | 4"     | 7.36            | dk5 |            |                   |      |          | 12   | Std Vel.     | some cloudy periods.                                                     | 1.5K                |
|                                    |        |                 |     |            |                   |      |          | 13   |              |                                                                          |                     |
|                                    |        |                 |     |            |                   |      |          | 2    |              | cloud increasing thickness                                               | 14.2K<br>→ 13.6K    |
|                                    |        |                 |     |            |                   |      |          | 1    |              |                                                                          |                     |
|                                    |        |                 |     |            |                   |      |          | 14   |              |                                                                          |                     |
| 548                                | 3"     | ?               | e!  |            |                   |      |          | 15   | Vnk / Nova   | not as much cloud here.<br>(until later) $\Delta\alpha \sim -30^{\circ}$ | 6.0K                |
|                                    |        |                 |     |            |                   |      |          | 16   |              |                                                                          |                     |
|                                    |        |                 |     |            |                   |      |          | 17   |              | lamp didn't shut off @ end.                                              |                     |
| 2416<br>exp. mtr<br>shutter closed |        | 11.19<br>-11.77 |     |            |                   |      |          | 18   | Vnk Cepheid. | sky clearer now.<br>$\Delta\delta = -3'$                                 | 120<br>above<br>blg |
|                                    |        |                 |     |            |                   |      |          | 19   |              |                                                                          |                     |
|                                    |        |                 |     |            |                   |      |          | 1    |              |                                                                          |                     |
|                                    |        |                 |     |            |                   |      |          | 20   |              |                                                                          |                     |
| 444                                |        | 10.84<br>-11.21 |     |            |                   |      |          | 21   | Vnk Cepheid. | sky getting brighter.                                                    | 300<br>above<br>blg |
|                                    |        |                 |     |            |                   |      |          | 22   |              |                                                                          |                     |
|                                    |        |                 |     |            |                   |      |          | 3/4  | FOCUS TEST   | now set too warm, in focus<br>PERFECT for the night.                     | 290<br>raw          |

All to DAT & D:\

pg # 1 Fri / Sat 301

Date 1995 Sep 1/2.... Observers [Rm]... J.H. / Surf.....

Emulsion Batches:

.....  
.....  
.....

| Plate No.   | Object              | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination                   | Comparison<br>Type/Filter | Exp.  |
|-------------|---------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------------------------|---------------------------|-------|
| CC350 91/92 | Inboard / OUT board |              |                     |                         |                       | 00 19 W           | 48 <sup>0</sup> <del>19</del> | Fair<br>clear             | 50/60 |
| 93          | BIAS(4)             |              |                     | 19 43                   |                       |                   |                               |                           |       |
| 94          | Comp                |              |                     |                         |                       |                   |                               | Fair<br>clear             | 60    |
| 95          | HD171391            | 18 29 29     | -11 03 19           | 19 58 33                |                       | 0 07 E            |                               |                           | 242   |
| 96          | COMP                |              |                     |                         |                       |                   |                               | "                         | 60    |
| 97          | COMP                |              |                     |                         |                       |                   |                               | "                         | "     |
| 98          | HD173297            | 18 39 20     | -20 45              | 20 11 36                |                       | 0 12 W            |                               |                           | 1200  |
| 99          | COMP                |              |                     |                         |                       |                   |                               | "                         | 60    |
| CC35106     | BIAS(4)             |              |                     | 20 38                   |                       |                   |                               |                           | -     |
| 01          | COMP                |              |                     |                         |                       |                   |                               | "                         | 60    |
| 02          | HD180583            | 19 11 59     | +27 44 59           | 20 40 51                |                       | 0 03 E            |                               |                           | 400   |
| 03          | COMP                |              |                     |                         |                       |                   |                               | "                         | 60    |
| 04          | COMP                |              |                     |                         |                       |                   |                               | "                         | "     |
| 05          | HD187691            | 19 46 14     | +10 09 55           | 20 54 32                |                       | 0 28 E            |                               |                           | 180   |
| 06          | COMP                |              |                     |                         |                       |                   |                               | "                         | 60    |



CCD

Spectr. Temp.  $-100.2^{\circ}\text{C}$ Dome Temp./Hum.  $+17.2^{\circ}\text{C}$  67.96H

Transparency Conditions . Mostly Clear..... 302

Focus ..... 6.88

cc 3503  $\rightarrow$   $16.0^{\circ}\text{C}/72.4\%$ 

FANS OFF

Spectr. Temp.  $\nearrow$ Dome Temp./Hum.  $\nearrow$  *C. Lambda*

420 0 50 1024 4 1 CCD FMT

| Exp. Mtr. | Seeing                          | Ptg. Mag. | Sp.                         | Inst.             | Grating/Tilt   | Slit      | Emulsion         | P.H. | Program    | Remarks                                                        | Quality |
|-----------|---------------------------------|-----------|-----------------------------|-------------------|----------------|-----------|------------------|------|------------|----------------------------------------------------------------|---------|
| 5160      | Note Nov 95 Tr<br>Probably 6.68 |           |                             | CASSED            | 1800 $\mu$ /mm | 306 $\mu$ | <del>6375A</del> | 3/4  | focus test | in focus, grating change<br>not much and will help if anything |         |
|           |                                 |           |                             | <del>G-5942</del> | G-5942         |           | <del>6375A</del> | 1    |            |                                                                |         |
|           |                                 |           |                             | Gj                |                |           |                  |      |            |                                                                |         |
|           |                                 |           |                             |                   | G-5946         |           | 6395A            | 5    |            |                                                                |         |
| 242       | 4600                            | 4"        | 5.14                        | G8II              |                |           |                  | 6    | Std Vel.   |                                                                | 5.6K    |
|           |                                 |           |                             |                   |                |           |                  | 7    |            |                                                                |         |
|           |                                 |           |                             |                   |                |           |                  | 8    |            |                                                                |         |
| 1200      | 36560<br>FILTER<br>1945         | 4"        | $\langle v \rangle$<br>7.48 | G0Ib              |                |           |                  | 9    | Rm         | V350 Sgr                                                       | 3.7K    |
|           |                                 |           |                             |                   |                |           |                  | 10   |            |                                                                |         |
|           |                                 |           |                             |                   |                |           |                  | 11   |            |                                                                |         |
| 400       | 2600                            | 3-4"      | $\langle v \rangle$<br>6.19 | F6I-IIb           |                |           |                  | 12   | Rm         | V473 Lyr                                                       | 5.8K    |
|           |                                 |           |                             |                   |                |           |                  | 13   |            |                                                                |         |
|           |                                 |           |                             |                   |                |           |                  | 14   |            |                                                                |         |
| 180       | 2750                            | 4"        | $\langle v \rangle$<br>5.11 | F8V               |                |           |                  | 15   | Std. Vel   |                                                                | 5.8K    |
|           |                                 |           |                             |                   |                |           |                  | 16   |            |                                                                |         |

pg #2

Fri/Sat 303

Emulsion Batches:

Date 1995 Sep 1/2 ..... Observers [Rm]/Tn/Smt.....

| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC35107   | COMP     |              |                     |                         |                       |                   |             | Fed<br>clear              | 60   |
| 08        | HD331970 | 20 08 27     | +32 34 16           | 21 04 59                |                       | 00 01 E           |             |                           | 2444 |
| 09        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 10        | BIAS(4)  |              |                     | 21 52                   |                       |                   |             |                           |      |
| 11        | Comp     |              |                     |                         |                       |                   |             | Fed<br>Clear              | 60s  |
| 12        | HD203156 | 21 15 23     | +37 49              | 21 57 08                |                       | 0 50 E            |             |                           | 400  |
| 13        | Comp     |              |                     |                         |                       |                   |             | Fed<br>Clear              | 60s  |
| 14        | Comp     |              |                     |                         |                       |                   |             | "                         | "    |
| 15        | HD214975 | 22 36 57     | +56 19 00           | 22 13 14                |                       | 1 36 E            |             |                           | 1530 |
| 16        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 17        | BIAS(4)  |              |                     | 22 41                   |                       |                   |             |                           | —    |
| 18        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 19        | HD215159 | 22 38 15     | +53 23 08           | 22 51 39                |                       | 1 22 E            |             |                           | 180  |
| 20        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 21        | COMP     |              |                     |                         |                       |                   |             | "                         | "    |



Spectr. Temp. — 100.6 °C..... Dome Temp./Hum. 15.8°C/73.5% Transparency Conditions fine for DDO

Focus ..... 6.68.....

Spectr. Temp. .... Dome Temp./Hum. 14.9°C/76.4% @ Z Lac FANS OFF 304  
cd ci 420 0 50 1024 4 1 ccd fat

| Exp. Mtr.                                | Seeing | ✓<br>Mag.   | Sp.          | Inst.       | Grating/<br>Tilt            | Slit       | Emulsion | P.H. | Program | Remarks                                                       | Quality |
|------------------------------------------|--------|-------------|--------------|-------------|-----------------------------|------------|----------|------|---------|---------------------------------------------------------------|---------|
| 60<br>06 560<br>FILTER                   |        |             |              | C455<br>CCD | 1800 $\lambda$ nm<br>G=5946 | 30 $\mu$ m | 0395A    | 17   |         | <u><math>\approx 170/1</math> S/N</u>                         |         |
| 2444<br>7 shutter<br>closed on<br>frash. | 3"     | 9.1<br>-9.8 | F8-<br>G2 Ib |             |                             |            |          | 18   | Rm      | MW Cyg <sup>spec. calibrator</sup><br><del>mid-exposure</del> | 1.7K    |
| 60                                       |        |             |              |             |                             |            |          | 19   |         |                                                               |         |
|                                          |        |             |              |             |                             |            |          | 1/2  |         |                                                               |         |
| 60s                                      |        |             |              |             |                             |            |          | 20   |         |                                                               |         |
| 400<br>3330                              | 3'     | 5.8<br>-5.9 | F2           |             |                             |            |          | 21   | Rm pgm  | V1334 Cyg                                                     | 1.0K    |
| 16s                                      |        |             |              |             |                             |            |          | 22   |         |                                                               |         |
|                                          |        |             |              |             |                             |            |          | 23   |         |                                                               |         |
| 1530<br>1225                             | 3"     | 8.40        | ~G0 Ib       |             |                             |            |          | 24   | Rm      | Z Lac                                                         | 2.5K    |
| 60                                       |        |             |              |             |                             |            |          | 25   |         |                                                               |         |
|                                          |        |             |              |             |                             |            |          | 1    |         |                                                               |         |
| 60                                       |        |             |              |             |                             |            |          | 26   |         | grazing cosmic ray col 0-10<br>row 436-444                    |         |
| 180<br>1730                              |        | 6.19        | K2           |             |                             |            |          | 27   | Rm      | Z Lac velocity comparison                                     | 4.4K    |
| 60                                       |        |             |              |             |                             |            |          | 28   |         |                                                               |         |
| "                                        |        |             |              |             |                             |            |          | 29   |         |                                                               |         |

pg #3

Fri/SAT 305

Emulsion Batches:

Date 1995 Sep 1/2

Observers

[Rm]/Tn/Smt

| Plate No.               | Object                | R.A.<br>1900                         | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T.                                          | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp              |
|-------------------------|-----------------------|--------------------------------------|---------------------|-------------------------|----------------------------------------------------------------|-------------------|-------------|---------------------------|------------------|
| cc 35122                | HD3712                | 0 34 50                              | +55 59 20           | 23 06 45                |                                                                | 3 05 W            |             |                           | 40               |
| 23                      | COMP                  |                                      |                     |                         |                                                                |                   |             | FcAr<br>clear             | 60               |
| 24- <del>28</del>       | FLAT x <del>5</del> 5 | 1st 5 flats are fine.                |                     |                         | Note Oct 5 Th<br>Found Header Dimensions wrong<br>for cc35128- |                   |             |                           | Turng<br>x4 4p 8 |
| 29                      | BIAS(4)               |                                      |                     |                         |                                                                |                   |             |                           | —                |
| CG 800 <sup>93/96</sup> | HD 207754             | 21 46 12                             | 43 25               |                         |                                                                |                   |             | 4x                        | 67ms             |
| 97/98                   | "                     |                                      |                     |                         | 23 34                                                          | 0 10 W            | 58° Alt     | 2x                        | 133ms            |
| cc 35130                | COMP                  | note ORDER of Fils is as per normal. |                     |                         |                                                                |                   |             | FcAr<br>clear             | 60               |
| 131 + <del>20</del>     | HD 331970             | 20 08 27                             | +32 34 16           | 23 43 59                |                                                                | 2 35 W            |             |                           | 2248             |
| 132                     | Comp                  |                                      |                     |                         |                                                                |                   |             | FcAr<br>clear             | 60               |
| 133                     | Comp                  |                                      |                     |                         |                                                                |                   |             | "                         | "                |
| 134                     | HD 187691             | 19 46 14                             | +10 09 55           | 00 35 44                |                                                                | 3 16 W            |             |                           | 303              |
| 135                     | Comp                  |                                      |                     |                         |                                                                |                   |             | FcAr<br>clear             | 60               |
| 136                     | BIAS(4)               |                                      |                     | 00 43                   |                                                                |                   |             |                           | —                |
| 137                     | Comp                  |                                      |                     |                         |                                                                |                   |             | "                         | 60               |
| 138                     | HD 180583             | 19 11 59                             | +27 44 59           | 00 48 21                |                                                                | 4 09 W            |             |                           | 600              |
| 139                     | COMP                  |                                      |                     |                         |                                                                |                   |             | "                         | 60               |

CCP  
Spectr. Tem

Focus.....

Spectr. Tem

Exp. Mtr.

F1/4p

9780

1156

By 0016

3

Sp Control

F1/4p

3900

3270

4



<sup>CCD</sup>  
Spectr. Temp. .... -100.2°C .....

Dome Temp./Hum. 14.4°C / 77.2% Transparency Conditions clear

Focus ..... 6.88 .....

1/28/29 FANS OFF 306

Spectr. Temp. ....

Dome Temp./Hum. 14-1°C / 18-36% .

| son<br>Exp. | Exp. Mtr.              | Seeing | Mag.        | Sp.          | Inst.               | Grating/<br>Tilt           | Slit       | Emulsion | P.H. | Program        | Remarks                                                                                                                                             | Quality |
|-------------|------------------------|--------|-------------|--------------|---------------------|----------------------------|------------|----------|------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 40          | OG 560<br>F11 tee      | ?      | 2.23        | KO IIIa      | CASS<br>CCD         | 1800 $\lambda$ m<br>G=5946 | 30 $\mu$ m | 6395     | 30   | Std. Vel       | $\alpha$ Cas, tracked.                                                                                                                              | ~9K     |
| 60          |                        |        |             |              |                     |                            |            |          | 31   |                |                                                                                                                                                     |         |
| 8           |                        |        |             |              |                     |                            |            |          | 32   |                | GPB error killed last 12.4K<br>2 original flats (old 29/10) $\rightarrow$<br>Did a focus test and test it, when<br>GPB errors came. Still in focus. |         |
| 67ms        |                        | 3"     | 7.32        | KO III       | CCD<br>TV<br>GUIDER | ABOVE 30 $\mu$ m Slit      |            |          | —    | Seeing test    | Done w, light NNE wind, clear                                                                                                                       |         |
| 133ms       |                        |        |             |              |                     |                            |            |          | —    | " "            |                                                                                                                                                     |         |
| 60          |                        |        |             |              | CASS<br>CCD         |                            |            |          | 3    |                |                                                                                                                                                     |         |
| 229ms       | 1156<br>By 0016        | 3"-4"  | 9.1<br>-9.8 | F8-<br>G2 Ib |                     |                            |            |          | 4    | Rm pgn         | Repeat of earlier exposure                                                                                                                          |         |
| 10          | Sp Control<br>fail 4AD |        |             |              |                     |                            |            |          | 5    |                |                                                                                                                                                     | 2K      |
| 303         | 3900                   |        | 5.11<br>8s  | F8 II        |                     |                            |            |          | 6    |                |                                                                                                                                                     |         |
| 60          |                        |        |             |              |                     |                            |            |          | 7    | Std vel repeat |                                                                                                                                                     | 64K     |
| 60          |                        |        |             |              |                     |                            |            |          | 8    |                |                                                                                                                                                     |         |
| 60          |                        |        |             |              |                     |                            |            |          | 1/2  |                |                                                                                                                                                     |         |
| 60          |                        |        |             |              |                     |                            |            |          | 9    |                |                                                                                                                                                     |         |
| 60          | 3270                   | 4"-5"  | 6.19        | F6 I-IIb     |                     |                            |            |          | 10   | Rm             | V473 Lyr                                                                                                                                            |         |

Pg#4

Fri/SAT 307

Emulsion Batches:

Date 1995 Sep 1/2

Observers

[Rm] T<sub>4</sub> / Surt

| Plate No. | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp   |
|-----------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC35140   | Comp                 |              |                     |                         |                       |                   |             | Fear<br>clear             | 60    |
| 41        | VY Per               | 2 20 19      | +58 28 06           | 1 13 33                 |                       | 1 54 E            |             |                           | 3200  |
| 42        | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 43        | BIAS(4)              |              |                     | 2 10                    |                       |                   |             |                           | —     |
| 44        | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 45        | HD25361              | 3 56 42      | +58 23              | 2 14 19                 |                       | 2 57 E            |             |                           | 1599  |
| 46        | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 47        | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 48        | HD30282              | 4 41 06      | +36 32              | 2 48 01                 |                       | 3 12 E            |             |                           | 1265  |
| 49        | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 50        | BIAS(4)              |              |                     | 3 11                    |                       |                   |             |                           | —     |
| 51        | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 52        | HD44990              | 6 19 49      | +7 08 25            | 3 24 31                 |                       | 4 17 E            |             |                           | 805   |
| 53        | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 54/55     | In Board / Out Board |              |                     |                         |                       | 00                | 30°         | "                         | 60/60 |



Spectr. Temp. .... Dome Temp./Hum.  $13.4^{\circ}\text{C}/81.2\%$  Transparency Conditions ... *clear, humid, partly cloudy*  
 Focus ..... *6.68* .....  
 Spectr. Temp. .... Dome Temp./Hum.  $12.8^{\circ}\text{C}/81.7\%$  *308*  
 420 0 50 1024 4 1 ccd fat

| Exp. Mtr.                                      | Seeing | Mag.           | Sp.             | Inst.       | Grating/<br>Tilt                   | Slit             | Emulsion       | P.H.  | Program                                      | Remarks                                                      | Quality          |
|------------------------------------------------|--------|----------------|-----------------|-------------|------------------------------------|------------------|----------------|-------|----------------------------------------------|--------------------------------------------------------------|------------------|
| 05560<br>FILTER                                |        |                |                 | CASS<br>CCD | 1800 $\text{\AA}$<br><del>G=</del> | 30 $\mu\text{m}$ | <del>640</del> | 12    |                                              |                                                              |                  |
| 420                                            | 3"     | 10.8-<br>11.66 | F5-F9           |             | 5946                               |                  | 6395A          | 13    | Rm                                           | some thick clouds broad &<br>dispersed in Per in about 5 min | 700 above<br>6/9 |
|                                                |        |                |                 |             |                                    |                  |                | 14    |                                              | 95% on catwalk                                               |                  |
|                                                |        |                |                 |             |                                    |                  |                | 1     |                                              |                                                              |                  |
|                                                |        |                |                 |             |                                    |                  |                | 15    |                                              |                                                              |                  |
| 3300                                           | 3-4"   | 7.30<br>-8.07  | F6Ib-<br>G2Ib   |             |                                    |                  |                | 16    | Rm                                           | RX Cam                                                       | 5.5K             |
|                                                |        |                |                 |             |                                    |                  |                | 17    |                                              |                                                              | 6.7K             |
|                                                |        |                |                 |             |                                    |                  |                | 18    |                                              |                                                              |                  |
| 3000                                           | ?      | B 7.9<br>-8.8  | F6-<br>G1       |             |                                    |                  |                | 19    | Rm                                           | AW Per cloud Per a bit                                       | 6.1K             |
|                                                |        |                |                 |             |                                    |                  |                | 20    |                                              |                                                              |                  |
|                                                |        |                |                 |             |                                    |                  |                | 1     |                                              |                                                              |                  |
|                                                |        |                |                 |             |                                    |                  |                | 21    |                                              | waited ~ 5 min for clouds to<br>pass                         |                  |
| 3000                                           | 5"     | B 6.5<br>-8.0  | F7Iab<br>-K1Iab |             |                                    |                  |                | 22    | Rm                                           | T Mon 1st of season,<br>lots of retraction.                  | 5.5K             |
|                                                |        |                |                 |             |                                    |                  |                | 23    |                                              |                                                              |                  |
| All To Di\To-cdrom\sepcas & Persaus<br>and DAT |        |                |                 |             |                                    |                  |                | 24/25 | focus test. set for slightly<br>warmer temp. |                                                              |                  |





Spectr. Temp. ....  $-100.6^{\circ}\text{C}$ ....

Dome Temp./Hum. 17.5°C / 64.6%

Transparency Conditions .. *cloudy - dense cloud* .....

Focus ..... 6:68 .....

Spectr. Temp. . . . .

Dome Temp./Hum. ....

420 0 50 1024 4 1 ccd/m<sup>2</sup>

| Comparison<br>Mtr. Exp. | Exp. Mtr. | Seeing                                    | Ptg.<br>Mag. | Sp. | Inst.        | Grating/<br>Tilt       | Slit | Emulsion              | P.H. | Program       | Remarks                                 | Quality          |
|-------------------------|-----------|-------------------------------------------|--------------|-----|--------------|------------------------|------|-----------------------|------|---------------|-----------------------------------------|------------------|
| 6065                    |           |                                           |              |     | CASS<br>(CD) | 1800 lines<br>G = 6100 | 30μm | 6603 Å                | 3/4  | FOCUS<br>TEST | right in focus.                         | 16K<br>→ 15.3K   |
| -                       |           |                                           |              |     |              |                        |      | (6603 Å @<br>row 506) | 1    |               |                                         | ↓                |
| 9                       |           |                                           |              |     |              |                        |      |                       | 5    | Blu           | as close to saturation<br>as possible   |                  |
| 6                       |           |                                           |              |     |              |                        |      |                       | 6    | Blu           | 1/2 weaker than<br>saturation (1st set) | 10.6K<br>→ 10.3K |
| -                       |           |                                           |              |     |              |                        |      |                       | 1    |               |                                         |                  |
| 4.5                     | ←         | tscale set to 100 so exptime says 45 sec. |              |     |              |                        |      |                       | 7    | Blu           | 1/2 weaker than 1st set.<br>strength of | 8.0K<br>→ 7.7K   |
| 2.2                     | ←         | tscale set to 100 so exptime says 22 sec. |              |     |              |                        |      |                       | 8    | Blu           | 1/4 strength of 1st set.                | 4.0K<br>→ 3.9K   |
|                         |           |                                           |              |     |              |                        |      |                       | 1    |               |                                         |                  |
| 60                      | ←         | tscale set to 1000 again.                 |              |     |              |                        |      |                       | 9    |               |                                         |                  |

p4#1

Mon [Labor Day] / Tues

311

Emulsion Batches:

Date 1995 Sep. 4/5..... Observers [Bln]..... Tn.....

| Plate No.  | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp   |
|------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC3517 1/5 | In board / out board |              |                     | 19 33                   |                       | 00 03W            | 42 33'      | Felt<br>clear             | 60/6s |
| 76         | BIAS(4)              |              |                     |                         |                       |                   |             |                           |       |
| 77         | Comp                 |              |                     |                         |                       |                   |             | Felt<br>clear             | 60s   |
| 78         | HD 177724            | 19 00 49     | +13 42 53           | 19 47 45                |                       | 00 38 E           |             |                           | 55    |
| 79         | Comp                 |              |                     |                         |                       |                   |             | Felt<br>clear             | 60s   |
| 80         | Comp                 |              |                     |                         |                       |                   |             | "                         | "     |
| 81         | HD 186205            | 19 37 54     | +8 59 00            | 19 56 15                |                       | 00 36 E           |             |                           | 1957  |
| 82         | Comp                 |              |                     |                         |                       |                   |             | "                         | 10s   |
| 83         | Comp                 |              |                     |                         |                       |                   |             | "                         | "     |
| 84         | HDE 235679           | 21 55 00     | +54 00 00           | 20 39 28                |                       | 02 04 E           |             |                           | 2271  |
| 85         | Comp                 |              |                     |                         |                       |                   |             | "                         | 60s   |
| 86         | BIAS(4)              |              |                     | 21 21                   |                       |                   |             |                           |       |
| 87         | Comp                 |              |                     |                         |                       |                   |             | "                         | 60s   |
| 88         | HD 187691            | 19 46 14     | +10 09 55           | 21 32 56                |                       | 00 22W            |             |                           | 179   |
| 89         | Comp                 |              |                     |                         |                       |                   |             | "                         | 60s   |

CCD  
Spectr. Temp.

Focus.....

CCD  
Spectr. Temp.

Mr.

35560

Filter

5000

1300

1600

3000



CCD  
Spectr. Temp. ... -100.5 °C ...

Dome Temp./Hum. ... +19.6 °C ... 57% H<sub>2</sub>O

Transparency Conditions ... Fine ...

Focus ... 6.68 ...

90 c gain

312

CCD  
Spectr. Temp. ... -160.5 °C ...

Dome Temp./Hum. ...

That Hot Pixel on Red 26, Row 14A

+20 0 50 1024 4 1 CCD FMT

| Exp. Mtr.        | Seeing | P. Mag. | Sp.               | Inst.    | Grating/<br>Tilt                              | Slit  | Emulsion | P.H. | Program      | Remarks                                                               | Quality    |
|------------------|--------|---------|-------------------|----------|-----------------------------------------------|-------|----------|------|--------------|-----------------------------------------------------------------------|------------|
| OG 560<br>Filter |        |         |                   | CASS CCD | 1800 1/4 mm                                   | 306 μ | 6603 Å   | 3/4  | focus test   |                                                                       | MAX<br>ADY |
|                  |        |         |                   |          | *G=6100<br>(unchanged<br>from previous night) |       |          | 1/2  |              |                                                                       |            |
|                  |        |         |                   |          |                                               |       |          | 5    |              |                                                                       | 3.5K       |
| 5000             | OK     | 2.99    | A0 V <sub>n</sub> |          |                                               |       |          | 6    | Telluric Std | Air mass = 1.173                                                      | 10K        |
|                  |        |         |                   |          |                                               |       |          | 7    |              |                                                                       | 3.6K       |
|                  |        |         |                   |          |                                               |       |          | 8    |              |                                                                       |            |
| 1360             | 2"-3"  | 8.43    | B2 V              |          |                                               |       |          | 9    | Blk He Star  | > 170/1 SN<br>Air mass = 1.250                                        |            |
|                  |        |         |                   |          |                                               |       |          | 10   |              |                                                                       |            |
|                  |        |         |                   |          |                                               |       |          | 11   |              |                                                                       |            |
| 1600             | 2"-3"  | 8.86    | B2.5 Ib           |          |                                               |       |          | 12   | Sp Bin Blk   | Had strong Em max 16K but not saturated<br>at start<br>Air mass 1.130 |            |
|                  |        |         |                   |          |                                               |       |          | 13   |              |                                                                       |            |
|                  |        |         |                   |          |                                               |       |          | 1/2  |              |                                                                       |            |
|                  |        |         |                   |          |                                               |       |          | 14   |              |                                                                       |            |
| 3400             |        | 5.11    | F8 V              |          |                                               |       |          | 15   | Std Vel      |                                                                       | 12K        |

p9#0

Mon/Tues

313

Emulsion Batches:

Date 1995. Sep 4/5..... Observers [B/m]..T.A.....

| Plate No. | Object     | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC 35190  | Comp       |              |                     |                         |                       |                   |             | Fe Ar<br>clear            | 60s  |
| 91        | HD 17724   | 19 00 49     | +13 42 53           | 21 45 12                |                       |                   |             |                           | 50   |
| 92        | "          | "            | "                   | 21 50 23                |                       |                   |             | "                         | 45s  |
| 93        | Comp       |              |                     |                         |                       |                   |             |                           | 60s  |
| 94/<br>03 | FLATS x10  |              |                     |                         |                       | 01 26W            | +17°        | TLUG<br>Ap=1/4            | 9    |
| 04        | Comp       |              |                     |                         |                       |                   |             | Fe Ar<br>clear            | 60   |
| 05        | HD 186205  | 19 37 54     | +8 59 00            | 22 13 05                |                       | 01 44 W           |             |                           | 2172 |
| 06        | Comp       |              |                     |                         |                       |                   |             | Fe Ar<br>clear            | 60   |
| 07        | BIAS (4)   |              |                     | 22 52                   |                       |                   |             |                           |      |
| 08        | Comp       |              |                     |                         |                       |                   |             | Fe Ar<br>clear            | 60s  |
| CC 35209  | BD+17 4572 | 21 19 21     | +17 51              | 22 58 10                |                       | 00 45 W           |             |                           | 1983 |
| 10        | Comp       |              |                     |                         |                       |                   |             | "                         | 60s  |
| 11        | Comp       |              |                     |                         |                       |                   |             | "                         | "    |
| 12        | HD 214946  | 22 36 42     | +44 29              | 23 51 40                |                       | 00 01 W           |             |                           | 764  |
| 13        | Comp       |              |                     |                         |                       |                   |             | Fe Ar<br>clear            | 60s  |



Spectr. Temp. .... Dome Temp./Hum.  $+18.4^{\circ}\text{C}$  57864 Transparency Conditions ... OK... slight haze...

Focus .... 6.68

Spectr. Temp. ....

Dome Temp./Hum. ....  
clankala

increasing cloud 314

| Exp. Mtr.       | Seeing | P.V.<br>Mag.  | Sp. | Inst.  | Grating/<br>Tilt    | Slit | Emulsion | P.H. | Program                              | Remarks                                  | Quality |
|-----------------|--------|---------------|-----|--------|---------------------|------|----------|------|--------------------------------------|------------------------------------------|---------|
| 06560<br>Filter |        |               |     | CH55CQ | 1800/n/mm<br>G=6100 | 306x | 6603A    | 17   | -                                    |                                          |         |
| 5200            |        | 2.99          | ADV |        |                     |      |          | 18   | Telluric Std                         | AIR MASS = 1.21<br>2nd exposure of night | 12K     |
| 5000            |        | "             | "   |        |                     |      |          | 18   | " "                                  | better column centering                  | 10K     |
|                 |        |               |     |        |                     |      |          | 19   |                                      |                                          |         |
|                 |        |               |     |        |                     |      |          | 20   |                                      |                                          | 15.3K   |
|                 |        |               |     |        |                     |      |          | 21   |                                      |                                          |         |
| 1650            | 2'3"   | 8.43          | B2V |        |                     |      |          | 22   | Blk Hester                           | 2nd exp of night<br>AIR MASS = 1.27.     | 3.2K    |
|                 |        |               |     |        |                     |      |          | 23   |                                      |                                          |         |
|                 |        |               |     |        |                     |      |          | 1/2  |                                      |                                          |         |
|                 |        |               |     |        |                     |      |          | 24   |                                      |                                          |         |
| 1100            | 2'3"   | 8.98<br>-9.47 |     |        |                     |      |          | 25   | Cepheid Vix A4 Peg                   | Field drawn just in case                 | 2.6K    |
|                 |        |               |     |        |                     |      |          | 26   | (Stellar Radius COP. very very slow) |                                          |         |
|                 |        |               |     |        |                     |      |          | 5    |                                      |                                          | 3.7K    |
| 2400            | 3'     | B<br>7.26     | A5  |        |                     |      |          | 6    | Blk Blue pygmy star *                |                                          | 7.4K    |
|                 |        |               |     |        |                     |      |          | 7    |                                      | * H $\alpha$ = 6678Å look<br>doubled.    | 3.64K   |

315

Date 1945 Sep 4/5 Observers [Bh] Tg

### Emulsion Batches:

[illegible]



Spectr. Temp. .... Dome Temp./Hum.  $+18^{\circ}\text{C}$  ... 60% H Transparency Conditions *clouding in* .....

Focus ..... 6.68 .....

Spectr. Temp. .... Dome Temp./Hum. .... *clankle*

*High Cirrus from SW* 316

| Exp. Mtr. | Seeing | Pg. Mag.         | Sp.  | Inst.                | Grating/Tilt                 | Slit                 | Emulsion | P.H. | Program     | Remarks          | Quality |
|-----------|--------|------------------|------|----------------------|------------------------------|----------------------|----------|------|-------------|------------------|---------|
|           |        |                  |      | CASS CCD             | 1800 $\mu\text{m}$<br>G-6100 | 306 $\mu$            | 6603A    | 1/2  |             |                  |         |
| 67ms      | 2-3"   | B<br>7.26        | A5   |                      |                              | Above 306 $\mu$ slit |          |      | Seeing test | Done NW, no wind |         |
| 13ms      |        |                  |      |                      |                              |                      |          |      | " "         |                  |         |
| 63        |        |                  |      |                      |                              |                      |          | 8    |             |                  |         |
| 3850      |        | 4.13             | F7V  |                      |                              |                      |          | 9    | st/vel      | some cloud       |         |
| 64        |        |                  |      |                      |                              |                      |          | 10   |             |                  |         |
| 6/65      |        | 117.9 $^{\circ}$ | 6.68 | set                  |                              |                      |          | 3/4  | Focus test  |                  |         |
|           |        |                  |      | All to DAT, Perseus, | D:1                          | To CDROM             | SEPCASS  |      |             |                  |         |

pg #1

Tues/Wed

317

Date 1995 Sep 5/6 ... Observers {Vys} Tn .....

Emulsion Batches:

.....  
.....  
.....

| Plate No. | Object           | R.A.<br>1900                                                         | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|------------------|----------------------------------------------------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 35220  | BIAS x 4         | (Sum of 4 biases for Vys pgm)                                        |                     |                         |                       |                   |             |                           |       |
| 21/22     | Inboard/outboard |                                                                      |                     |                         |                       |                   | 45°         | FENE<br>Clear             | 20/35 |
| 23        | Comp             |                                                                      |                     |                         |                       |                   |             | "                         | 25s   |
| 24        | BD+45 2743       | 18 3226                                                              | +45 39 53           | 19 3734                 |                       | 00 12W            |             |                           | 172s  |
| 25        | Comp             |                                                                      |                     |                         |                       |                   |             | FENE<br>Clear             | 25s   |
| *27       | Comp             | * (too late, to REWRITE frames in sequence)                          |                     |                         |                       |                   |             | "                         | "     |
| 28        | AC+63 32399      | 23 0202                                                              | +63 23 24           | 20 2754                 |                       | 03 20E            |             |                           | 2232  |
| 29        | Comp             |                                                                      |                     |                         |                       |                   |             | FENE<br>Clear             | 25s   |
| 26        | BIAS x 4         | Had to Renumber, by over writing <sup>21 08</sup> bad file # CC35226 |                     |                         |                       |                   |             |                           |       |
| 30        | Comp             |                                                                      |                     |                         |                       |                   |             | "                         | 25s   |
| 31        | BD+57 2735       | 23 1954                                                              | +57 20 00           | 21 1632                 |                       | 02 55E            |             |                           | 1899  |
| 32        | Comp             |                                                                      |                     |                         |                       |                   |             | "                         | 25s   |
| 33        | Comp             |                                                                      |                     |                         |                       |                   |             | "                         | "     |
| 34        | HD1326           | 00 1258                                                              | +43 2744            | 21 5518                 |                       | 03 30E            |             |                           | 692   |
| 35        | Comp             |                                                                      |                     |                         |                       |                   |             | "                         | 25s   |



Spectr. Temp. <sup>CCD</sup> -100.2°C

Dome Temp./Hum 19.3.....80% H

Transparency Conditions ... Clearing up.....

Focus ..... 6.68.....

90 C gain

318

Spectr. Temp. ....

Dome Temp./Hum. .... c Lambda

420 0 50 1024 41 CCD Fmt AD4

| Exp. Mtr. | Seeing | P <sub>0</sub> Mag. | Sp.  | Inst.    | Grating/Tilt            | Slit | Emulsion | P.H. | Program       | Remarks                                                  | Quality |
|-----------|--------|---------------------|------|----------|-------------------------|------|----------|------|---------------|----------------------------------------------------------|---------|
| no filter |        |                     |      | C455 CCD | 1800 lines/mm<br>G=5153 | 306  | 5302A    | 1/2  |               |                                                          |         |
| 19.3 6.68 |        |                     |      |          |                         |      |          | 3/4  |               | Forgot that Moon → Full.                                 |         |
|           |        |                     |      |          |                         |      |          | 5    |               | Not so good for faint pgn.                               | 7.5K    |
| 1000      | 2.3"   | 9.83                | M0   |          |                         |      |          | 6    | MarCy Std Vel | 75/1 S/N                                                 |         |
|           |        |                     |      |          |                         |      |          | 7    |               |                                                          |         |
|           |        |                     |      |          |                         |      |          | 8    |               | Had to Reset KCR and HERRICK<br>And Repeat. Mostly "GPB" | 7.8K    |
| 640       | 2.4"   | 10.8                | M0   |          |                         |      |          | 2    | Vys 858       | 750/1 S/N                                                |         |
|           |        |                     |      |          |                         |      |          | 3    |               |                                                          |         |
|           |        |                     |      |          |                         |      |          | 1/2  |               |                                                          |         |
|           |        |                     |      |          |                         |      |          | 4    |               |                                                          |         |
| 1070      | 3"     | 10.05               | M2e  |          |                         |      |          | 5    | Vys 211       | 180/1 S/N                                                |         |
|           |        |                     |      |          |                         |      |          | 6    |               |                                                          |         |
|           |        |                     |      |          |                         |      |          | 7    |               |                                                          | 7.3K    |
| 2000      | 2.3"   | 8.07                | M1Ve |          |                         |      |          | 8    | MarCy Std Vel |                                                          |         |

Pg #2

Tues / wed

319

Emulsion Batches:

Date 1995 Sep. 5 / 6... Observers {V45} J.A.P. ....

| Plate No. | Object              | R.A.<br>1900                                      | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|---------------------|---------------------------------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 35236  | BIAS x 4            |                                                   |                     | 22 09                   |                       |                   |             |                           |       |
| 37        | Comp                |                                                   |                     |                         |                       |                   |             | FelNe<br>Clear            | 25s   |
| 38        | AC+18 1074-63       | 22 2356                                           | +18 25 18           | 22 20 19                |                       | 00 52 E           |             |                           | 2088  |
| 39        | Comp                |                                                   |                     |                         |                       |                   |             | FelNe<br>Clear            | 25s   |
| 40        | Comp                |                                                   |                     |                         |                       |                   |             | "                         | "     |
| 41        | HP 216899           | 22 51 48                                          | +16 02 00           | 23 02 28                |                       | 00 58 E           |             |                           | "     |
| 42        | Comp                |                                                   |                     |                         |                       |                   |             | "                         | 25    |
| 43        | Comp                | Too Humid & foggy to go for seeing test intended. |                     |                         |                       |                   |             |                           |       |
| 51        | FLATS x 9           |                                                   |                     |                         |                       | 00 54 E           | +17°        | Tung<br>Ap/2              | 5s    |
| 52        | Inboard / out board | HARTMANN                                          |                     |                         |                       | "                 | "           | FelNe<br>Clear            | 20/35 |
| 54        | BIAS x 4            |                                                   |                     | 23 32                   |                       |                   |             |                           |       |



Spectr. Temp.  $\dots -101.2^{\circ}\text{C} \dots$

Dome Temp./Hum. *418.2°C* *90% H*

Transparency Conditions... *Slightly hazy -> foggy*.....

Focus . . . 6-68 . . . . .

Spectr. Temp. . . . .

Dome Temp./Hum. *17.7°C* *92% H*

320 max  
APC

[illegible]

pg #1

[Thu/Fri]

321

Emulsion Batches:

Date 1995 September 7/8 Observers [Rm] Smt

| Plate No.   | Object             | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-------------|--------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| cc 35255/56 | INBOARD / OUTBOARD | HARTMANN     |                     |                         |                       |                   |             | Fair<br>clear             | 50/60 |
| 57          | BIAS(4)            |              |                     | 21 25                   |                       |                   |             | "                         | —     |
| 58          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 59          | HD180583           | 19 11 59     | +27 44 59           | 21 40 09                |                       | 1 34 W            |             |                           | 1200  |
| 60          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 61          | BIAS(4)            |              |                     | 22 04                   |                       |                   |             | "                         | —     |
| 62          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 63          | HD187691           | 19 46 14     | +10 09 55           | 22 09 58                |                       | 1 17 W            |             |                           | 480   |
| 64          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 65          | COMP               |              |                     |                         |                       |                   |             | "                         | "     |
| 66          | HD331970           | 20 08 27     | +32 34 16           | 22 29 19                |                       | 1 59 W            |             |                           | 3100  |
| 67          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 68          | BIAS(4)            |              |                     | 23 24                   |                       |                   |             | "                         | —     |
| 69          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 70          | HD203156           | 21 15 23     | +37 48 55           | 23 31 21                |                       | 1 12 W            |             |                           | 600   |
| 71          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |



CCD  
Spectr. Temp. .... -100°C

Dome Temp./Hum. 10.0°C/73.2%  
@ FOCUS TEST

Transparency Conditions just cleared, full moon...  
FANS OFF AWFUL seeing, humid.  
322

Focus ..... 6.76

Spectr. Temp. ....

Dome Temp./Hum. ....

420 0 50 1024 4 1 ccd int

| Exp. Mtr.        | Seeing | Ptg. Mag.    | Sp.          | Inst.       | Grating/Tilt     | Slit | Emulsion            | P.H.             | Program       | Remarks                                                           | Quality |
|------------------|--------|--------------|--------------|-------------|------------------|------|---------------------|------------------|---------------|-------------------------------------------------------------------|---------|
| CG 560<br>FILTER |        |              |              | CASS<br>CCD | 1800 Å<br>G=5946 | 306µ | 6400 Å<br>@ c. 1512 | 3/4<br>1<br>5    | FOCUS<br>TEST | set a bit cool but<br>T dropping fast.                            |         |
| 4100             | >7"!   | <V><br>6.19  | F6I-IIb      |             |                  |      |                     | 6<br>7<br>1<br>8 | Rm            | V473 Lyr. pretty<br>spread out - c. 6.1K                          |         |
| 4100             | 6-7"   | V<br>5.11    | F8I          |             |                  |      |                     | 9<br>10<br>11    | Std Vel       | seeing getting a bit<br>better, but not much.                     | 5.5K    |
| 1171             | 5-6"   | V<br>9.1-9.8 | F8-<br>G2 Ib |             |                  |      |                     | 12<br>13<br>14   | Rm            | MW Cgg auto-guided<br>with 586 ST-4                               | 1.6K    |
| 3180             | 6"     | V<br>5.8-5.9 | F2           |             |                  |      |                     | 15<br>16         | Rm            | V1334 Cgg R/H getting very<br>high outside, still<br>okay inside. | 4.8K    |

pg #2

323

Emulsion Batches:

Date 1995 September 7/8 Observers [Rm] Smt

| Plate No.  | Object                       | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp   |
|------------|------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC35272    | COMP                         |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60    |
| 73         | HD214975                     | 22 36 54     | +56 19              | 23 49 54                |                       | 0 19 W            |             |                           | 1200  |
| 74         | COMP                         |              |                     |                         |                       |                   |             | "                         | 60    |
| 75         | BIAS(4)                      |              |                     | 0 16                    |                       |                   |             |                           | —     |
| 76         | COMP                         |              |                     |                         |                       |                   |             | "                         | 60    |
| 77         | HD215159                     | 22 38 15     | +53 23 08           | 0 19 06                 |                       | 0 35 W            |             |                           | 500   |
| 78         | COMP                         |              |                     |                         |                       |                   |             | "                         | 60    |
| 79         | COMP                         |              |                     |                         |                       |                   |             | "                         | "     |
| 80         | HD223094                     | 23 41 30     | +28 09              | 0 40 02                 |                       | 0 09 E            |             |                           | 450   |
| 81         | COMP                         |              |                     |                         |                       |                   |             | "                         | 60    |
| CG80105-08 | HD223094 x4                  | 23 41 30     | +28 09              |                         |                       |                   |             |                           | .067  |
| 109/110    | " x2                         |              |                     |                         | 0 57                  | 0 01 W            | 75° Alt     |                           | .133  |
| CC35282    | BIAS(4)                      |              |                     | 1 00                    |                       |                   |             |                           | —     |
| 83-91      | FLAT x 9                     |              |                     |                         |                       | 0 0 1 W           | +28°        | Tung<br>1/4 Ap            | 7     |
| 92/93      | INBOARD/OUTBOARD<br>HARTMANN |              |                     |                         |                       |                   |             | FeAr<br>clear             | 50/60 |



CEV  
Spectr. Temp.  $-100.7^{\circ}\text{C}$ .....

Dome Temp./Hum.  $8.2^{\circ}\text{C}/18.2\%$

Transparency Conditions *clear, full moon, getting wet outside due to R/H.*

Focus .....  $6.76$ .....

CEV  
Spectr. Temp.  $-100.5^{\circ}\text{C}$ .....

Dome Temp./Hum.  $7.7^{\circ}\text{C}/79.6\%$  @ seeing test

FANS OFF  
420 0 50 1024 11.7K  
324

| Exp. Mtr.                  | Seeing | Ptg. Mag. | Sp.         | Inst.             | Grating/Tilt                          | Slit            | Emulsion          | P.H. | Program     | Remarks                                                                      | Quality          |
|----------------------------|--------|-----------|-------------|-------------------|---------------------------------------|-----------------|-------------------|------|-------------|------------------------------------------------------------------------------|------------------|
| OG 560 FILTER              |        |           |             | CASS CCD          | 1800 $\text{\AA}/\text{mm}$<br>G=5946 | 306 $\mu$       | 6400 $\text{\AA}$ | 17   |             |                                                                              |                  |
| 1109                       | 5"     | 8.40      | $\sim$ G0Ib |                   |                                       |                 |                   | 18   | Rm          | spec. ctrs crashed during exposure but exp. data shutter stayed open.        | 1.9K             |
|                            |        |           |             |                   |                                       |                 |                   | 19   |             |                                                                              |                  |
|                            |        |           |             |                   |                                       |                 |                   | 1    |             |                                                                              |                  |
|                            |        |           |             |                   |                                       |                 |                   | 20   |             |                                                                              |                  |
| 3630                       | 5"     | 6.19      | k2          |                   |                                       |                 |                   | 21   | Rm          | 2 Lac velocity comparison                                                    | 6.7K             |
|                            |        |           |             |                   |                                       |                 |                   | 22   |             |                                                                              |                  |
|                            |        |           |             |                   |                                       |                 |                   | 23   |             |                                                                              |                  |
| 1400                       | 5"     | 7.45      | k5III       |                   |                                       |                 |                   | 24   | Std. Vel    |                                                                              | 2.5K             |
|                            |        |           |             |                   |                                       |                 |                   | 25   |             |                                                                              |                  |
|                            | 5"     | 7.45      | k5III       | EEV CCD TV GUIDER |                                       | above 306 $\mu$ |                   | —    | SEEING TEST | Dome SSSW, no wind, cleared VERY quickly @ 20:30 after days of cloud & storm |                  |
|                            | "      | "         | "           |                   |                                       |                 |                   | —    | "           | 96% on catwalk                                                               |                  |
|                            |        |           |             |                   |                                       |                 |                   | 1    |             | dome closed now.                                                             |                  |
|                            |        |           |             |                   |                                       |                 |                   | 26   |             |                                                                              | 11.7K<br>→ 11.1K |
| All to DAT, 0:1 & M: CASS. |        |           |             |                   |                                       |                 |                   | 3/4  | FOCUS TEST  | T=8.0°C set warm now by the same shift as it was cool at start of night      |                  |

pg #1

Fri/Sat

(325)

Date 1995 September 8/9 Observers [Rm] Smt

Emulsion Batches:

During the day, frame.

grabber darks taken by K.K.

e.g. 80111.fts → e.g. 80116.fts

| Plate No.  | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| cc35294/95 | INBOARD/<br>OUTBOARD | HARTMANN     |                     |                         |                       |                   |             | FeAr<br>clear             | 50/60 |
| 96         | BIAS(4)              |              |                     | 20 04                   |                       |                   |             |                           | —     |
| 97         | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 98         | HD173297             | 18 39 24     | -20 45              | 20 10 03                |                       | 0 40 W            |             |                           | 1300  |
| 99         | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| cc35300    | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 01         | HD1771391            | 18 29 29     | -10 03 19           | 20 38 06                |                       | 0 59 W            |             |                           | 180   |
| 02         | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 03         | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 04         | HD180583             | 19 11 59     | +27 44 59           | 20 48 18                |                       | 0 37 W            |             |                           | 690   |
| 05         | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 06         | BIAS(4)              |              |                     | 21 02                   |                       |                   |             |                           | —     |
| 07         | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 08         | HD187691             | 19 46 14     | +10 09 55           | 21 07 49                |                       | 0 13 W            |             |                           | 181   |
| 09         | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |



CCD Spectr. Temp. .... -99.3°C

Dome Temp./Hum. 12.6°C/69.2%  
@ FOCUS TEST

Transparency Conditions just cleared, full moon..

Focus ..... 6.76

FANS ON

(326)

Spectr. Temp. ....

Dome Temp./Hum. ....

420 0 50 1024 4 1 credit

| Exp. Mtr.              | Seeing | Ptg. Mag.   | Sp.     | Inst.       | Grating/Tilt        | Slit | Emulsion | P.H. | Program       | Remarks                              | Quality |
|------------------------|--------|-------------|---------|-------------|---------------------|------|----------|------|---------------|--------------------------------------|---------|
| 50/60<br>560<br>FILTER |        |             |         | CASS<br>CCD | 1800 R/mm<br>G=5946 | 306μ | 6400A    | 3/4  | FOCUS<br>TEST | Set cool but T<br>should really drop |         |
|                        |        |             |         |             |                     |      |          | 1    |               |                                      |         |
|                        |        |             |         |             |                     |      |          | 5    |               |                                      |         |
| 1300<br>1950           | 3"-4"  | <V><br>7.48 | ~G0Ib   |             |                     |      |          | 6    | Rm            | V350 Sgr                             | 4.1K    |
|                        |        |             |         |             |                     |      |          | 7    |               |                                      |         |
|                        |        |             |         |             |                     |      |          | 8    |               |                                      |         |
| 180<br>3280            | 3"     | ✓<br>5.14   | G8III   |             |                     |      |          | 9    | Std. Vel      | close by V350 Sgr                    | 6.0K    |
|                        |        |             |         |             |                     |      |          | 10   |               |                                      |         |
|                        |        |             |         |             |                     |      |          | 11   |               | N DOME FAN ON ONLY                   |         |
| 140<br>4730            | 3"     | <V><br>6.19 | F6I-IIb |             |                     |      |          | 12   | Rm            | V473 Lyr                             | 10.0K   |
|                        |        |             |         |             |                     |      |          | 13   |               |                                      |         |
|                        |        |             |         |             |                     |      |          | 1    |               |                                      |         |
|                        |        |             |         |             |                     |      |          | 14   |               |                                      |         |
| 181<br>7600            | 3"-4"  | ✓<br>5.11   | F8V     |             |                     |      |          | 15   | Std. Vel      |                                      | 5.4K    |
|                        |        |             |         |             |                     |      |          | 16   |               |                                      |         |

pg #2

327

Emulsion Batches:

Date 1995 September 8/9 Observers [Rm] Smt

| Plate No.  | Object      | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|------------|-------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC35310    | COMP        |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 11         | HD331970    | 20 08 27     | +32 34 16           | 21 23 40                |                       | 0 38 W            |             |                           | 2000 |
| 12         | COMP        |              |                     |                         |                       |                   |             | "                         | 60   |
| 13         | BIAS(4)     |              |                     | 22 01                   |                       |                   |             |                           | —    |
| 14         | COMP        |              |                     |                         |                       |                   |             | "                         | 60   |
| 15         | HD194071    | 20 18 30     | +27 55              | 22 06 57                |                       | 0 53 W            |             |                           | 900  |
| 16         | COMP        |              |                     |                         |                       |                   |             | "                         | 60   |
| 17         | COMP        |              |                     |                         |                       |                   |             | "                         | "    |
| 18         | HD203156    | 21 15 23     | +37 48 55           | 22 31 45                |                       | 0 13 W            |             |                           | 450  |
| 19         | COMP        |              |                     |                         |                       |                   |             | "                         | 60   |
| CG80117-20 | HD207754 x4 | 21 46 12     | +43 25              |                         |                       |                   |             |                           | .067 |
| CG80121/22 | " x2        |              |                     |                         | 23 03                 | 0 06 W            | 89° ARt     |                           | .133 |
| 20         | BIAS(4)     |              |                     | 23 10                   |                       |                   |             |                           | —    |
| 21         | COMP        |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 22         | HD214975    | 22 36 54     | +56 19              | 23 18 17                |                       | 0 04 E            |             |                           | 1500 |
| 23         | COMP        |              |                     |                         |                       |                   |             | "                         | 60   |



CCD  
Spectr. Temp. -100.....

Focus.....6:76.....

Spectr. Temp. ....

Dome Temp./Hum. 10.8°C/72.5%

Dome Temp./Hum. 10.2°C/72.4% @ seeing test

Transparency Conditions clear, full moon... 328

NORTH DOME FAN ON ONLY

420 0 50 1024 4 1 ccd/fat

| Exp. Mtr.     | Seeing | Ptg. Mag.    | Sp.     | Inst.             | Grating/Tilt                          | Slit            | Emulsion          | P.H. | Program     | Remarks                                                                              | Quality |
|---------------|--------|--------------|---------|-------------------|---------------------------------------|-----------------|-------------------|------|-------------|--------------------------------------------------------------------------------------|---------|
| OG 560 FILTER |        |              |         | CASS CCD          | 1800 $\text{\AA}/\text{mm}$<br>G=5946 | 300 $\mu$       | 6400 $\text{\AA}$ | 17   |             | reset spec. controller due to multiple failures.                                     |         |
| 1222          | 3"     | V<br>7.1-9.9 | F8-G2Ib |                   |                                       |                 |                   | 18   | Rm          | MW Cyg                                                                               | 2.3K    |
|               |        |              |         |                   |                                       |                 |                   | 19   |             |                                                                                      |         |
|               |        |              |         |                   |                                       |                 |                   | 1    |             | low flying plane travelling W $\rightarrow$ E flow right through zenith @ 22:04 (Gt) |         |
|               |        |              |         |                   |                                       |                 |                   | 20   |             |                                                                                      |         |
| 1605          | 3'-4'  | V<br>8.13    | G8III   |                   |                                       |                 |                   | 21   | Std. Vel    | seeing not as good here now.                                                         | 4.2K    |
|               |        |              |         |                   |                                       |                 |                   | 22   |             | grazing cosmic ray cols 37-39                                                        |         |
|               |        |              |         |                   |                                       |                 |                   | 23   |             | spec. controller failed before hand                                                  |         |
| 4130          | 3"     | V<br>5.8-5.9 | F2      |                   |                                       |                 |                   | 24   | Rm          | V1334 Cyg                                                                            | 11.4K   |
|               |        |              |         |                   |                                       |                 |                   | 25   |             |                                                                                      |         |
|               | 2'-3"  | V<br>7.32    | K0 III  | EEV CCD TV GUIDER |                                       | above 300 $\mu$ |                   | -    | SEEING TEST | Dome W, very light SW wind, CLEAR; 85% catwalk R/H                                   |         |
|               |        |              |         |                   |                                       |                 |                   | -    | "           | full moon - some program problems                                                    |         |
|               |        |              |         |                   |                                       |                 |                   | 1    |             |                                                                                      |         |
|               |        |              |         |                   |                                       |                 |                   | 26   |             |                                                                                      |         |
| 1968          | 2'-3"  | <V><br>8.40  | ~G0Ib   |                   |                                       |                 |                   | 27   | Rm          | Z Lac very thin cloud                                                                | 5.6K    |
|               |        |              |         |                   |                                       |                 |                   | 28   |             |                                                                                      |         |

pg. #3

(329)

Emulsion Batches:

Date 1995 September 8/9 Observers [Rm.] Smt. .... iks. as safety backup

| Plate No. | Object   | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC35324   | COMP     |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 25        | HD215159 | 22 38 15     | +53 23 08           | 23 50 35                |                       | 0 07 W            |             |                           | 300  |
| 26        | COMP     |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 27        | BIAS(4)  |              |                     | 23 59                   |                       |                   |             |                           | —    |
| 28        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 29        | HD3712   | 0 34 50      | +55 59 20           | 0 06 14                 |                       | 1 40 E            |             |                           | 830  |
| 30        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 31        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 32        | VY PER   | 2 20 19      | +58 28 04           | 0 19 24                 |                       | 2 44 E            |             |                           | 1800 |
| 33        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 34        | VY PER   |              |                     | 0 53 57                 |                       | 2 00 E            |             |                           | 2400 |
| 35        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 36        | BIAS(4)  |              |                     | 1 38                    |                       |                   |             |                           | —    |
| 37        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |
| 38        | HD25361  | 3 56 42      | +58 23              | 1 45 34                 |                       | 3 10 E            |             |                           | 900  |
| 39        | COMP     |              |                     |                         |                       |                   |             | "                         | 60   |



Spectr. Temp. .... Dome Temp./Hum.  $10.0^{\circ}\text{C}/71.6\%$  Transparency Conditions *a few thin clouds, full moon*

Focus ..... *6.76* .....

Spectr. Temp. .... Dome Temp./Hum. ....

*N FAN ON*

*330*

*420 0 50 1024 4 1 ccd fast*

| Exp. Mtr.        | Seeing | Ptg. Mag.                 | Sp.           | Inst.       | Grating/Tilt                  | Slit      | Emulsion | P.H. | Program  | Remarks                                                                                        | Quality       |
|------------------|--------|---------------------------|---------------|-------------|-------------------------------|-----------|----------|------|----------|------------------------------------------------------------------------------------------------|---------------|
| 06 S60<br>FILTER |        |                           |               | CASS<br>CCD | 1800 $2\text{mm}$<br>$6=5046$ | 306 $\mu$ | 6400A    | 29   |          |                                                                                                |               |
| 3220             | 2"-3"  | $\checkmark$<br>6.19      | K2            |             |                               |           |          | 30   | Rm       | 2 Lac velocity comparison                                                                      | 10.7K         |
|                  |        |                           |               |             |                               |           |          | 31   |          |                                                                                                |               |
|                  |        |                           |               |             |                               |           |          | 1    |          |                                                                                                |               |
|                  |        |                           |               |             |                               |           |          | 5    |          |                                                                                                |               |
| 8700             | 3"     | $\checkmark$<br>2.23      | K0 IIIa       |             |                               |           |          | 6    | Std. Vel | $\alpha$ Cas, trailed                                                                          | 10.3K         |
|                  |        |                           |               |             |                               |           |          | 7    |          |                                                                                                |               |
|                  |        |                           |               |             |                               |           |          | 8    |          |                                                                                                |               |
| 265              | 2"-3"  | $\checkmark$<br>10.8-11.6 | F5-F9         |             |                               |           |          | 9    | Rm       | VY Per <i>used SB16 ST-4 to autoguide, it kept falling star off slit near end of exposure.</i> | 500 above b/g |
|                  |        |                           |               |             |                               |           |          | 10   |          |                                                                                                |               |
| 380              |        |                           |               |             |                               |           |          | 12   | Rm       | 2nd time around guided manually <i>grazing cosmic ray in spectrum col 21, rows 218-222</i>     | 600 above b/g |
|                  |        |                           |               |             |                               |           |          | 13   |          |                                                                                                |               |
|                  |        |                           |               |             |                               |           |          | 1    |          |                                                                                                |               |
|                  |        |                           |               |             |                               |           |          | 13   |          |                                                                                                |               |
| 2235             | 3"     | $\checkmark$<br>7.30-8.07 | F6Ib-<br>G2Ib |             |                               |           |          | 15   | Rm       | RX Cam                                                                                         | 6.1K          |
|                  |        |                           |               |             |                               |           |          | 16   |          |                                                                                                |               |

pg #4

331

Date 1995 September 8/9 Observers [Rm] Smt

### Emulsion Batches:

| Plate No. | Object                       | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-----------|------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC35340   | COMP                         |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60    |
| 41        | HD30282                      | 4 41 06      | + 36 32             | 2 16 21                 |                       | 3 22 E            |             |                           | 900   |
| 42        | COMP                         |              |                     |                         |                       |                   |             | "                         | 60    |
| 43        | BIAS(4)                      |              |                     | 2 35                    |                       |                   |             |                           | —     |
| 44        | COMP                         |              |                     |                         |                       |                   |             | "                         | 60    |
| 45        | HD29587                      | 4 34 30      | + 41 57             | 2 42 28                 |                       | 2 54 E            |             |                           | 660   |
| 46        | COMP                         |              |                     |                         |                       |                   |             | "                         | 60    |
| 47        | COMP                         |              |                     |                         |                       |                   |             | "                         | "     |
| 48        | HD44990                      | 6 19 49      | + 7 08 25           | 3 06 12                 |                       | 4 14 E            |             |                           | 600   |
| 49        | COMP                         |              |                     |                         |                       |                   |             | "                         | 60    |
| 50-58     | FLAT x 9                     |              |                     |                         |                       | 0 00              | + 34°       | Tung<br>K <sub>4</sub> Ap | 7     |
| 59        | BIAS(4)                      |              |                     | 3 28                    |                       |                   |             |                           | —     |
| 60/61     | INBOARD/OUTBOARD<br>HARTMANN |              |                     |                         |                       |                   |             | FeAr<br>clear             | 50/60 |



Spectr. Temp. .... Dome Temp./Hum. 9.4°C/75.0% Transparency Conditions clear, full moon

Focus ..... 6.76 .....

Spectr. Temp. .... Dome Temp./Hum. 9.0°C/79.8% @ FLATS

(332)

cd ci 420 0 50 1024 4 1 ccd flat

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp.        | Inst.                 | Grating/Tilt | Slit | Emulsion | P.H. | Program    | Remarks                                | Quality          |
|-----------|--------|-----------|------------|-----------------------|--------------|------|----------|------|------------|----------------------------------------|------------------|
| 60        |        |           |            | CASS                  | 1800.2lm     | 306u | 6400 Å   | 17   |            |                                        |                  |
| 900       | 2670   | 3" 4" B*  | F6-7.7-8.8 | G1                    | G=5946       |      |          | 18   | Rm         | AW Per * still seems brighter          | 6.7K             |
| 60        |        |           |            |                       |              |      |          | 19   |            |                                        |                  |
| -         |        |           |            |                       |              |      |          | 1    |            |                                        |                  |
| 60        |        |           |            |                       |              |      |          | 20   |            |                                        |                  |
| 260       | 1856   | 3" V      | 7.29       | dG2                   |              |      |          | 21   | Std. Vel.  |                                        | 4.1K             |
| 60        |        |           |            |                       |              |      |          | 22   |            | gmcily cosmic ray cds 5-6 rows 888-910 |                  |
| "         |        |           |            |                       |              |      |          | 23   |            |                                        |                  |
| 600       | 3050   | 4" 5" B*  | 6.5-8.0    | F7Iab - KI Iab        |              |      |          | 24   | Rm         | T Mon * some retraction                | 7.4K             |
| 60        |        |           |            |                       |              |      |          | 25   |            |                                        |                  |
| 7         |        |           |            |                       |              |      |          | 26   |            |                                        | 11.4K<br>→ 10.9K |
| -         |        |           |            |                       |              |      |          | 1    |            |                                        |                  |
| 50/60     |        |           |            | All to DAT, D:\ & M:\ |              |      |          | 3/4  | FOCUS TEST |                                        |                  |

P1 #1

(333)

Date 1945. September 9/10 Observers [Rm] Smt + Robert Thérien

Emulsion Batches:

2. large. hrs. v. cural.

MS7

| Plate No.   | Object             | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp.  |
|-------------|--------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| cc 35362/63 | INBOARD / OUTBOARD |              |                     |                         |                       |                   |             | Fair<br>clear             | 50/60 |
| 64          | BIAS(4)            |              |                     | 22 38                   |                       |                   |             |                           | —     |
| 65          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 66          | HD180583           | 19 11 59     | +27 44 59           | 22 47 42                |                       | 2 39 W            |             |                           | 600   |
| 67          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 68          | COMP               |              |                     |                         |                       |                   |             | "                         | "     |
| 69          | HD187691           | 19 46 14     | +10 09 55           | 23 07 34                |                       | 2 19 W            |             |                           | 285   |
| 70          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 71          | BIAS(4)            |              |                     | 23 18                   |                       |                   |             |                           | —     |
| 72          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 73          | HD331970           | 20 08 21     | +32 34 16           | 23 27 09                |                       | 2 50 W            |             |                           | 222?  |
| 74          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 75          | BIAS(4)            |              |                     | 0 08                    |                       |                   |             |                           | —     |
| 76          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |
| 77          | HD203156           | 21 15 23     | +37 48 55           | 0 26 48                 |                       | 2 14 W            |             |                           | 550   |
| 78          | COMP               |              |                     |                         |                       |                   |             | "                         | 60    |



Spectr. Temp. <sup>CD</sup> -100°C

Dome Temp./Hum. 12.3°C/73.4%  
after focus test

Transparency Conditions a few fast moving, low clouds....  
full moon. Windy

Focus 6.76

Spectr. Temp.

Dome Temp./Hum.

420 0 50 1024 4 1 sec/lat

334

| Exp. Mtr. | Seeing | Ptg. Mag.                         | Sp.         | Inst.    | Grating/Tilt       | Slit | Emulsion | P.H. | Program    | Remarks                                       | Quality |
|-----------|--------|-----------------------------------|-------------|----------|--------------------|------|----------|------|------------|-----------------------------------------------|---------|
| 50/60     |        |                                   |             | CASS CCD | 1800-21m<br>G=5946 | 306m | 6400A    | 3/4  | FOCUS TEST |                                               |         |
| 60        |        |                                   |             |          |                    |      |          | 1    |            |                                               |         |
| 60        |        |                                   |             |          |                    |      |          | 5    |            |                                               |         |
| 60        | 4300   | 3-4" <sup>&lt;v&gt;</sup><br>6.19 | F6I-IIb     |          |                    |      |          | 6    | Rm         | V473 Lyr                                      | 9K      |
| 60        |        |                                   |             |          |                    |      |          | 7    |            |                                               |         |
| 60        |        |                                   |             |          |                    |      |          | 8    |            |                                               |         |
| 285       | 4500   | 4" <sup>v</sup><br>5.11           | F8V         |          |                    |      |          | 9    | Std. Vel   | overwrote last one<br>readout in wrong cache. | 9.8K    |
| 60        |        |                                   |             |          |                    |      |          | 8    |            |                                               |         |
| 60        |        |                                   |             |          |                    |      |          | 1    |            |                                               |         |
| 60        |        |                                   |             |          |                    |      |          | 9    |            |                                               |         |
| 2223      | 1125   | 5" <sup>v</sup><br>9.1-9.8        | F8-<br>G2Ib |          |                    |      |          | 10   | Rm         | MW Cyg windy                                  | 2.3K    |
| 60        |        |                                   |             |          |                    |      |          | 11   |            |                                               |         |
| 60        |        |                                   |             |          |                    |      |          | 1    |            |                                               |         |
| 60        |        |                                   |             |          |                    |      |          | 12   |            |                                               |         |
| 550       | 3830   | 5" <sup>v</sup><br>5.8-5.9        | F2          |          |                    |      |          | 13   | Rm         | V1334 Cyg                                     | 7.0K    |
| 60        |        |                                   |             |          |                    |      |          | 14   |            |                                               |         |

p4 #2

(335)

Date 1995 September 9/10 Observers [Rm] Smt + Robert Tharrien

Emulsion Batches:

.....  
.....  
.....

| Plate No.  | Object           | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination      | Comparison<br>Type/Filter | Exp.  |
|------------|------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|------------------|---------------------------|-------|
|            | <del>COMP</del>  |              |                     |                         |                       |                   |                  |                           |       |
| CG80123-26 | HD223094 x4      | 23 41 30     | +28 09              |                         |                       |                   |                  |                           | .067  |
| 27/28      | HD223094 x2      |              |                     |                         | 0 49                  | 0 01 W            | 75° Alt<br>+ 29° |                           | .133  |
| CC35379    | COMP             |              |                     |                         |                       |                   |                  | Fear<br>clear             | 60    |
| 80         | HD223094         | 23 41 30     | +28 09              |                         |                       | 0 18 W            |                  |                           | 630   |
| 81         | COMP             |              |                     |                         |                       |                   |                  | "                         | 60    |
| 82         | BIAS(4)          |              |                     | 1 09                    |                       |                   |                  |                           | —     |
| 83         | COMP             |              |                     |                         |                       |                   |                  | "                         | 60    |
| 84         | HD214975         | 22 36 54     | +56 19              | 1 17 48                 |                       | 1 55 W            |                  |                           | 1200  |
| 85         | COMP             |              |                     |                         |                       |                   |                  | "                         | 60    |
| 86         | COMP             |              |                     |                         |                       |                   |                  | "                         | "     |
| 87         | HD215159         | 22 38 15     | +53 23 08           | 1 47 09                 |                       | 2 07 W            |                  |                           | 240   |
| 88         | COMP             |              |                     |                         |                       |                   |                  | "                         | 60    |
| 89-97      | FLAT x9          |              |                     |                         |                       |                   |                  | Tung<br>K4 Ap             | 8     |
| 98         | BIAS(4)          |              |                     | 2 18                    |                       |                   |                  |                           | —     |
| 99/CC35400 | INBOARD/OUTBOARD |              |                     |                         |                       |                   |                  | Fear<br>clear             | 50/60 |

S.E.D.  
Spectr. Tem.

Focus.....

Spectr. Tem.

Exp. Mir.

36.560  
5.170R

2830

240

400



Spectr. Temp.  $-100.4^{\circ}\text{C}$ Focus  $6.76$ 

Spectr. Temp. ....

Dome Temp./Hum.  $9.3^{\circ}\text{C}/72.4\%$ 

after seeing test

Dome Temp./Hum.  $7.7^{\circ}\text{C}/72.4\%$ 

@ focus test

Transparency Conditions full moon, clear, a few clouds...

FANS OFF

fart from NW.

336

| Exp. Mtr.        | Seeing | Ptg. Mag.            | Sp.   | Inst.                   | Grating/Tilt | Slit                      | Emulsion | P.H. | Program        | Remarks                                                                                             | Quality         |
|------------------|--------|----------------------|-------|-------------------------|--------------|---------------------------|----------|------|----------------|-----------------------------------------------------------------------------------------------------|-----------------|
|                  |        |                      |       |                         |              |                           |          |      |                |                                                                                                     |                 |
|                  | 3"-4"  | $\checkmark$<br>7.45 | K5III | EEV CCD<br>TV<br>GUIDER |              | about<br>30 $\mu\text{m}$ |          | —    | SEEING<br>TEST | Dome SSW, medium SE wind<br>clear, full moon, wind is<br>a problem tonight so seeing is<br>variable |                 |
| 061560<br>FILTER |        |                      |       |                         |              |                           |          | 15   |                |                                                                                                     |                 |
| 2830             |        | $\checkmark$<br>7.45 | K5III |                         |              |                           |          | 16   | Sk Vel         |                                                                                                     |                 |
|                  |        |                      |       |                         |              |                           |          | 17   |                |                                                                                                     |                 |
|                  |        |                      |       |                         |              |                           |          | 1    |                |                                                                                                     |                 |
|                  |        |                      |       |                         |              |                           |          | 18   |                |                                                                                                     |                 |
| 1240             |        | $\checkmark$<br>8.40 | K6076 |                         |              |                           |          | 19   | Rm             | 2 Lac                                                                                               | 2.5K            |
|                  |        |                      |       |                         |              |                           |          | 20   |                |                                                                                                     |                 |
|                  |        |                      |       |                         |              |                           |          | 21   |                |                                                                                                     |                 |
| 2400             | 5"     | $\checkmark$<br>6.19 | K2    |                         |              |                           |          | 22   | Rm             | 2 Lac velocity cap. 5.5K                                                                            |                 |
|                  |        |                      |       |                         |              |                           |          | 23   |                |                                                                                                     |                 |
|                  |        |                      |       |                         |              |                           |          | 24   |                |                                                                                                     | 15.4K<br>→ 124K |
|                  |        |                      |       |                         |              |                           |          | 1    |                |                                                                                                     |                 |
|                  |        |                      |       |                         |              |                           |          | 3/4  | focus test     | still in focus now!                                                                                 |                 |

All to DAT, P:\, M:\

pg #1

337

Emulsion Batches:

Date 1995 September 10/11

Observers [Blr] Smt

| Plate No.       | Object               | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp   |
|-----------------|----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC35401/<br>102 | INBOARD/<br>OUTBOARD | HARTMANN     |                     |                         |                       |                   |             | Fed<br>clear              | 60/65 |
| 03              | BIAS(4)              |              |                     |                         |                       |                   |             |                           | —     |
| 04              | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 05              | HD172187             | 18 33 42     | +43 08 12           | 19 55 39                |                       | 0 21 W            |             |                           | 300   |
| 06              | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 07              | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 08              | HD177724             | 19 00 49     | +13 42 53           | 20 04 50                |                       | 0 01 W            |             |                           | 45    |
| 09              | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 10              | COMP                 |              |                     |                         |                       |                   |             | "                         | "     |
| 11              | HD186205             | 19 37 54     | +8 59               | 20 26 55                |                       | 0 15 W            |             |                           | 1800  |
| 12              | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 13              | HD186205             |              |                     | 21 03 05                |                       | 0 45 W            |             |                           | 1400  |
| 14              | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |
| 15              | HD186205             |              |                     | 21 31 58                |                       | 1 05 W            |             |                           | 800   |
| 16              | COMP                 |              |                     |                         |                       |                   |             | "                         | 60    |

Exp. Mtr. S

Focus.....

Spectr. Temp.

Exp. Mtr. S

06 560  
FILTER

1850

5000

155

100 after  
100 seconds

100



CED Spectr. Temp.  $-100.4^{\circ}\text{C}$  Dome Temp./Hum.  $11.3^{\circ}\text{C}/56.3\%$  Transparency Conditions *clear*

Focus  $6.76$

Spectr. Temp. ....

Dome Temp./Hum. ....

FANS ON 338

420 0 50 1024 4 1 ccd fnt

| Comparison<br>Filter Exp. | Exp. Mtr.                | Seeing | Ptg.<br>Mag.  | Sp. | Inst.      | Grating/<br>Tilt                | Slit             | Emulsion | P.H. | Program       | Remarks                                                            | Quality |
|---------------------------|--------------------------|--------|---------------|-----|------------|---------------------------------|------------------|----------|------|---------------|--------------------------------------------------------------------|---------|
| 6465                      | 06 S40<br>FILTER         |        |               |     | CAS<br>CCD | 1800 $\ell/\text{mm}$<br>G=6100 | 30 $\mu\text{m}$ | 6603A    | 3/4  | FOCUS<br>TEST | maybe a bit cool.<br>chip still cooling from $-85^{\circ}\text{C}$ |         |
|                           |                          |        |               |     |            |                                 |                  |          | 1    |               |                                                                    |         |
| 60                        |                          |        |               |     |            |                                 |                  |          | 5    |               |                                                                    |         |
| 300                       | 1850                     | 3"     | $6.26^{\vee}$ | F0V |            |                                 |                  |          | 6    | Bln Blue pga  | norm'n star anyway.<br>not much there at a glance                  | 4.2K    |
| 60                        |                          |        |               |     |            |                                 |                  |          | 7    |               |                                                                    |         |
| 60                        |                          |        |               |     |            |                                 |                  |          | 8    |               |                                                                    |         |
| 45                        | 5000                     | 4"     | 2.99          | 40V |            |                                 |                  |          | 9    | Telluric Std. |                                                                    | 14.8K   |
| 60                        |                          |        |               |     |            |                                 |                  |          | 10   |               |                                                                    |         |
| "                         |                          |        |               |     |            |                                 |                  |          | 11   |               | many spec. contr. failures<br>beforehand.                          |         |
| 180                       | 1155                     | 3"     | $8.43^{\vee}$ | B2V |            |                                 |                  |          | 12   | Bln - He*     |                                                                    | 2.6K    |
| 60                        |                          |        |               |     |            |                                 |                  |          | 13   |               | many more spec. contr. failures<br>beforehand.                     |         |
| 1400                      | 140 after<br>200 seconds | 3"     | "             | "   |            |                                 |                  |          | 12   | Bln - He*     | 2nd exposure, shorter this<br>time. spec. contr. failed and exp.   | 2.2K    |
| 60                        |                          |        |               |     |            |                                 |                  |          | 13   |               | strongest col same as hot p. red.                                  |         |
| 800                       | 500                      |        | "             | "   |            |                                 |                  |          | 12   | Bln - He*     | less cosmic rays this way                                          | 1.2K    |
| 60                        |                          |        |               |     |            |                                 |                  |          | 13   |               |                                                                    |         |

pg #2

339

Emulsion Batches:

Date 1995 September 10/11 Observers [Bln] Sm + / Mki

| Plate No. | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp  |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| cc35417   | BIAS(4)   |              |                     | 21 50                   |                       |                   |             |                           | —    |
| 18        | COMP      |              |                     |                         |                       |                   |             | F4<br>Clear               | 60   |
| 19        | HD235679  | 21 55 00     | +54 00              | 22 13 58                |                       | 0 13 E            |             |                           | 1800 |
| 20        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |
| 21        | BIAS(4)   |              |                     | 22 47                   |                       |                   |             |                           | —    |
| 22        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |
| 23        | HD218153  | 23 00 36     | +25 29              | 23 03 24                |                       | 0 45 E            |             |                           | 930  |
| 24        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |
| 25        | COMP      |              |                     |                         |                       |                   |             | "                         | "    |
| 26        | HD209833  | 22 01 03     | +28 28 41           | 23 48 02                |                       | 0 32 W            |             |                           | 460  |
| 27        | COMP      |              |                     |                         |                       |                   |             | "                         | 60   |
| 28        | BIAS(4)   |              |                     | 23 38                   |                       |                   |             |                           | —    |
| 29-31     | FLAT x 3  |              |                     |                         |                       |                   |             | Tung<br>1/4 A             | 7    |
| 32        | COMP      |              |                     |                         |                       |                   |             | Fe Ar<br>Clear            | 60   |
| 33        | BD+16 516 | 3 44 43      | +16 51 06           | 23 55 03                |                       | 4 38 E            |             |                           | 900  |



Spectr. Temp. .... Dome Temp./Hum. 9.6°C/60.1% Transparency Conditions clear, full moon rising.....  
 Focus ..... 6.76 ..... FANS on 340  
 Spectr. Temp. .... Dome Temp./Hum. .... 420 0 50 1024 4 1 ccdfmt

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp.             | Inst.    | Grating/Tilt      | Slit | Emulsion | P.H. | Program       | Remarks                                                         | Quality                      |
|-----------|--------|-----------|-----------------|----------|-------------------|------|----------|------|---------------|-----------------------------------------------------------------|------------------------------|
| -         |        |           |                 | C955 CCD | 18002lm<br>G=6100 | 30um | 6603A    | 1    |               |                                                                 |                              |
| 60        |        |           |                 |          |                   |      |          | 14   |               |                                                                 |                              |
| 970       | 3"     | 8.86      | B251b           |          |                   |      |          | 15   | Bln SB        | H $\alpha$ emission >3x coding                                  | 6.4K                         |
| 60        |        |           |                 |          |                   |      |          | 16   |               |                                                                 |                              |
| -         |        |           |                 |          |                   |      |          | 1    |               |                                                                 |                              |
| 60        |        |           |                 |          |                   |      |          | 17   |               |                                                                 |                              |
| 2300      | 4"     | 7.6       | G8II            |          |                   |      |          | 18   | Mki           | only star in field bright enough - a bit of H $\alpha$ emission | 5.5K                         |
| 60        |        |           |                 |          |                   |      |          | 19   |               | cosmic ray                                                      |                              |
| "         |        |           |                 |          |                   |      |          | 20   |               |                                                                 |                              |
| 3380      |        | 5.63      | B9IIn           |          |                   |      |          | 21   | Telluric Std. |                                                                 | 8.1K                         |
| 60        |        |           |                 |          |                   |      |          | 22   |               |                                                                 |                              |
| -         |        |           |                 |          |                   |      |          | 1    |               |                                                                 |                              |
| 7         |        |           |                 |          |                   |      |          | 23   |               |                                                                 | 12.7K $\rightarrow$<br>12.3K |
| 60        |        |           |                 |          |                   |      |          | 24   |               |                                                                 |                              |
| 276       | 3"-4"  | 9.40-9.71 | A65*<br>K0II+un |          |                   |      |          | 25   | Mki           | V471 Tau P <sup>1</sup> series                                  |                              |

pg #3 241

Date 1995 September 10/11 Observers Mki / Smt

Emulsion Batches:

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.....  
.....

| Plate No. | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC35434   | BD+16 516 | 3 44 43      | +16 57 06           | 00 11 06                |                       |                   |             |                           | 900  |
| 35        | "         |              |                     | 00 26 27                |                       |                   |             |                           | "    |
| 36        | "         |              |                     | 00:41:49                |                       | ~ 3 52 E          |             |                           | "    |
| 37        | COMP      |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 38-40     | FLAT x 3  |              |                     |                         |                       |                   |             | Tung<br>1/4 Ap            | 7    |
| 41        | BIAS(4)   |              |                     | 102                     |                       |                   |             |                           | -    |
| 42        | COMP      |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 43        | BD+16 516 | 3 44 43      | +16 57 06           | 1 05 16                 |                       | 3 28 E            |             |                           | 900  |
| 44        | "         |              |                     | 1 20 37                 |                       | 3 13 E            |             |                           | 900  |
| 45        | "         |              |                     | 1 35 59                 |                       | 3 52 E            |             |                           | 900  |
| 46        | "         |              |                     | 1 51 21                 |                       | 2 42 E            |             |                           | 900  |
| 47        | COMP      |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |
| 48-50     | FLAT x 3  |              |                     |                         |                       |                   |             | Tung<br>1/4 Ap            | 7    |
| 51        | BIAS(4)   |              |                     | 2 "                     |                       |                   |             |                           | -    |
| 52        | COMP      |              |                     |                         |                       |                   |             | FeAr<br>clear             | 60   |



Spectr. Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $8.7^{\circ}\text{C}/67.1\%$  Transparency Conditions *clear, full moon* .....

Focus .....  $6.76$  .....

Spectr. Temp. .... Dome Temp./Hum. ....

N FAN ON ONLY

342

420 0 50 1024 4 1 credit.

| Exp. Mtr. | Seeing | V. Dig. Mag.  | Sp.                        | Inst.       | Grating/Tilt             | Slit       | Emulsion | P.H. | Program | Remarks                                             | Quality                              |
|-----------|--------|---------------|----------------------------|-------------|--------------------------|------------|----------|------|---------|-----------------------------------------------------|--------------------------------------|
| 375       | 3"     | 9.40-<br>9.71 | 0.65*<br>KO $\bar{V}$ +wid | CASS<br>CCD | 1800 $\bar{A}$<br>G=6100 | 30 $\mu$ m | 6603 i   | 25   | Mki     | 1st Series<br>V471 Tau using v471tau.bat            |                                      |
| 410       |        |               |                            |             |                          |            |          | 25   | "       | "                                                   |                                      |
| 400       |        |               |                            |             |                          |            |          | 25   | "       | "                                                   |                                      |
|           |        |               |                            |             |                          |            |          | 26   |         |                                                     |                                      |
|           |        |               |                            |             |                          |            |          | 27   |         |                                                     | 12.7K<br>→ 12.2K                     |
|           |        |               |                            |             |                          |            |          | 1    |         |                                                     |                                      |
|           |        |               |                            |             |                          |            |          | 28   |         |                                                     |                                      |
| 430       | 2"-3"  | 9.40<br>-9.71 | 0.65*<br>KO $\bar{V}$ +wid |             |                          |            |          | 29   | Mki     | 2nd Series Cosmic ray or He emission?<br>V471 Tau ↑ |                                      |
| 437       | "      | "             | "                          |             |                          |            |          | 29   | "       | " probably this one                                 |                                      |
| 450       | "      | "             | "                          |             |                          |            |          | 29   | "       | "                                                   |                                      |
| 458       | "      | "             | "                          |             |                          |            |          | 29   | "       | "                                                   | 740 <del>5</del><br>12.6K<br>→ 12.1K |
|           |        |               |                            |             |                          |            |          | 30   |         |                                                     |                                      |
|           |        |               |                            |             |                          |            |          | 31   |         |                                                     | 12.6K<br>→ 12.1K                     |
|           |        |               |                            |             |                          |            |          | 1    |         |                                                     |                                      |
|           |        |               |                            |             |                          |            |          | 30   |         |                                                     |                                      |

pg # 4 343

Date 1995 September 10/11 Observers Mki / Smt

Emulsion Batches:

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| Plate No. | Object    | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-----|
| cc35453   | BD+16 516 | 3 44 43      | +16 57 06           | 2 16 00                 |                       |                   |             |                           | 900 |
| 54        | "         |              |                     | 2 31 22                 |                       |                   |             |                           | "   |
| 55        | "         |              |                     | 2 46 43                 |                       |                   |             |                           | "   |
| 56        | "         |              |                     | 3 02 05                 |                       | 1 31 E            |             |                           | "   |
| 57        | COMP      |              |                     |                         |                       |                   |             | FcAr<br>clear             | 60  |
| 58-60     | FLAT x3   |              |                     |                         |                       |                   |             | Tung<br>1/4 Ap            | 7   |
| 61        | BIAS(4)   |              |                     | 3 23                    |                       |                   |             |                           | —   |
| 62        | COMP      |              |                     |                         |                       |                   |             | FcAr<br>clear             | 60  |
| 63        | BD+16 516 | 3 44 43      | +16 57 06           | 3 26 26                 |                       |                   |             |                           | 900 |
| 64        | "         |              |                     | 3 41 48                 |                       |                   |             |                           | "   |
| 65        | "         |              |                     | 3 57 10                 |                       |                   |             |                           | "   |
| 66        | "         |              |                     | 4 12 31                 |                       | 0 20 E            |             |                           | "   |
| 67        | COMP      |              |                     |                         |                       |                   |             | FcAr<br>clear             | 60  |
| 68-70     | FLAT x3   |              |                     |                         |                       |                   |             | Tung<br>1/4 Ap            | 7   |
| 71        | BIAS(4)   |              |                     | 4 32                    |                       |                   |             |                           | —   |



Spectr. Temp.  $-100^{\circ}\text{C}$  Dome Temp./Hum.  $8.3^{\circ}\text{C}/73.4\%$  Transparency Conditions  $\text{clear, full moon}$

Focus  $6.76$

N FAN ON

344

Spectr. Temp. ....

Dome Temp./Hum. ....

420 0 50 1024 4 1 ccd flat

| OB 560<br>Exp. Mtr.<br>FILTER | Seeing | V <sub>471</sub><br>Mag. | Sp.             | Inst.       | Grating/<br>Tilt                   | Slit             | Emulsion | P.H. | Program | Remarks                                        | Quality          |
|-------------------------------|--------|--------------------------|-----------------|-------------|------------------------------------|------------------|----------|------|---------|------------------------------------------------|------------------|
| 453                           | 2-3"   | 9.40<br>-9.71            | 0.65*<br>KOS+nd | CASS<br>CCD | 1800 $\lambda/\text{mm}$<br>G=6100 | 30 $\mu\text{m}$ | 6603A    | 32   | Mki     | 3rd series<br>V471 Tau using V471 tau, bat     |                  |
| 460                           | "      | "                        | "               |             |                                    |                  |          | 32   | "       | "                                              |                  |
| 469                           | "      | "                        | "               |             |                                    |                  |          | 32   | "       | "                                              |                  |
| 440                           | "      | "                        | "               |             |                                    |                  |          | 32   | "       | "                                              | 1.3K<br>@ Max    |
|                               |        |                          |                 |             |                                    |                  |          | 33   |         |                                                |                  |
|                               |        |                          |                 |             |                                    |                  |          | 31   |         |                                                | 12.1K            |
|                               |        |                          |                 |             |                                    |                  |          | 1    |         |                                                |                  |
|                               |        |                          |                 |             |                                    |                  |          | 5    |         |                                                |                  |
| 470                           | 2-3"   | 9.40<br>-9.71            | 0.65*<br>KOS+nd |             |                                    |                  |          | 6    | Mki     | 4th series<br>V471 Tau still say V471 tau, bat |                  |
| 489                           |        | "                        | "               |             |                                    |                  |          | "    | "       | "                                              |                  |
| 480                           |        | "                        | "               |             |                                    |                  |          | "    | "       | "                                              |                  |
| 457                           | 2-3    | "                        | "               |             |                                    |                  |          | "    | "       | " cosmic ray in Ha,<br>Emission.               |                  |
|                               |        |                          |                 |             |                                    |                  |          | 7    |         |                                                |                  |
|                               |        |                          |                 |             |                                    |                  |          | 8    |         |                                                | 12.7K<br>→ 12.2K |
|                               |        |                          |                 |             |                                    |                  |          | 1    |         |                                                |                  |





Spectr. Temp. ....

Dome Temp./Hum. 8.2°C/61.4%  
 @ FOCUS TEST

346

420 0 50 1024 4 100000

[illegible]

pg #1

Mon / Tues

347

Date . 1995. Sep. 11. / 12 ..... Observers [K.L.] ... Tr. / S.M. ....

Emulsion Batches:

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| Plate No.              | Object                      | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|------------------------|-----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce097 <sup>49/50</sup> | Inboard / outboard Hartmann |              |                     |                         |                       | 02 44W            | 32°         | ThAr                      | 4/4  |
| 51                     | BIAS(4)                     |              |                     |                         |                       |                   |             |                           | —    |
| 52                     | COMP                        |              |                     |                         |                       |                   |             | ThAr                      | 4sec |
| 53                     | HD137909                    | 15 23 42     | 29 27 01            | 19 38 19                |                       | 03 21 W           |             |                           | 330  |
| 54                     | Comp                        |              |                     |                         |                       |                   |             | ThAr                      | 4sec |
| 55                     | HD137909                    | "            | "                   | 19 46 15                |                       | 03 29W            |             |                           | 360  |
| 56                     | Comp                        |              |                     |                         |                       |                   |             | ThAr                      | 4sec |
| 57                     | HD137909                    | "            | "                   | 19 54 39                |                       | 3 38 W            |             |                           | 370  |
| 58                     | Comp                        |              |                     |                         |                       |                   |             | ThAr                      | 4sec |
| 59                     | BIAS(4)                     |              |                     |                         |                       |                   |             |                           | —    |
| 60                     | Comp                        |              |                     |                         |                       |                   |             | ThAr                      | 4    |
| 61                     | AD5 11046A<br>HD165341A     | 18 00 24     | 102 31 22           | 20 10 53                |                       | 1 21 W            |             |                           | 605  |
| 62                     | COMP                        |              |                     |                         |                       |                   |             | "                         | 4    |
| 63                     | AD5 11046B<br>HD165341B     |              |                     | 20 23 52                |                       | 1 48 W            |             |                           | 1463 |
| 64                     | Comp                        |              |                     |                         |                       |                   |             | "                         | 4    |



CCD Spectr. Temp.  $-100^{\circ}\text{C}$  ..... Dome Temp./Hum.  $+15.6^{\circ}\text{C}$   $53.5\%$  Transparency Conditions  $\text{Mostly Clear}$  .....

Focus .....  $235$  .....

$90^{\circ}$  gain

348

Spectr. Temp. .... Dome Temp./Hum.  $E-W$  slit

$C_i$

MAX  
APU

| Exp. Mtr. | Seeing | Mag.  | Sp.  | Inst.                | Grating/<br>x Tilt     | Slit                   | Emulsion | P.H. | Program    | Remarks                                                                          | Quality |
|-----------|--------|-------|------|----------------------|------------------------|------------------------|----------|------|------------|----------------------------------------------------------------------------------|---------|
| 4/4       |        |       |      | echelle CCD<br>18.51 | 300 $1/4$ /mm<br>1.554 | 60u W<br>100u H = .225 |          | 1/2  | focus test | $T=15.5$ , $F=235$ set a bit cool<br>intent: mag 1.4<br>0 0 128 1024 8 1 cad fat |         |
| —         |        |       |      |                      |                        |                        | 6300 Å?  | 1    |            | 0 0 256 1024 4 1 cad fat                                                         |         |
| 4sec      |        |       |      |                      |                        |                        |          | 3    |            |                                                                                  |         |
| 330       | 416    | 3"    | 366  | Fp                   |                        |                        |          | 4    | KK pyro    |                                                                                  | 5.5K    |
| 4sec      |        |       |      |                      |                        |                        |          | 3    |            |                                                                                  |         |
| 360       | 460    |       |      |                      |                        |                        |          | 4    | KK pyro    |                                                                                  | 5.6K    |
| 4sec      |        |       |      |                      |                        |                        |          | 3    |            |                                                                                  |         |
| 370       | 413    |       |      |                      |                        |                        |          | 4    | KK pyro    |                                                                                  | 5.0K    |
| 4sec      |        |       |      |                      |                        |                        |          | 3    |            |                                                                                  |         |
| —         |        |       |      |                      |                        |                        |          | 1/2  |            |                                                                                  |         |
| 4         |        |       |      |                      |                        |                        |          | 3    |            |                                                                                  |         |
| 605       | 470    | 2"-3" | 4.20 | KOV                  |                        |                        |          | 5    | KK Vis Bin | brighter & NW                                                                    | 8.3K    |
| 4         |        |       |      |                      |                        |                        |          | 3    |            |                                                                                  |         |
| 1403      | 152    | 2"-3" | 5.99 | K4V                  |                        |                        |          | 6    | "          | fainter & SE                                                                     | 4K      |
| 4         |        |       |      |                      |                        |                        |          | 3    |            |                                                                                  |         |

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### Emulsion Batches:

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[illegible]



Spectr. Temp. ... -100...°C..... Dome Temp./Hum. 13.9°C / 64.6%  
 Focus ..... 23.5 .....  
 Spectr. Temp. ... -99.5°C..... Dome Temp./Hum. ....  
 Transparency Conditions . partly cloudy .....  
 (4490 catwalk R/H) meter stuck, actually 74% on catwalk.  
 350  
 0 0 256 1024 4 1 ccd/fut

| Exp. Mtr. | Seeing | V <sup>max</sup> Mag. | Sp. | CCD Inst. ECHELLE | X Grating/Tilt    | Slit           | Emulsion | P.H. | Program    | Remarks                                                 | Quality      |
|-----------|--------|-----------------------|-----|-------------------|-------------------|----------------|----------|------|------------|---------------------------------------------------------|--------------|
| 410       | 222    | 3" 4.20               | K0V | 18.51             | 300 L/mm<br>.5540 | 60μ W<br>40μ H | 6300 Å   | 5    | KK Vis Bin | b. ighter and NW well separated                         | 4.2K         |
| 4         |        |                       |     |                   |                   |                |          | 3    |            |                                                         |              |
| —         |        |                       |     |                   |                   |                |          | 1/2  |            |                                                         |              |
| 4         |        |                       |     |                   |                   |                |          | 3    |            |                                                         |              |
| 1733      | 18     | 2-3" 8.30             | K3V |                   |                   |                |          | 4    | KK Vis Bin | sl. brighter and N well separated                       | 620 above 4g |
| 4         |        |                       |     |                   |                   |                |          | 3    |            |                                                         |              |
| 1800      | 11     | 3" 8.40               | ?   |                   |                   |                |          | 5    | "          | sl. fainter and S, seeing not quite as good.            | 600 above 4g |
| 45        |        |                       |     |                   |                   |                |          | 3    |            |                                                         |              |
| 1770      | 21     | 3" 8.30               | K3V |                   |                   |                |          | 4    | "          | sl. brighter and N again.                               | 750 above 4g |
| 45        |        |                       |     |                   |                   |                |          | 3    |            |                                                         |              |
| —         |        |                       |     |                   |                   |                |          | 1    |            |                                                         |              |
| 43        |        |                       |     |                   |                   |                |          | 3    |            |                                                         |              |
| 1453      | 31     | 2-3" 7.50             | K0  |                   |                   |                |          | 6    | KK Vis Bin | ~ 6.5 pixels apart (Looks elbl lined) <u>indistinct</u> | 750 Above 4g |
| 45        |        |                       |     |                   |                   |                |          | 3    |            |                                                         |              |
| 2150      | 13     | 3-4" 8.20             | ?   |                   |                   |                |          | 4    | KK Vis Bin | larger than intended fainter and N                      | 400 above 4g |
| 48        |        |                       |     |                   |                   |                |          | 3    |            |                                                         |              |

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Mon / Tues

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Emulsion Batches:

Date 1995 Sept. 11/12... Observers [K.K.] J.G. / Smit.....

| Plate No. | Object                              | R.A.<br>1900 | Declination<br>1900 | Starting Time<br>E.S.T. | Ending Time<br>E.S.T. | Hour Angle<br>End | Declination | Comparison<br>Type/Filter | Exp. |
|-----------|-------------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CE09781   | ADS 14270 A                         | 20 41 36     | +15 32              | 23 49 19                |                       | 2 37 W            |             |                           | 1687 |
| 82        | Comp                                |              |                     |                         |                       |                   |             | ThAr                      | 4sec |
| 83        | B115(4)                             |              |                     | 0 20                    |                       |                   |             |                           | —    |
| 84        | Comp                                |              |                     |                         |                       |                   |             | "                         | 4    |
| 85        | <sup>ADS 14279 A</sup><br>HD 197964 | 20 42 01     | +15 45 50           | 0 23 24                 |                       | 2 55 W            |             |                           | 731  |
| 86        | COMP                                |              |                     |                         |                       |                   |             | "                         | 4    |
| 87        | <sup>ADS 14279 B</sup><br>HD 197963 | 20 42 01     | "                   | 0 37 42                 |                       | 3 09 W            |             |                           | 697  |
| 88        | COMP                                |              |                     |                         |                       |                   |             | "                         | 4    |
| 89        | <sup>ADS 14279 A</sup><br>HD 197964 | "            | "                   | 0 50 59                 |                       | 3 17 W            |             |                           | 400  |
| 90        | COMP                                |              |                     |                         |                       |                   |             | "                         | 4    |
| 91        | <del>B115</del> COMP                |              |                     |                         |                       |                   |             | "                         | "    |
| 92        | HD 187691                           | 19 46 14     | +10 09 55           | 01 01 45                |                       | 4 26 W            |             |                           | 574  |
| 93        | COMP                                |              |                     |                         |                       |                   |             | "                         | 4    |
| 94        | Comp                                |              |                     |                         |                       |                   |             | "                         | 4    |
| 95        | HP 8890                             | 01 22 34     | +88 46 26           | 01 17 30                |                       | 2 15 E            |             |                           | 172  |
| 96        | COMP                                |              |                     |                         |                       |                   |             | "                         | 4    |

Spectr. Tem.

Focus.....

Spectr. Tem.

Exp. Mir.

438

180

264

72

750



Spectr. Temp. .... Dome Temp./Hum. *11.72/79.0%* Transparency Conditions *ok... some cloud...*  
 Focus *2.35* .....  
 Spectr. Temp. .... Dome Temp./Hum. ....  
*clearly* 0 0 256 1024 4 1 ccd fut

| Exp. Mtr.         | Seeing | P <sub>0</sub><br>Mag. | Sp.   | Inst.                    | Grating/<br>X Tilt | Slit        | Emulsion | P.H.               | Program    | Remarks                                 | Quality |
|-------------------|--------|------------------------|-------|--------------------------|--------------------|-------------|----------|--------------------|------------|-----------------------------------------|---------|
| <i>1687</i><br>46 | 2"-3"  | 7.50                   | K0    | <i>ec 101/e</i><br>18.51 | 30014/mm<br>15540  | 60u<br>400u | 6300B    | <del>46</del><br>3 | KK Vis Bin | dpl lines again<br>brighter and S       |         |
| <i>4</i>          |        |                        |       |                          |                    |             |          | 1/2                |            |                                         |         |
| <i>4</i>          |        |                        |       |                          |                    |             |          | 3                  |            |                                         |         |
| <i>731</i><br>438 | 3"-4"  | 4.50                   | K1 IV |                          |                    |             |          | 2                  | KK Vis Bin | lots of signal.<br>brighter & E         | 7.4K    |
| <i>4</i>          |        |                        |       |                          |                    |             |          | 3                  |            |                                         |         |
| <i>697</i><br>180 | 3"     | 5.50                   | F7 V  |                          |                    |             |          | 4                  | KK Vis Bin | fainter & W                             | 3K      |
| <i>4</i>          |        |                        |       |                          |                    |             |          | 3                  |            |                                         |         |
| <i>400</i><br>264 | 3"     | 4.50                   | K1 IV |                          |                    |             |          | 2                  | KK Vis Bin | brighter & E                            |         |
| <i>4</i>          |        |                        |       |                          |                    |             |          | 3                  |            |                                         |         |
| <i>11</i>         |        |                        |       |                          |                    |             |          | 3                  |            |                                         |         |
| <i>57</i><br>72   | 4"     | 5.11                   | F8 V  |                          |                    |             |          | 5                  | Std. Vel.  |                                         | 1.5K    |
| <i>4</i>          |        |                        |       |                          |                    |             |          | 3                  |            |                                         |         |
| <i>4</i>          |        |                        |       |                          |                    |             |          | 3                  |            |                                         |         |
| <i>172</i><br>750 | 4"     | 2.0                    | F8 Ib |                          |                    |             |          | 4<br>3             | KK         | seeing not good enough to<br>go after B | 13.2K   |

pg#4 353

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Date 1995 Sep 11/12 Observers [KK]/Tn/Smt

### Emulsion Batches:

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[illegible]



11.5°C/85.2%

~~clear~~ hazy, full moon, getting wet

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| Comparison<br>Filter Exp | EXP.<br>METER | SEING<br>(")                     | V<br>MAG. | SP.<br><del>III</del> | PROGRAM  | ci  | REMARKS             | max<br>ADU |
|--------------------------|---------------|----------------------------------|-----------|-----------------------|----------|-----|---------------------|------------|
| 116                      | 500           | 4"                               | 2.0       | F816                  | KK       | 4   |                     | 11.1K      |
| 4                        |               |                                  |           |                       |          | 3   |                     |            |
| 130                      | 520           | 4"                               | "         | "                     | KK       | 4   |                     | 8K         |
| 4                        |               |                                  |           |                       |          | 3   |                     |            |
| —                        |               |                                  |           |                       |          | 1/2 |                     |            |
| 4                        |               |                                  |           |                       |          | 3   |                     |            |
| 29                       | 500           | 4" <sup>1/2</sup> crater<br>size |           | reflected<br>G2 V     | KK Std.  | 2   |                     |            |
| 4                        |               |                                  |           |                       |          | 3   |                     |            |
| 31                       | 500           | 4" <sup>1/2</sup> crater<br>size |           | reflected<br>G2 V     | KK Std.  | 2   |                     | 11K        |
| 4                        |               |                                  |           |                       |          | 3   |                     |            |
| 4                        |               |                                  |           |                       |          | 3   |                     |            |
| 630                      | 328           | 4"                               | 4.13      | F712                  | Std. Vel | 5   | 95% on<br>catalwalk | 44K        |
| 4                        |               |                                  |           |                       |          | 3   |                     |            |
| —                        |               |                                  |           |                       |          | 1   |                     |            |







