

76



3

Sp
Fo
Sp
E

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions

Focus

Spectr. Temp. Dome Temp./Hum.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|---------|---------|---------|
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|---------|---------|---------|

DAVID DUNLAP OBSERVATORY

74" LOGBOOK

VOL: 76

Plate Nos CC. 20409 - 27813 (FCG 40026 - 40031)

Mar. 13, 1994 - June 1, 1994

pg. 2 (continued from last book)

(5)

Emulsion Batches:

Date 1994 Mar. 13/14 Observers Hlw & Vy.s. LCK = safety backup

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|---------------|--------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-----------------------|
| cg40026 -9 | 4x HD73992 | 08 36 12 | +39 25 00 | 21:50 | | +0:15 W | | | .067 |
| cg40030 1 | 2x HD73992 | 08 36 12 | +39 25 00 | | 21:55 | | | | .133 |
| cc20409 | Bias (sum of 4) | | | | | | | | |
| 410 | Comp BD+10 1857 | | | | | | | FeNe Clear | 35 |
| 411 | BD+10 1857 | 08 37 20 | +09:55:22 | 22:12:45 | | +0:55 W | +9° 33' | | 965 |
| 412 | Comp | | | | | | | " | 35 |
| 413 | Comp | | | | | | | " | " |
| 414 | AC+47 2368-79 | 09 04 48 | +47 01 23 | 22:47:25 | | +1:08 W | +47° | | 1446 |
| 415 | Comp | | | | | | | " | 35 |
| 416 | Bias x 4 | | | | | | | | |
| 417 | Bias x 4 | | | | | | | | |
| 418 | Comp | | | | | | | FeNe Clear | 35 |
| 419 | HD95735 | 10 57 54 | +36 38 00 | 00:37:34 | | +0:53 W | +36° 00' | | 602 602 |
| 420 | Comp | | | | | | | FeNe Clear | 35 |
| 421-9 | 9x Flats | | | | | | | Tung | 10, |
| 430 | Bias x 4 | | | | | | | 4 Ap | |

Spectr.

Focis.

Spectr.

Exp. Mir.

120

~50

123

Spectr. Temp. -100.0°C Dome Temp./Hum. $-2.2^{\circ}\text{C}/79.5\%$ Transparency Conditions *hazy... to clouds...*
 Focus *6.90* Fans OFF (6)
 Spectr. Temp. Dome Temp./Hum. $-2.8^{\circ}\text{C}/81.1\%$ 480°A 1024 41 ccd fnt

| Exp. Mtr. | Seeing | Pr. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Clamp/Exposure | SI | Program | Remarks | Quality |
|---------------------------|-------------------------|----------|-------|----------|---------------------|---------------------------|----------------|----|-------------|---|---------|
| | $\sim 3^{\prime\prime}$ | 7.5 | M2II | Cass CCD | 1800.2/nm G=5115 | 500 μm 10-g | 5303A | | Seeing Test | Dome WSW, light NW wind | |
| | | 7.5 | M2III | | | | | 1 | Seeing Test | 92% Humidity on catwalk @ 2150 | |
| | | | | | | | | 17 | | | |
| 120 | | 9.6 | M2 | | | | | 18 | Vys Pgm | | |
| | | | | | | | | 19 | | | |
| | | | | | | | | 20 | | | |
| ~ 50 | | 10.9 | M0 | | | | | 21 | Vys Pgm | -Through some clouds mostly at <u>END</u> of exposure (perhaps account for this in wavelength calibration) Totally cloudy now | |
| | | | | | | | | 22 | | | |
| 1.5 hour break for clouds | | | | | | | | | 1 | | |
| 123 | | 7.48 | M2 | | | | | | Vys Std | -Through <u>thick</u> clouds (but what the heck! I need this observation...) | |

All to W.O.R.M.
to Perseus.

pg 1

7

Date 1994 Mar 16/17 Observers TK / T_n / Hw...Emulsion Batches:
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.....
.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| cc20431 | bias(4) | | | | | | | | |
| 432 | Comp | | | | | Zenith | | FeAr Clear | 60 |
| 433 | Comp | | | | | " | | FeNe Clear | 60 |
| 434 | Comp | | | | | " | | FeNe Clear | 20 |
| 435 | Comp | | | | | " | | FeNe clear | 60s |
| 436 | Bias (4) | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |

Spectr.

Focus

Spectr.

Exp. M.

Spectr. Temp. -100.0°CDome Temp./Hum. $-6.3/66.0\%$Transparency Conditions cloudy, snowy,Focus 6.92

Spectr. Temp.

Dome Temp./Hum.

(8)

| Exp. Mir. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion + lambda + c | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|----------|-----------------------|-----------|-----------------------------|------|------------|-----------------|---------|
| | | | | Cass CCD | 1800 l/mm G = 6065 | 300 μ | 6604A | 1 | | | |
| | | | | " | 1800 l/mm G = 6065 | " | 6604A | 3 | H α | 6500 Å - 6700 Å | |
| | | | | " | 1800 l/mm G = 4810 | " | 4861A | #5 | H β | | |
| | | | | " | 1800 l/mm G = 4460 | " | 4340A | 4 | H γ | | |
| | | | | " | 1800 l/mm G = 4310 | " | 4101A | 6 | H δ | | |
| | | | | | | | | 1 | | | |

9
pg#1

Date 1994 MAR 17/18... Observers T.K. / F.G. / T.n.....

Emulsion Batches:

CSS 386 10 secs ahead of WWV... Time.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|---------------|---------------------------|---------------------------------|---------------------|---------------------------------|-----------------------|-------------------|-------------|---------------------------|-----------------|
| CC20437 38 | Comp / stellar | HUTNIAN | | | | | | FeAr clear | 60/55 |
| 39 | BIAS(4) | | | | | | | | |
| 40 | Comp | | | | | | | FeAr clear | 60s |
| 41 | HD 15963 | 02 28 54 | +57 38 08 | 19 19 24 | | 04 37 W | | | 180s |
| 42 | Comp | | | | | | | FeAr clear | 60s |
| 43 | Comp | | | | | | | " | " |
| 44 | HD 22193 | 03 29 24 | +47 51 | 19 56 37 | | 02 38 W | | | 24s |
| 45 | Comp | | | | | | | FeAr clear | 60s |
| 46 | HD 22192 22192 | 03 29 24 | +47 51 | 20 08 37 | | | | " | 180s |
| 47 | Comp | | | | | | | FeAr clear | 60s |
| 48 | BIAS(4) | | | | | | | | |
| 49 | Comp | | | | | | | FeAr clear | 60s |
| 50 | HD 23862 Comp | 03 43 06 03 43 06 | 23 57 | 01 30 44 | | | | FeAr FeAr | 830 |
| 51 | Comp | | | | | | | FeAr | |
| 52 | HD 23850 | 03 43 06 | 23 45 | 01 30 44 20 30 44 | | | | an | 134 |
| 53 | Comp | | | | | | | FeAr | 60s |

Spectr. Temp. Dome Temp./Hum. $-3.8^{\circ}C$ 60.78 H Transparency Conditions Fine - hazy down low.

Focus 6.90

Spectr. Temp. Dome Temp./Hum. λ Lambda

10

| Exp. Mtr. | Seeing | He. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------------|--------|----------|-------|-------------|--------------------|-------------------|----------|------|---------|---|---------|
| | | | | CASS CCD | 1800/nom G=6065 | 300 μ FULL | C60AA | 3/4 | | | S/N |
| | | | | | | | | 1 | | | |
| | | | | | | | | 5 | | | |
| 1077 | 2-3" | 7.8 | A0p | | | | | 6c: | TK pym | SI hazy here AIR MASS = 1.33 = 640/1 | |
| | | | | | | | | 7c: | | | |
| | | | | | | | | 8c: | | | |
| 4500 | 2-3" | 4.23 | B5e | | | | | 9c: | | H α saturated AIR MASS 1.27 Koptery way | |
| | | | | | | | | 8c: | | | |
| 1650 1950 | | 4.23 | B5e | | | | | 10c: | | | |
| | | | | | | | | 11 | | | |
| | | | | | | | | 1c: | | | |
| 830 | | | | | | | | 12 | | | |
| 830 | | | B8P | | | | | 13 | | | |
| | | | | | | | | 14 | | | |
| 260 | | | B5III | | | | | 15 | | | |

11 032

Emulsion Batches:

Date 1994 MAR 17/18 Observers J.K./r.G./Tn.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|--------------------------|---------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|--------------------------------------|-----------------|
| | | | | | | | | Type/Filter | Exp. |
| CC20434 65 | HD 23850 HD Comp. | 03 43 06 | 23 45 | 20 38 22 | | | | | 142 |
| 56 | HD 23850 | 03 43 06 | 23 45 | 20 44 34 | | | | | 254 |
| 57 | Comp | | | | | | | Fear Clear | 60s |
| 58 | HD 23862 | 03 43 0 | 23 51 | 20 52 22 | | | | | 232 |
| 59 | HD 23862 | 03 43 0 | 23 51 | 20 56 54 | | | | | 281 |
| 60 | Comp. | | | | | | | | 60 |
| 61 | bias (4) | | | | | | | | |
| 62 63 | HD 32630 HD 32630 | 04 59 0 | 41 06 | 21 11 57 | | | | Fear | 103s |
| 64 | HD 32630 | 04 59 0 | 41 06 | 21 15 53 | | | | | 192s |
| 65 | HD 32630 | 04 59 0 | 41 06 | 21 20 10 | | | | | 210s |
| 66 | HD Comp. | | | 21 24 59 | | | | Fear clear | |
| 67 | 5x Flats | | | | | | | Fung 1/2 Tap | 55s |
| 68 | Ecomp. | | | | | | | 12 AR clear | |
| 72 | Comp. | | | | | | | 12 AR clear | 55s |

Spectr. Temp. Dome Temp./Hum.

Transparency Conditions *incr. cloud*Focus *690*

Spectr. Temp. Dome Temp./Hum.

*RG class tour = 20 students**(12)*

| Exp. | Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------|-----------|--------|-----------|-----|------------|------------------|------|----------|------|---------|---------|---------|
| 1/2 | 2600 | | | | CAS CCD | 1800/12 5606J | 300 | 6604F | 16ci | | | |
| | | | | | | | | | 14ci | | | |
| 2 | 2790 | | | | | | | | 14 | | | |
| 3 | | 4" | | | | | | | 13ci | | | |
| 4 | 991 | | | | | | | | 13ci | | | |
| 5 | 892 | | | | | | | | 14ci | | | |
| 6 | | | | | | | | | 14ci | | | |
| 7 | 6800 | | | | | | | | 18ci | | | |
| 8 | 5100 | | | | | | | | 19ci | | | |
| 9 | 5700 | | | | | | | | 20ci | | | |
| 10 | | | | | | | | | 20ci | | | |
| 11 | | | | | | | | | 20ci | | | |
| 12 | | | | | | | | | 20ci | | | |
| 13 | | | | | | | | | 20ci | | | |
| 14 | | | | | | | | | 20ci | | | |
| 15 | | | | | | | | | 20ci | | | |
| 16 | | | | | | | | | 20ci | | | |
| 17 | | | | | | | | | 20ci | | | |
| 18 | | | | | | | | | 20ci | | | |
| 19 | | | | | | | | | 20ci | | | |
| 20 | | | | | | | | | 20ci | | | |
| 21 | | | | | | | | | 20ci | | | |
| 22 | | | | | | | | | 20ci | | | |
| 23 | | | | | | | | | 20ci | | | |
| 24 | | | | | | | | | 20ci | | | |
| 25 | | | | | | | | | 20ci | | | |
| 26 | | | | | | | | | 20ci | | | |
| 27 | | | | | | | | | 20ci | | | |
| 28 | | | | | | | | | 20ci | | | |
| 29 | | | | | | | | | 20ci | | | |
| 30 | | | | | | | | | 20ci | | | |
| 31 | | | | | | | | | 20ci | | | |
| 32 | | | | | | | | | 20ci | | | |
| 33 | | | | | | | | | 20ci | | | |
| 34 | | | | | | | | | 20ci | | | |
| 35 | | | | | | | | | 20ci | | | |
| 36 | | | | | | | | | 20ci | | | |
| 37 | | | | | | | | | 20ci | | | |
| 38 | | | | | | | | | 20ci | | | |
| 39 | | | | | | | | | 20ci | | | |
| 40 | | | | | | | | | 20ci | | | |
| 41 | | | | | | | | | 20ci | | | |
| 42 | | | | | | | | | 20ci | | | |
| 43 | | | | | | | | | 20ci | | | |
| 44 | | | | | | | | | 20ci | | | |
| 45 | | | | | | | | | 20ci | | | |
| 46 | | | | | | | | | 20ci | | | |
| 47 | | | | | | | | | 20ci | | | |
| 48 | | | | | | | | | 20ci | | | |
| 49 | | | | | | | | | 20ci | | | |
| 50 | | | | | | | | | 20ci | | | |

2 13k ADU max

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ... *Cloudy* ... *14* ...Focus ... *6.90* ...

Spectr. Temp.

Dome Temp./Hum. ... *6.32* ... *72%*

| Exp. Mtr. | Seeing | Filter Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-------------|----------------|---------|--------------------|-------------|----------|------|---------------|---------------|---------------|
| 169 | | | B32 | CMS CCD | 1800/1/1 G 6065 | 300 Full | C6049 | 22c | | | |
| 297 | | | | | | | | | | | |
| | | | B32 | | | | | 22c | | | |
| 292 | | | | | | | | | | | |
| 1922 | | | B5V | | | | | 26c | | | |
| 4817 | | | | | | | | 25 | | | |
| 1234 | | | B5V | | | | | 28 | | | 5/1X 150/1 |
| 4160 | | | | | | | | 29c | | | |
| 1200 | | | B5V | | | | | 30c | | | |
| | | | | | | | | 14 | | | |
| 2550 | | 1.36 | B5V | | | | | 31c | Telluric Std. | Thick cloud | |
| 1500 | | | B7V | | | | | 32 | " " | 1.20 Air mass | |
| | | | | | | | | 5c | | | |
| | | | | | | | | 33c | | 15 R ADU max | |
| | | | | | | | | 1c | | | |

15

pg #1

Date 1994 Mar 18/19 Observers T.K./Tn

Emulsion Batches:

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| CC20495 | Bias(4) | | | | | | | | |
| 96 | Comp. | | | | | | | FeAr clear | 60s |
| 97 | HD103287 | 114836 | 541500 | 01 05 13 | | | | | 72 |
| 98 | HD103287 | " | " | 01 08 09 | | | | | 90 |
| 99 | HD103287 | " | " | 01 11 26 | | | | | 106 |
| 500 | Comp. | | | | | | | FeAr clear | 60s |
| 501 | Comp. | | | | | | | FeAr clear | 60s |
| 502 | HD97633 | 11 09 00 | 15 59 00 | 01 19 33 | | | | | 163 |
| 503 | HD97633 | " | " | 01 25 59 | | | | | 282 |
| 504 | HD97633 | " | " | 01 30 11 | | | | | 253 |
| 505 | Comp. | | | | | | | FeAr clear | 60s |
| 506 | Comp. | | | | | | | FeAr clear | 60s |
| 507 | HD102647 | 11 43 54 | 15 08 00 | 01 42 42 | | | | | 128 |
| 508 | HD102647 | " | " | 01 45 51 | | | | | 83 |
| 509 | HD102647 | " | " | 01 47 40 | | | | | 66 |
| 510 | Comp. | | | | | | | FeAr clear | 60 |

Spectr.

Focus.

Spectr.

Exp. Mtr.

3962

5700

400

6104

8171

3534

4000

3500

3600

3390

3220

Spectr. Temp. Dome Temp./Hum. 3.7°C, 73.9 Transparency Conditions cloudy 1/6

Focus 6.90

Spectr. Temp. Dome Temp./Hum. 2 lambda

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------|--------|-----------|-----|-------------|--------------------|--------------|----------|------|---------|----------------|---------|
| 3098 | | | | CASS CCD | 1800/deg G 6065 | 300x FULL | 6604A | 1 | | | |
| 3962 | 3/5s | 2.44 | AOV | | | | | | | TK std | |
| 5700 | " | " | AOV | | | | | | | max 11.7K ADU. | |
| 400 | " | " | AOV | | | | | | | | |
| 6104 | | | | | | | | 5ci | | | |
| 8171 | 3/5s | | A | | | | | 5ci | | | |
| 3534 | " | 3.31 | AOV | | | | | 6ci | TK std | | |
| 4000 | " | " | " | | | | | " | | | |
| 3500 | | | | | | | | " | | | |
| | | | | | | | | 5ci | | | |
| | | | | | | | | 5ci | | | |
| 3600 | 3/5c | 2.14 | AOV | | | | | 7ci | TK std | | |
| 3390 | " | " | " | | | | | " | | | |
| 3220 | | | | | | | | " | | | |
| | | | | | | | | 5ci | | | |

1719#2

Date 1994 Mar. 18/19 Observers T.K./Tn.....

Emulsion Batches:

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|---------|
| CC20511 | bias(4) | | | | | | | | |
| → 12 16 | FLATS x 5 | | | | | 01 54W | +40 | T416 Ap/1/2 | 5sec |
| CG40037 - 35 | HD120245 | 13 43 11 | 38 23 33 | 01 51 08 | | | | Ax | 67 msec |
| 36 - 37 | " | | | | | | | 2x | 133ms |
| 517 | Comp | | | | | | | FeAr clear | 60s |
| 518 | HD193182 | 20 13 49 | 39 16 59 | 02 40 32 | | 05 40 E | | | 1039 |
| 519 | HD193182 | " | " | 02 59 16 | | | | | 1052 |
| 520 | Comp | + | + | 02 20 35 | | | | FeAr clear | 60s |
| 521 | HD193182 | " | " | 03 20 35 | | | | | 920 |
| 522 | Comp. | | | | | | | FeAr clear | 60s |
| 523 | bias(4) | | | | | | | | |
| 524 | Comp. | | | | | | | FeAr clear | 60s |
| 525 | HD195407 | 20 26 00 | 36 39 08 | 03 43 57 | | | | | 1680 |
| 526 | Comp. | | | | | | | FeAr clear | 60s |
| 527 | Comp | | | | | | | 11 | 11 |

Spectr.

Focus.

Spectr.

Exp. Mtr.

1356

1496

1620

1419

858

Spectr. Temp.

Dome Temp./Hum = 3.9°C, 73.9 Transparency Conditions ... Cloudy ...

Focus 6.90

- some clearing

Spectr. Temp.

Dome Temp./Hum.

CLARA

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|--------------|-------------|---------------------|--------------|----------|------|-------------|--|---------|
| | | | | CASS CCD | 1800/1800 G-6065 | 3000 FULL | 6604A | 1ci | | (Primarily at MAXISITY ^{They} would be cut) | |
| | 2.3? | 6.95 | K0111 | above | 3000 | lit | | 2ci | | Note - FAPS never on tonight | |
| | | | | | | | | | | Strongest Pms WSW | |
| | | | | | | | | | | medium NW wind. | |
| 1356 | 4" | 6.42 | B9111 CSH | | | | | 5ci | | | |
| 1496 | " | " | " | | | | | 8ci | TK pgm star | 2.29 A.M. max | |
| 1610 | | | | | | | | 9ci | | | |
| 1419 | " | " | " | | | | | 5ci | | | |
| | | | | | | | | 10ci | | | |
| | | | | | | | | 5ci | | | |
| | | | | CASS CCD | 1800/1800 G-6065 | 3000 full | 6604A | 1ci | | | |
| | | | | | | | | 5ci | | | |
| 838 | 7.5 | | B05h | | | | | 11ci | | | |
| | | | | | | | | 5ci | | | |
| | | | | | | | | 5ci | | | |

19 p⁺3

Date 1994 Mar 18/19 Observers TK/Ta

Emulsion Batches:

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------|-----------|--------------|---------------------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC20528 | HD 195325 | 20 25 31 | 10 33 30 10 33 30 | 04 23 38 | | | | | 951 |
| 529 | HD 195325 | " | " | 04 40 18 | | | | | 751 |
| 530 | HD 195325 | " | " | 04 53 12 | | | | | 678 |
| 531 | Comp. | | | | | | | Fe Ar Clear | 605 |
| 532 | bias(4) | | | | | | | | |
| 533 | Comp. | | | | | | | Fe Ar Clear | 605* |
| 534 | HD 183656 | 19 25 33 | 03 14 08 | 05 11 04 | | | | | 602 |
| 535 | HD 183656 | " | " | 05 21 53 | | | | | 608 |
| 536 | HD 183656 | " | " | 05 32 26 | | | | | 558 |
| 537 | Comp. | | | | | | | Fe Ar Clear | 605 |
| 38 | Flats x 5 | | | | | | | Tung Ap/2 | 5 sec |
| 41 | | | | | | | | | |
| 542 | bias(4) | | | | | | | | |

Spectr.

Focus

Spectr.

Exp. Mtr.

1718

1652

1786

1826

1900

1850

Spectr. Temp. Dome Temp./Hum. 5° , 74.8 Transparency Conditions ... clear 20

Focus 6.90

Spectr. Temp. Dome Temp./Hum. $c \cdot \lambda$ ambata

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------------|-------|---------------------|----------|----------|------|---------|---------|---------|
| 51 | 1718 | 6.08 | Alesh | | | | | 12ci | | | |
| 55 | 1652 | " | " | | | | | 13ci | | | |
| 62 | 1756 | " | " | | | | | 14ci | | | |
| 63 | | | | | | | | 15ci | | | |
| 64 | | | | | | | | 1ci | | | |
| 65 | | | | | | | | 16ci | | | |
| 66 | 1826 | 6.75 | BA-AD esh | | 1800/nm 6 = 6065 | 30m F | 600/4H | 17ci | | | |
| 68 | 1900 | " | " | | | | | 18ci | | | |
| 69 | 1850 | " | " | | | | | 19ci | | | |
| 70 | | | | | | | | 5ci | | | |
| 71 | | | | | | | | 17ci | | | |
| 72 | | | | | | | | 1ci | | | |

21 pg #1

Emulsion Batches:

Date 1994 Mar 19/20 Observers T.K./Tn

CSS 386 12 sec. @ head of W.W.V. Time

| Plate No. | Object | R.A. | | Declination | | Starting Time | | Ending Time | | Hour Angle End | Declination | Comparison | |
|-----------|---------|----------|----------|-------------|------|---------------|--------|-------------|--------|-------------------|-------------|---------------|------|
| | | 1900 | 1900 | 1900 | 1900 | E.S.T. | E.S.T. | Type/Filter | Exp. | | | | |
| CC20543 | bias(4) | | | | | | | | | | | | |
| 44 | Comp. | | | | | | | | | | | FEAR clear | 60 |
| 45 | HD37202 | 05 31 00 | 21 05 00 | 21 38 41 | | | | | | | | | 60 |
| 46 | HD37202 | " | " | 21 41 32 | | | | | | | | | 41 |
| 47 | HD37202 | " | " | 21 42 44 | | | | | | | | | 34 |
| 48 | Comp. | | | | | | | | | | | FEAR clear | 60 |
| 49 | Comp. | | | | | | | | | | | FEAR clear | 60 |
| 50 | HD44351 | 06 16 00 | 14 21 00 | 21 54 23 | | | | | 3 25 W | | | | 1290 |
| 51 | Comp. | | | | | | | | | | | FEAR clear | 60 |
| 52 | HD44351 | " | " | 22 19 01 | | | | | 3 57 W | | | | 1303 |
| 53 | Comp. | | | 22 44 02 | | | | | | | | FEAR clear | 60 |
| 54 | HD44351 | " | " | 22 44 02 | | | | | 3 55 W | | | | 980 |
| 55 | Comp. | | | | | | | | | | | FEAR clear | 60 |
| 56 | bias(4) | | | | | | | | | | | | |
| 57 | Comp. | | | | | | | | | | | FEAR clear | 60 |
| 58 | HD45910 | 06 25 09 | 05 56 00 | 23 09 20 | | | | | 4 25 W | | | | 776 |
| 59 | " | " | " | 23 23 15 | | | | | 4 33 W | | | | 431 |

Spectr. T.

Focus...

Spectr. T.

Exp. Mtr.

3500

2926

2850

783

797

558

120

873

Spectr. Temp. Dome Temp./Hum. ... 0.7 ... +52° Transparency Conditions ... Partly ... Cloudy ...
 Focus ... 6.0 ...
 Spectr. Temp. Dome Temp./Hum. e-lambda CCD → -100°C 90CGAIN
 e Gusty NW wind

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|----------|-------------|--------------------|------|----------|------------|---------|--|------------|
| | | | | CHSS CCD | 100-11mm G=6065 | 322 | CB04 | 1ci 2ci | | Tel Eastside Twilight | |
| 3500 | | 2.98 | B2NP | | | | | 4ci | TK pgn | (Very near moon exp. rate 41/sec when star off slit) | |
| 2976 | | " | " | | | | 5 | | | | |
| 2850 | | " | " | | | | 6 | | | | |
| | | | | | | | | 3ci | | | |
| | | | | | | | | " | | | |
| 783 | 3-5" | 8.5 | B3pe | | | | | 7ci | TK pgn | High RA preparation? west S/N 125/1 | |
| 797 | | " | " | | | | | 3ci | " | | |
| | | | | | | | | 8ci | | | |
| 538 | | " | " | | | | | 10ci | | | cord @ end |
| | | | | | | | | 3ci | | | |
| | | | | CHSS CCD | | | | | | | |
| 122 | 4" | 6.77 | B2-IIIpe | | | | | 3ci | | | |
| 873 | " | " | " | | | | | 11ci | TK pgn | 267 AIR mass some cloud Hd sl saturated | |
| | | | | | | | | 12 | " | | |

Py#2 (23)

Emulsion Batches:

Date 1994 MAR 19/20... Observers T.K./Tn.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|---------------------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC20560 | HP45910 | 062512 | 0556 | 233104 | | | | | |
| 61 | " | | | 233715 | | 4 47W | | | 486 |
| 62 | Comp | | | | | | | FeAr CLEAR | 60s |
| 63 | | | | | | | | TUNG Apl2 | 55s |
| → 67 | FLATSx5 | | | | | 4 55W | +6° | | |
| CG400 68 | BINS(4) | | | | | | | | |
| CG400 38 → 41 | HD103095 | 11 4713 | +38 2610 | 3 00 15 | | 3 0 | 38° | 4x | 67s |
| CG400 42 → 44 | " | | | | | | | 3x | 133 |
| CC20569 | Comp | | | | | | | FeAr CLEAR | 60s |
| 70 | HD103095 | 11 4713 | +38 2610 | 00 26 21 | | | | | 244 |
| 71 | Comp | | | | | | | FeAr CLEAR | 60s |
| 72 | FLATSx5 | | | | | 7 00 | = 38° | | 45s |
| 73 | Comp | | | | | | | FeAr | 80sec |
| | SN1994 D | 12 34 03 | +07 42 05 | 01 14 55 | | | | | |
| 73 73 | Comp | | | | | | | FeAr CLEAR | 60 |
| 74 74 | HD220300 | 23 17 36 | 55 49 00 | 02 01 11 | | | | FeAr CLEAR | 60s |
| 51 75 | COMP | | | | | | | | |

Spectr.

Focus.

Spectr.

Exp. Mtr.

755

1430

Note on
slits

377

Spectr. Temp. Dome Temp./Hum. ^{-1.3°C 56°F @ 4} Transparency Conditions Part cloudy
 Focus ... 6:90
 Spectr. Temp. Dome Temp./Hum. Lumberly

(24)

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|------|----------------|--------------|-----------------|----------|------|---------|--|----------------|
| 755 | 4.5 | 6.77 | B20 | CASS CCD | 1800 G-6065 | 300μ FULL | 6604A | 13c | TK pym | | |
| | | | | | | | | 14c | | | |
| | | | | | | | | 3c | | | |
| | | | | | | | | 2c | | | |
| | | | | | | | | 1c | | SS _{sp} EIASA.BAT | |
| | 5030 | 6.45 | G8ip | (1/8 Farnight) | | Above 300μ slit | | | | Seeing Test Dome ESE, mod WNW Wind (Tel on East side this time) | |
| | | | | | | | | 3c | | | |
| 1430 | | 6.45 | G8ip | | | | | 15c | std vel | | |
| | | | | | | | | 3c | | | |
| | | | | | | | | 16c | | | |
| | | | | | | | | 3c | | | |
| | | | | | | | | 18c | | | |
| | | | | | | | | | | Note didn't write short exp of SN. Nothing seen @ this dispersion & wave length SNova was ~ 10" NW of nebulosity assumed to be NGC 4526 | |
| 377 | 8" | 7.9 | B8 | | | | | 19c | TK pym | V far NE | AIR MASS = 3.9 |
| | | | | | | | | 3c | | | |

pg # 3 (25)

Emulsion Batches:

Date 1994 MAR 19/20 Observers TK/Ta

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|------------------|--------|
| | | | | | | | | Type/Filter | Exp. |
| CC 20576 | HD 220300 | 23 17 36 | 55 49 07 | 02 29 34 | | | E | | 1348 |
| 77 | Comp | | | | | | | Feltr clear | 60s |
| 78 | BIAS (4) | | | | | | | | |
| 79 | HD 220300 | 23 17 36 | 55 49 00 | 02 57 55 | | | | | 1155 |
| 80 | Comp. | | | | | | | Fe Ar clear | 60s |
| 81-83 | Flats x 3 | | | | | | | Tung Ap 12 | 5sec |
| 84 | Comp. | | | | | | | Fe Ar clear | 60s |
| 85 | HD 192954 | 20 12 36 | 15 33 07 | 03 28 10 | | | | | 100s |
| 86 | HD 192954 | " | " | 03 45 52 | | | | | 1023 |
| 87 | HD 192954 | " | " | 04 03 35 | | | | | 1292 |
| 88 | Comp. | | | | | | | Fe Ar clear | 60 sec |
| 89 | BIAS (4) | | | | | | | Fe Ar | |

Spectr.
 Focus.
 Spectr.
 Exp. Mtr.

468
 468
 488
 753
 836
 1008

Spectr. Temp. Dome Temp./Hum. = 3.4...58[°]? Transparency Conditions clear 26

Focus 6.90

Spectr. Temp. Dome Temp./Hum. c. lambda

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|----------------|-----------|-----|----------|--------------------|--------------------------|----------|------|------------------|--------------|---------|
| 468 | 4 ^u | 7.9 | B8 | CASS CCD | 1800 l/n G-6065 | 300 _i Full | 60A9 | 20i | TK shell Rgn1 | 353 AIRMASS | |
| | | | | | | | | 30i | | | |
| | | | | | | | | 10i | | | |
| 428 | | 7.9 | B8 | | | | | 210i | | | |
| | | | | | | | | 30i | | | |
| | | | | | | | | 220i | | | |
| | | | | | | | | 30i | | | |
| 753 | | 7.3 | B9 | | | | | 23i | | | |
| 836 | 4* | " | " | | | | | 24i | | 2.47 AIRMASS | |
| 1008 | | " | " | | | | | 250i | | | |
| | | | | | | | | 260i | | | |
| | | | | | | | | 10i | | | |

27 pg #1 sun/moon

Emulsion Batches:

Date 1994 MAR 20/21... Observers Blm./Jm.....

CSS Time Reset to WWV Time on Acor. (D.D. 74, p. 19, etc.)

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|---------------|--------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| CC20590 91 | Comp/Stellar | HARTMAN | Posis | | | 00 | +36 | FeAr Clear | 60/55 |
| 92 | BIAS(A) | | | | | | | | |
| 93 | Comp | | | | | | | FeAr Clear | 60s |
| 94 | HD 87901 | 10 0303 | +12 2722 | 19 11 32 | | | | | 27 |
| 95 | HD 87901 | 10 0303 | +12 2722 | 19 1334 | | 0317E | | | 26 |
| 96 | Comp | | | | | | | FeAr Clear | 60s |
| 97 | Comp | | | | | | | FeAr Clear | 60s |
| 98 | HD 93521 | 10 42 42 | +38 06 | 19 2243 | | 03 35 E | | | 902 |
| 99 | " | " | " | 3812 | | | | | 869 |
| 600 | Comp | | | | | | | FeAr Clear | 60s |
| 601 | HD 93521 | 10 42 42 | +38 06 | 19 56 35 | | | | | |
| 602 | HD 93521 | " | " | 20 12 23 | | | | | 900 |
| 603 | Comp, Then BIAS(A) | | | | | | | FeAr Clear | 60s |
| CC20605 | HD 93521 | 10 42 42 | +3806 | 20 30 28 | | | | | 945 |
| 606 | HD 93521 | | | 20 46 36 | | 02 13E | | | 761 |
| 607 | Comp | | | | | | | FeAr Clear | 60s |

Spectr. Temp. Dome Temp./Hum. $+2.2^{\circ}$ $66\% H$ Transparency Conditions *Fine - inc cloud*Focus ... *6:90*Spectr. Temp. Dome Temp./Hum. $+0.8^{\circ}$ $65\% H$ *(L.H.D.B.R)*CCDT \rightarrow -100° 90CGAIN*20*

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|------|--------------|--------------------|-------------|----------|-------|--------------|--------------------------------------|---------|
| | | | | C 455 CCD | 1800/6/mm G-065 | 300 Full | 6604A | 3/4ci | 1-focus | | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 5ci | Comp | | |
| | 5000 | | 1.36 | B7V | | | | 6 | Telluric Std | 12K max | |
| | 4700 | | | | | | | 7 | | measured at max. slit | |
| | | | | | | | | 8ci | Comp | | |
| | 2330 | 2" | F04 | 095V | | | | 9ci | Blk-pgm | $\approx 170/1$ S/N 1.32 Air mass | |
| | 2410 | | | | | | | 10ci | | (extending blue) | |
| | | | | | | | | 5ci | | | |
| | 1636 | <2" | | | | | | 11ci | | Cloud from 4000 1000 cts 0-400 s | S/N |
| | 1970 | | | | | | | 12ci | | H ₂ jump vs blue | 170/1 |
| | | | | | | | | 13ci | | | |
| | 2490 | <2" | | | | | | 14 | Blk-pgm | thin cloud | |
| | 2400 | 1-2" | | | | | | 15 | | | |
| | | | | | | | | 16 | | | |

201
pg#2

Sun/Mon

Emulsion Batches:

Date 1994 MAR 20/21... Observers Bln./Tm.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|------|
| | | | | | | | | Type/Filter | Exp. |
| CC20608 | HD93521 | 10 42 42 | +38 06 | 21 02 25 | | 01 58 E | | | 700 |
| 09 | HD93521 | | | 21 14 32 | 21 24 40 | | | | 668 |
| 10 | Comp | | | | | | | Feltr clear | 60s |
| 11 | Comp | | | | | | | " | 60s |
| 12 | HD 77327 | 08 56 48 | +47 33 08 | 21 32 57 | | | | | 57 |
| 13 | " | " | " | 21 34 48 | | 00 09 W | | | 64 |
| 14 | Comp | | | | | | | Feltr clear | 60 |
| 15 | Comp | | | | | | | " | " |
| 16 | HD93521 | 10 42 42 | +38 06 | 21 42 04 | | | | | 600 |
| 17 | HD93521 | | | 21 52 27 | | 01 09 E | | | 580 |
| 18 | Comp | | | | | | | Feltr clear | 60s |
| 19 | HD93521 | | | 22 05 02 | | | | | 531 |
| 20 | " | | | 22 14 13 | | | | | 549 |
| 21 | Comp | | | | | | | Feltr clear | 60s |
| 22 | BIAS(A) | | | | | | | | |

Spectr.
Focus
Spectr.

Exp. Mt.

2450

2670

4000

4000

2440

2470

2407

2550

Spectr. Temp. Dome Temp./Hum. 100.8°C ... $66\% / 81\%$ Transparency Conditions *part. cloudy*

Focus ... 6.80

Spectr. Temp. Dome Temp./Hum.

30

c. LAMBDA

| Exp. | Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------|-----------|--------|------|-------|-------------|--------------------|-------------|----------|------|-------------------------|------------------------------|---------|
| 70 | 2450 | 1" | 7.04 | 09.5K | C455 CCD | 1822/n/m G-6065 | 300 FULL | 6604A | 17ci | Bln O ^x pgrm | | |
| 68 | 2670 | 1" | | | | | | | 18ci | | | |
| 69 | | | | | | | | | 19ci | | | |
| 71 | | | | | | | | | 19ci | | | |
| 72 | 4000 | | 3.66 | A0 | | | | | 20ci | Telluric Std | no cloud now Low AIR MASS | |
| 74 | 4000 | | 3.66 | A0 | | | | | 20ci | " " | | |
| 75 | | | | | | | | | 21ci | | | |
| 76 | | | | | | | | | 21ci | | | |
| 77 | 2440 | 1" | 7.04 | 09.5K | | | | | 22ci | Bln O ^x pgrm | | |
| 78 | 2470 | | | | | | | | 22ci | | | |
| 79 | | | | | | | | | 5ci | | | |
| 81 | 2407 | 1" | | | | | | | 24ci | Bln O ^x pgrm | (He bump gone now) | |
| 82 | 2550 | | | | | | | | 25ci | | | |
| 83 | | | | | | | | | 5ci | | | |
| 84 | | | | | | | | | 1ci | | | |

31 P9#3 Sun/man

Date 1994 DEC 20/21 Observers [Blk], J.T.a..... 50700 W.K.Ki

Emulsion Batches:

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|----------------|-----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| cc20623 -25 | FLATS X3 | | | | | | | TUNG Ap 1/2 | 55s |
| 26 | HD93521 | 10 42 42 | +38 06 | 22 2828 | | 00 34E | | | 570 |
| 27 | " | | | 22 3822 | | | | | 564 |
| 28 | Comp | | | | | | | Fetr clear | 60s |
| 29 | HD93521 | 10 42 42 | +38 06 | 22 5113 | | | | | 744 |
| CG40045 -48 | HD93521 for seeing test too | | | | | | | 4x | 66ms |
| 49 -50 | " | " | | | | | | 2x | 133ms |
| cc20630 | HD93521 | 10 42 42 | +38 06 | 23 0822 | | | | | 772 |
| 31 | Comp | | | | | | | | |
| 32 | BIH5(4) | | | | | | | | |
| 33 | HD93521 | 10 42 42 | +38 36 | 23 2409 | | | | | 700 |
| 34 | " | | | 23 3649 | | 00 36W | | | 695 |
| 35 | Comp | | | | | | | Fetr clear | 60s |
| 36 | HD93521 | 10 42 42 | +38 06 | 23 5203 | | | | | 685 |
| 37 | " | | | 00 0401 | | | | | 693 |
| 38 | Comp | | | | | | | Fetr clear | 60s |

Spectr.
 Focus.
 Spectr.

Exp. Mtr

2665

2550

2690

2740

2400

2590

2440

2430

Spectr. Temp. Dome Temp./Hum. $+00.5^{\circ}\text{C}$ $66.1\% \text{H}$ Transparency Conditions *mostly clear again*
 Focus ... 6.90
 Spectr. Temp. Dome Temp./Hum.

32

| Exp. Mtr. | Seeing | Fl. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|----------|-------|-------------|----------------|----------------------------|----------|------|--------------|-----------------------|---------|
| | | | | CHSS CCD | 1800 G 6065 | 300 FULL | 6607A | 2c: | | MAX 15.6 K ADU | |
| 2665 | 1.2" | 7.0x | 09.5V | | | | | 26c: | Blk 0' pym | | |
| 2550 | | | | | | | | 27c: | | | |
| | | | | | | | | 5c: | | | |
| 2670 | 2.2" | | | | | | | 29c: | | | |
| | 1.2" | | | | | 1500° 300 slit | | | Seeing Test. | | |
| 2740 | 1.2" | | | | | | | 30c: | | Em better Blue of He? | |
| | | | | | | | | 5c: | | | |
| | | | | | | | | 1c: | | | |
| 2408 | 1" | | | | | | | 28c: | | | |
| 2590 | | | | | | | | 31c: | | | |
| | | | | | | | | 5c: | | | |
| 2440 | 1" | | | | | | | 32c: | | | |
| 2930 | | | | | | | | 20c: | | | |
| | | | | | | | | 5c: | | | |

33 ⁰⁵⁴⁴

Date 1944... 12/14/71... Observers [B.K.] T.S.....

Emulsion Batches:

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC20639 | BIAS(4) | | | | | | | | |
| 40 | HD93521 | 10 42 42 | +38 06 | 00 18 45 | | | | | 732 |
| 41 | " | | | 00 31 16 | | | | | 742 |
| 42 | Comp | | | | | | | FeAr Clear | 60s |
| 43 | HD93521 | 10 42 42 | +38 06 | 00 46 26 | | | | | 681 |
| 44 | " | | | 00 58 38 | | | | | 736 |
| 45 | Comp | | | | | | | FeAr Clear | 60sec |
| 46 | HD93521 | 10 42 42 | +38 06 | 01 13 20 | | | | | 905 |
| 47 | " | | | 01 28 50 | | | | | 1005 |
| 48 | Comp | | | | | | | FeAr Clear | 60sec |
| 49 | BIAS(4) | | | | | | | | |
| 50 | | | | | | | | | |
| → 55 | FLATS x 6 | | | | | OR W | +38° | TUNG Ap 1/2 | 5sec |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Spectr.

Focus.

Spectr.

Exp. Mtr.

2550

2020

2540

2500

2000

1240

Spectr. Temp. Dome Temp./Hum. $-00.5^{\circ}C$ 70% Transparency Conditions *Sl. hazy* \rightarrow increasing
 Focus ... 6.90
 Spectr. Temp. Dome Temp./Hum. $-01.3^{\circ}C$ 74% 34

complete cloud

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|------|-------------|--------------------|------------|----------|------|--------------------------|--------------------------------|-----------------|
| | | | | CASS CCD | 1800 h/m G 6065 | | | | | | S/N |
| 732 | 0550 | 1" | 7.04 | 09.5V | | 300 F4K | G 604A | 1c; | | | |
| 742 | 2620 | 1" | | | | | | 6c; | Elm O ^x pygm. | | $\approx 200/1$ |
| | | | | | | | | 7c; | | | |
| | | | | | | | | 5c; | | | |
| | 2540 | | | | | | | 20c; | | | |
| 734 | 0500 | 1" | | | | | | 21 | | | |
| | | | | | | | | 3c; | | | |
| | 2060 | | | | | | | 4c; | | clouding in here now | |
| | 1240 | 1.2' | | | | | | 9c; | | | |
| | | | | | | | | 5c; | | | |
| | | | | | | | | 1c; | | CCD T $-100.2^{\circ}C$ @ end, | |
| | | | | | | | | 33c; | | MAX AK ADK | |
| | | | | | | | | All | GG F. les | To PERSEUS | |
| | | | | | | | | 2 | To WORM | | |

pg 1
35

Tue Wed

Emulsion Batches:

Date 1994 Mar 22/23 Observers [Bln] Jwn/Hlw

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

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp |
|--------------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| cc20656 7 | Comp/Stellar | Hartman | | | | | | FeAr Clear | 30/30 |
| 58 | Bias (4) | | | | | | | | |
| 59 | Comp | | | | | | | FeAr Clear | 60 |
| 60 | HD87901 | 10 03 03 | +12 27 22 | 19 29 29 | | | | | 93s |
| 61 | HD87901 | 10 03 03 | +12 27 22 | 19 33 34 | | -2:50 E | | | 40 |
| 62 | Comp | | | | | | | " | 60 |
| 63 | Bias (4) | | | | | | | | |
| 64 | Comp | | | | | | | FeAr Clear | 60 |
| 65 | HD93521 | 10 42 42 | +38 06 00 | 19 46 06 | | -3:03 | | | 863 |
| 666 | Comp | | | | | | | " | 60 |
| 67 | HD93521 | 10 42 42 | +38 06 06 | 20 06 11 | | -2:45 | | | 900s |
| 68 | Comp | | | | | | | " | 60 |
| 69 | Bias (4) | | | | | | | | |
| 70 73 | 4x Flats | | | | | -2:30 E | +37°36' | Tung 1/2 Ap | 5s |
| 74 | Comp | | | | | | | FeAr Clear | 60 |
| 75 | Bias (4) | | | | | | | | |

Spectr. Ter
Focus.....
Spectr. Te
Exp. Mtr.

13 K

10.2 K

1165

250

Spectr. Temp. -100.0% Dome Temp./Hum. $+7.4/65.3\%$ Transparency Conditions *partially cloudy*Focus 6.80

Dome Fans ON

SE fan turned off @ 1950

(36)

Spectr. Temp.

Dome Temp./Hum.

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Filter | PH | Program | Remarks | Quality |
|---|--------|------|-------|----------|-----------------------|-----------|--------|-----|------------|-------------------------------------|---------|
| | | | | Cass CCD | 1800 l/mm G = 6065 | 300 μ | 6604R | 3/4 | Focus Test | T = 7.7° foc = 6.80 | good |
| | | | | | | | | 1 | | | |
| | | | | | | | | 5 | | | |
| 13 | K | 1.36 | B7V | | | | | 6 | Telluric | through some clouds | |
| 40 | 10.2 K | 1.36 | B7V | | | | | 7 | Telluric | not through some clouds | |
| | | | | | | | | 8 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 9 | | | |
| 1165 | | 7.04 | 09.5V | | | | | 10 | B1n 0* pgm | SNR ~ 150 | |
| | | | | | | | | 11 | | | |
| 250 | | 7.04 | 09.5V | | | | | 12 | B1n 0* pgm | 80 SNR, (50 \uparrow) | |
| | | | | | | | | 13 | | very cloudy now. | |
| | | | | | | | | 1 | | | |
| ----- 3 hour break for solid clouds ----- | | | | | | | | | | | |
| | | | | | | | | 15 | | | |
| | | | | | | | | 1 | | | |

Pg 2 (37)

Date 1994 Mar. 22/23 Observers [Bin] Jwn/Hlw

Emulsion Batches:

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

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|------|
| | | | | | | | | Type/Filter | Exp. |
| cc20676-9 | 4x Flats | | | | | +0:32 W | +37:37 | Tung 1/2 Ap | 5 |
| 680 | HD93521 | 10 42 42 | +38 06 00 | 23 37 55 | | | | | 880s |
| 81 | Comp | | | | | | | FeA Clear | 60 |
| 82 | Comp | | | | | | | FeA Clear | 60 |
| 83 | HD93521 | 10 42 42 | +38 06 00 | 01 36 00 | | +2:47 W | | | 900 |
| 84 | HD93521 | 10 42 42 | +38 06 00 | 01 51 13 | | +3:03 W | | | 900 |
| 85 | Comp | | | | | | | " | 60 |
| 86 | Bias (4) | | | | | | | | |
| 87 | HD93521 | 10 42 42 | +38 06 00 | 02 10 26 | | +3:22 W | | | 900s |
| 88 | HD93521 | 10 42 42 | +38 06 00 | 02 27 49 | | +3:34 W | | | 534 |
| 89 | Comp | | | | | | | | 60s |
| 90 | 4x Flats | | | | | +3:38 W | +37:37 | Tung 1/2 Ap | 5s |
| 93 | | | | | | | | FeA Clear | 60s |
| 94 | Comp | | | | | | | | 60s |
| 95 | HD87901 | 10 03 03 | +12 27 22 | 02:51:37 | | | | | 90s |
| 96 | Comp | | | | | | | | |

Spectr.

Focus

Spectr.

Exp. Mtr.

48

1775

295

85

145

7000

Spectr. Temp.
 Focus 6.80
 Spectr. Temp.

Dome Temp./Hum. 6.2°C/67.1%
 Dome Temp./Hum. 5.4°C/68.4%

Transparency Conditions ... Cloudy, with clear patches.
 → too haze.

38

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emission Wavelength | F.H. G. | Program | Remarks | Quality |
|-------------------------------------|--------|------|-------|----------|--------------------------------|-----------|---------------------|---------|------------|---------------------|-------------------|
| | | | | Cass CCD | 1800 λ /mm G = 6065 | 300 μ | 6604 \AA | 14 | | | |
| 480 | | 7.04 | 09.5V | | | | | 16 | Bln 0* Str | SNR = 85 | clouded in at end |
| ----- 1 hour break for clouds ----- | | | | | | | | | | | |
| | | | | | | | | 17 | | | |
| | | | | | | | | 19 | | | |
| 1775 | 3-4" | 7.04 | 09.5V | | | | | 20 | Bln 0* pgm | SNR = 175 | |
| 1295 | | 7.04 | 09.5V | | | | | 21 | Bln 0* pgm | Through much haze. | |
| | | | | | | | | 22 | | | |
| | | | | | | | | 1 | | | |
| 857 | | 7.04 | 09.5V | | | | | 23 | Bln 0* pgm | SNR = 115 | |
| 145 | | 7.04 | 09.5V | | | | 40 S.N.R. | 24 | | Down in <u>Muck</u> | |
| | | | | | | | | 25 | | | |
| | | | | | | | | 14 | | | |
| | | | | | | | | 25 | | | |
| 7000 | | 1.36 | B7V | | | | | 26 | Telluric | | |
| | | | | | | | | 27 | | | |

pg 3
 39
 Date

1994 Mar 22/23

Observers [Bln] Jwr/Hlw

Emulsion Batches:

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|---------------|-------------|--------------|---------------------|-------------------------|---|-------------------|-------------|---------------------------|------|
| cg40051 -4 | 4x HD128718 | 14:33:24 | +48 39 00 | 03:04 | | | | | .067 |
| cg40055 6 | 2x HD128718 | " | " | | 03:07 | | | | .133 |
| cc20697 | Comp | | | ~03:14 | typed in by hand due to CGS 386 crash. | | | FCAR Clear | 60s |
| 98 | HD 136849 | 15 17 48 | +33 17 30 | 03:18:29 | | -0:06 E | +32:57 | | 600s |
| 99 | Comp | | | | | | | " | 60 |
| 700 -703 | 4x Flats | | | | | | | Jung 1/2 AP | 5 |
| 704 | Bias (4) | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |

Spectr.
 Focus.
 Spectr.
 Exp. Mtr

2100

Spectr. Temp. Dome Temp./Hum. $+5.2^{\circ}\text{C}/69.2\%$ Transparency Conditions ... Partial clouds, very hazy
 Focus 6.80
 Spectr. Temp. Dome Temp./Hum.

(40)

| Exp. | Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------|-----------|--------|------|------|-----------------------|------------------------------|-----------|----------|------|-------------|-----------------|---------|
| 27 | | 2-3" | 6.7 | F2 | Cass CD | 1800 λ /mm G=6065 | 300 μ | 6604A | | Seeing Test | Dome W. no wind | |
| 33 | | 2-3" | 6.7 | F2 | | | | | | Seeing Test | very hazy | |
| 6 | | | | | | | | | 28 | | | |
| 100 | 2100 | | 5.37 | B9 V | | | | | 29 | | | |
| 10 | | | | | | | | | 30 | | | |
| 5 | | | | | | | | | 14 | | | |
| | | | | | | | | | 1 | | | |
| | | | | | All to WORM & Perseus | | | | | | | |

Spectr. Temp. Dome Temp./Hum. $8.3^{\circ}\text{C}/57.5\%$ Transparency Conditions scattered clouds, much haze. 42
 Focus 6.80 Dome Fans OFF
 Spectr. Temp. Dome Temp./Hum.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------------|--------|-----------|-------|----------|------------------------------|-----------|----------|------|------------|--|---------|
| | | | | Cass CCD | 1800 λ /mm G=6065 | 300 μ | 6604 | 3/4 | Focus Test | 69% Humidity on catwalk @ 2000 74% @ 2050 | good |
| | | | | | | | | 1 | | | |
| | | | | | | | | 5 | | | |
| 5000 | 1-2" | 1.36 | 87I | | | | | 6 | Telluric | Max ADU ~ 11K | |
| | | | | | | | | 7 | | | |
| | | | | | | | | 8 | | | |
| 900 | | 7.04 | 09.5I | | | | | 9 | Bln 0* pgm | SNR ~ 150- Through clouds | |
| 900 1423 | | 7.04 | 09.5I | | | | | 10 | Bln 0* pgm | SNR ~ 180- | |
| | | | | | | | | 11 | | | |
| | | | | | | | | 1 | | | |
| 830 | 1-2" | 7.04 | 09.5I | | | | | 12 | Bln 0* pgm | SNR ~ 135- Through clouds | |
| 1369 | | 7.04 | 09.5I | | | | | 13 | Bln 0* pgm | SNR ~ 180- | |
| | | | | | | | | 14 | | | |
| 1630 | | 7.04 | 09.5I | | | | | 13 | Bln 0* pgm | SNR ~ 180 | |
| 1280 | | 7.04 | 09.5I | | | | | 14 | Bln 0* pgm | | |
| | | | | | | | | 15 | | | |

Pg 2

(43)

Date 194 Mar 23/24 Observers Bln/Hlw

Emulsion Batches:

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

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|----------------------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------------|-----------------|
| | | | | | | | | Type/Filter | Exp. |
| cc20722 | Bias (4) | | | | | | | | |
| 23 | Comp | | | | | | | FeAr Clear | 60s |
| 24 | HD 77327 | 08 56 48 | +47 33 08 | 21:43:12 | | +0:28 W | | | 127 |
| 25 | Comp | | | | | | | " | 60s |
| 26/27 | Comp/stellar | Hartman | | | | +0:40 W | +47:33 | FeAr clear | 60/60 |
| 28 | Comp | | | | | | | " | 60 |
| 29 | * HD 93521 | 10 42 42 | +38 06 00 | 22 15 43 | | 0:29 E | | | 90 ^s |
| 30 | * HD 93521 | | | 22 33 52 | | 0:11 E | | | 90 ^s |
| 31 | Comp | | | | | | | | 60 |
| 32 | * HD 93521 | 10 42 42 | +38 06 00 | 22 54 01 | | | | | 950 |
| 33 | HD 93521 | 10 42 42 | +38 06 00 | 23 10 20 | | +0:25 W | | | 905 |
| 34 | Comp | | | | | | | FeAr Clear | 60 |
| 35 | Bias (4) | | | | | | | | |
| ³⁶ -41 | 6x Flats | | | | | | | Tung 1/2 Ap FeAr Clear | 5s |
| 42/43 | Comp/Stellar | Hartman | | | | | | | 30/30 |

Spectr.

Focus.

Spectr.

Exp. Mtr.

500

1450

1375

994

1417

Spectr. Temp.

Dome Temp./Hum.

6.6°C/56.7%

Transparency Conditions

Scattered Clouds

Focus 6.80

Spectr. Temp.

Dome Temp./Hum.

5.6°C/56.8%

→ thick clouds.

(44)

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|------------|---|---------|
| | | | | | | | | 1 | | | |
| | | | | | | | | 16 | | | |
| 5000 | 3.66 | A0 | | | | | | 17 | Telluric | | |
| | | | | | | | | 18 | | Done @ 21:57 (10 minutes late) | |
| | | | | | | | | 3/4 | Focus Test | T=6.2°C | |
| | | | | | | | | 19 | | | |
| 1450 | 7.04 | 09.5V | | | | | | 20 | Bln 0* pgn | | |
| 1375 | 7.04 | 09.5V | | | | | | 21 | Bln 0* pgn | Cloud in last 300 ^s | |
| | | | | | | | | 22 | | | |
| 994 | 7.04 | 09.5V | | | | | | 23 | Bln 0* pgn | Cloud from 120°-150° | |
| 1417 | 7.04 | 09.5V | | | | | | 24 | Bln 0* pgn | Totally clouded in right after end of this exposure | |
| | | | | | | | | 25 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 26 | | | |
| | | | | | | | | 3/4 | Focus test | 5.6°C, foc=6.80 | |

*Note: Headers on cc20729,30,32 which were saved to WORM have wrong or incomplete object, ra & dec information EXABYTE copy is okay. Logbook is correct.

All to WORM. & Perseus

pg 1
45 Fri/SAT

Emulsion Batches:

Date 1994 Mar 25/26 Observers [Bln] Tn/Hlw

css 386 clock set to EST from WWV time

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| cc20744/5 | Comp/stellar | Hartman | Mask | | | +0:17 W | +48° 48' | Fe Ar Clear | 70/70 |
| 46 | Bias (4) | | | | | | | | |
| 47 | Comp | | | | | | | Fe Ar Clear | 60 |
| 48 | HD87901 | 10 03 03 | 12 27 22 | 19 18 06 | | 2:53 E | | | 30 |
| 49 | HD87901 | 10 03 03 | 12 27 22 | 19 19 10 | | 2:52 E | | | 44 |
| 50 | Comp | | | | | | | " | 60 |
| 51 | Comp | | | | | | | " | " |
| 52 | HD93521 | 10 42 42 | +38 06 00 | 19 26 30 | | 03 12 E | | | 855 |
| 53 | " | " | " | 19 41 35 | | 02 57 E | | | 848 |
| 54 | Comp | | | | | | | Fe Ar Clear | 60s |
| 55 | HD93521 | 10 42 42 | +38 06 00 | 19 58 10 | | | | | 830 |
| 56 | " | " | " | 20 12 24 | | | | | 1032 |
| 57 | Comp | | | | | | | Fe Ar Clear | 60s |
| 58 | Bias (4) | | | | | | | | |
| 59 | HD93521 | 10 42 42 | +38 06 00 | 20 33 00 | | 2:06 E | | | 797 |
| 60 | HD93521 | 10 42 42 | +38 06 00 | 20:46:51 | | 1 57 E | | | |

CCD
Super
Focus
Speed
Exp. M
500
700
*
550
590
675
950
77
79

CCD Dewar → -100.0°C
 Spectr. Temp. 6.87
 Focus 6.87
 Spectr. Temp. gains 90

Dome Temp./Hum. -0.3°C/62.2% Transparency Conditions Clear
 Dome Fans OFF FULL moon
 Dome Temp./Hum. -1.4°C/62.4% 480 0 50 1024 4 1 cdfmt (46)

| Exp | Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/Tilt | Slit | Filter | Program | Remarks | Quality |
|-----|-----------|--------|------|-------|----------|--------------|------|--------|----------------|---|--------------|
| | | | | | Cass CCD | 1800L/mm | 300μ | 6604 Å | 3/4 Focus Test | T = -0.8, foc = 6.87 | good |
| | | | | | | G = 6065 | | | 1 | 77% Humidity on catwalk | |
| | | | | | | | | | 5 | @ 1930 | |
| | 5000 | 3-4" | 1.36 | B7V | | | | | 6 Telluric | Max ADU 7000 | |
| | 7100 | 3-4" | 1.36 | B7V | | | | | 6 Telluric | " 9000 | |
| | | | | | | | | | 7 | | |
| | | | | | | | | | 7 | | |
| | * 550 | 3-4" | 7.04 | O9.5V | | | | | 8 Bln 0* pgm | * Exp meter partial F.L.W.R @ 1925 EST | S/N 170/1 |
| | 590 | | | | | | | | 9 | 1.20 AIR MASS | |
| | | | | | | | | | 2c | | |
| | 675 | 3" | | | | | | | 10c | | 185/1 |
| | 950 | | | | | | | | 11c | | |
| | | | | | | | | | 5c | | |
| | | | | | | | | | 1c | | |
| | 770 | | | | | | | | 12c | | |
| | 795 | | | | | | | | 13 | | |

47^{pg#2}

Fri 1 SAT

Date 1994 MAR 25/26.. Observers [B/m] T. H. W.

Emulsion Batches:

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| CC20761 | Comp | | | | | | | Felt Clear | 60s |
| 62 | Comp | | | | | | | Felt Clear | 60s |
| 63 | HD77327 | 8:56:48 | +47:38:08 | 21:07:11 | | 0:01 W | | | 100s |
| 64 | HD77327 | 8:56:48 | +47:38:08 | 21:09:39 | | 0:04 W | | | 148 |
| 65 | Comp | | | | | | | " | 60 |
| 66 | Bias (4) | | | | | | | | . |
| 67 | Comp | | | | | | | " | " |
| 68 | HD93521 | 10 42 42 | 38 06 00 | 21 19 02 | | 1:19 E | | | 800 |
| 69 | HD93521 | 10 42 42 | 38 06 00 | 21 32 46 | | 1:04 E | | | 903 |
| 70 | Comp | | | | | | | | |
| 71 | HD93521 | 10 42 42 | 38 06 00 | 21 50 22 | | 0:46 E | | | 900 |
| 72 | HD93521 | 10 42 42 | 38 06 00 | 22 05 51 | | 0:31 E | | | 900 |
| 73 | Comp | | | | | | | | |
| 74 | HD93521 | 10 42 42 | 38 06 00 | 22 23 45 | | 0:14 E | | | 900 |
| Cg40057 | 4x HD93521 | 10 42 42 | 38 06 00 | 22:40 | | 0:08 E | | | .067 |
| 60 | | | | | | | | | |
| 61 | 2x HD93521 | 10 42 42 | 38 06 00 | | 22:43 | " | | | .133 |
| 62 | | | | | | | | | |

Spectr.
 Focus.
 Spectr.
 Exp. Mtr

2500

3500

789

988

1022

1094

1139

Spectr. Temp.

Dome Temp./Hum. $-1.4^{\circ}\text{C}/62.4\%$ Transparency Conditions *Fine*Focus *6.87*

Spectr. Temp.

Dome Temp./Hum. *C 211120A*

(48)

| Exp. Mtr. | Seeing | Pg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|----------|--------|------------|------------------|------------------|----------|-----------------|-------------|--|---------|
| | | | | CMS CCD | 1800 G-6065 | 300 μ FUK | 6604A | 5 $\frac{1}{2}$ | | | |
| | | | | | | | | 5 | | | |
| 2500 | | 3.66 | A0 | | | | | 6 | Telluric | | |
| 3500 | | 3.66 | A0 | | | | | 7 | Telluric | | |
| | | | | | | | | 8 | | | |
| | | | | | | | | 9 | | | |
| 788 | | 7.04 | 09.5 V | | | | | 10 | Bln O* pgm | | |
| 988 | | 7.04 | 09.5 V | | | | | 11 | Bln O* pgm | | |
| | | | | | | | | 12 | | 78% Rel. Humidity on catwalk @ 2130 | |
| 1022 | | 7.04 | 09.5 V | | | | | 13 | Bln O* pgm | | |
| 1094 | | 7.04 | 09.5 V | | | | | 14 | Bln O* pgm | 80% Rel. Humidity on catwalk @ 2230 | |
| | | | | | | | | 15 | | | |
| 1138 | | 7.04 | 09.5 V | | | | | 16 | Bln O* pgm | | |
| | 3-4" | | | | | | | | Seeing Test | | |
| | 3-4" | | | | | | | | Seeing Test | | |

Pg # 3 (49)

clean
" Manz

Date 1994 Mar 25/26

Observers

Bln/Tn/Hlw/Wde/Mnz

Emulsion Batches:

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|--------------|---------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| cc20775 | HD93521 | 10 42 42 | 38 06 00 | 22 42 58 | | 0:04 W | | | 800 s |
| 76 | Comp | | | | | | | FeAr Clear | 60s |
| 77 | Bias (4) | | | | | | | | |
| 78 | | | | | | | | | |
| 79 | Comp/Stellar | HARTMAN Posns | | | | 00 09 W | | FeAr clear | 30/30 |
| 80 | HD93521 | 10 42 42 | +38 06 00 | 23 11 32 | | 00 33 W | | | 803 |
| 81 | HD93521 | " | " | 23 25 15 | | 00 48 W | | | 876 |
| 82 | Comp | | | | | | | FeAr Clear | 60s |
| 83 | HD93521 | 10 42 42 | 38 06 00 | 23 42 48 | | 1:05 W | | | 867 |
| 84 | HD93521 | 10 42 42 | 38 06 00 | 23 57 39 | | | | | 992 |
| 85 | Comp | | | | | | | FeAr Clear | 60s |
| 86 | Bias (4) | | | | | | | | |
| 87 | HD93521 | 10 42 42 | 38 06 00 | 00 17 16 | | 01 40 W | | | |
| 88 | " | " | " | 00 37 10 | | | | | 799 |
| 89 | | | | | | | | FeAr Clear | 60s |
| 90 | Comp | | | | | | | | |
| →92 | FLATS x3 | | | | | | | TUNG Ap 1/2 | 5sec |

Spectr. Temp. Dome Temp./Hum. $-2.1^{\circ}\text{C}/64.5\%$ Transparency Conditions ... Clear
 Focus ... 6.87
 Spectr. Temp. Dome Temp./Hum.

(50)

| Exp. Mtr. | Seeing | Pk. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | Filter | Program | Remarks | Quality |
|-----------|--------|----------|------|----------|----------------------------|-----------|----------|--------|------------|-------------------------------------|---------|
| 1080 | 2.3" | 7.04 | 09.5 | Cass CCD | 1800/mm G = 6065 | 300 μ | 6604A | 17 | Bln 0* pgm | | S/A |
| | | | | | | | | 18 | | | |
| | | | | | | | | 1c | | | |
| | Set To | 6.90 | | | $T = -2.2^{\circ}\text{C}$ | | | 3/4c | Focus test | | |
| 1056 | 2.3" | | | | | | | 19c | Bln 0* pgm | Note no previous comp after results | 1/2/1 |
| 1127 | | | | | | | | 20c | Bln 0* pgm | <u>FOCUS</u> | |
| | | | | | | | | 5c | | | |
| 1124 | | 7.04 | 09.5 | | | | | 21c | Bln 0* pgm | | |
| 1277 | | 7.04 | 09.5 | | | | | 22 | Bln 0* pgm | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 1 | | | |
| 1100 | 3" | 7.04 | 09.5 | | | | | 23 | Bln 0* pgm | 1.06 AIR MASS | |
| 985 | 3.5" | | | | | | | 24 | | | |
| | | | | | | | | 2c | | | |
| | | | | | | | | 2ci | | | |
| | | | | | | | | | | MAX 13.6 K ADU | |

no # 2

Pg # 4

51

Fri/SAT

Date 1994 MAR 25/26 Observers [Blu], [Tn], H/W

Emulsion Batches:

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.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|--------------------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| cc20793 | HD 93521 | 10 42 42 | +38 06 00 | 00 50 32 | | | | | 991 |
| 94 | " | " | " | 01 07 28 | | 2:32 W | | | 972 |
| 95 | Comp | | | | | | | FeAr Clear | 60s |
| 96 | BIAS(4) | | | | | | | | |
| 97 | HD 93521 | 10 42 42 | +38 06 00 | 01 26 55 | | 2:50 W | | | 900 |
| 98 | HD 93521 | 10 42 42 | +38 06 00 | 01 42 35 | | 3:06 W | | 900sec → | 729 |
| 99 | Comp | | | | | | | FeAr Clear | 60s |
| cc20800 | HD 93521 | 10 42 42 | +38 06 00 | 01 59 50 | | 3:23 W | | | 901 |
| 801 | HD 93521 | 10 42 42 | +38 06 00 | 02 15 17 | | 3:40 W | | | 999 |
| 802 | Comp | | | | | | | | |
| 804 803 | Bias (4) | | | | | | | | |
| 803 804 | HD 93521 | 10 42 42 | +38 06 00 | 02 35 27 | | 3:59 W | | | 899 |
| 805 | HD 93521 | 10 42 42 | +38 06 00 | 02 51 32 | | 4:14 | | | 824 |
| 806 | Comp | | | | | | | FeAr Clear | 60s |
| 807 | HD 93521 | 10 42 42 | +38 06 00 | 03 08 38 | | 4:32 W | | | 883 |

Spectr. Temp.

Dome Temp./Hum. -2.5°C 67.0%

Transparency Conditions ... Fine

Focus ~~5.87~~ 6.90

Spectr. Temp.

Dome Temp./Hum. ... λ LAMBDA

52

| Exp. Mtr. | Seeing | P ₀ Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emission | P.H. | Program | Remarks | Quality |
|-----------|--------|---------------------|-------|----------|--------------------------|-------------------|----------|------|------------|-----------|---------|
| 91 1030 | 3.5" | 7.04 | 09.5V | CASS CCD | 1800 μ /mm G-6065 | 300 μ FULL | 6609A | 25c | Bln 0* pgm | | |
| 92 1040 | | | | | | | | 26c | Bln 0* pgm | | |
| | | | | | | | | 5c | | | |
| | | | | | | | | 1c | | | |
| 93 963 | | 7.04 | 09.5V | | | | | 27 | Bln 0* pgm | SNR ~ 160 | |
| 94 729 | 5.6" | 7.04 | 09.5V | | | | | 28 | Bln 0* pgm | SNR ~ 160 | |
| | | | | | | | | 5 | | | |
| 95 718 | | 7.04 | 09.5V | | | | | 29 | Bln 0* pgm | SNR ~ 155 | |
| 96 632 | | 7.04 | 09.5V | | | | | 30 | Bln 0* pgm | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 1 | | | |
| 97 560 | | 7.04 | 09.5V | | | | | 10 | Bln 0* pgm | | |
| 98 641 | | 7.04 | 09.5V | | | | | 12 | Bln 0* pgm | | |
| | | | | | | | | 5 | | | |
| 99 640 | 4" | 7.04 | 09.5V | | | | | 11 | | | |

Catwalk humidity = 84%
S/N @ 0221 180/l

Spectr. Temp. Dome Temp./Hum. ~~-30°C~~ 71.5/84 Transparency Conditions ... v. sl. hazy (54)

Focus ... ~~6.87~~ 6.90

Spectr. Temp. Dome Temp./Hum. -40°C 77%

| Exp. Mtr. | Seeing | F ₀ Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---------------------------|--------|---------------------|-------|-------|--------------------|------|------------|------|------------|--------------------|---------|
| 700 | 3" | 7.04 | 09.5V | | 1800/45° G 6065 | 300μ | 6604A | 13c | Bln 0* pgm | | |
| | | | | | | | | 5c | | | |
| | | | | | | | | 1c | | | |
| 700 | | | | | | | | 14c | Bln 0* pgm | | |
| 681 | | 7.04 | 09.5V | | | | | 15c | Bln 0* pgm | | |
| | | | | | | | | 5c | | | |
| 630 | | 7.04 | 09.5V | | | | | 16 | Bln 0* pgm | | |
| 470 | | 7.04 | 09.5V | | | | | 15 | Bln 0* pgm | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 6 | | West side of pier. | |
| | | | | | | | | 11 | | | |
| | | | | | | | | 5 | | East side of pier | |
| 377 | | 7.04 | 09.5V | | | | SNR. ~ 150 | 17 | Bln 0* pgm | Xend = 2.745 | |
| 334 | | 7.04 | 09.5V | | | | | 18 | Bln 0* pgm | Sunrise. Xend 3.05 | |
| All to Perseus E.W.O.R.M. | | | | | | | | | | | |

#1 (55) Mon/Tues

Steve Smith

Date 1994 MARCH 28/29 Observers Sgs./Smt./Tn.....

Emulsion Batches:

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

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|------------------------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| CC20829 | BIAS (4) | | | | | | | | |
| ⁸³⁰ → 31 | Comp/Stellar | HERATANN | | 19 28 | | 0 0 | +40° | FeAr Clear | 50/60 |
| 832 | Comp | | | | | | | r1 | 60s |
| 833 | HD25361 | 03 56 42 | +58 22 57 | 19 41 17 | | | | | 90bs |
| 834 | Comp | | | | | | | FeAr | 60s |
| 835 | BIAS (4) | | | | | | | | |
| 836 | Comp | | | | | | | FeAr | 60s |
| 837 | HD29260 | 04 31 26 | +18 20 24 | | | | | | 1211 |
| 838 | Comp | | | | | | | FeAr | 60s |
| 839 | BIAS (4) | | | | | | | | |
| 840 | Comp | | | | | | | FeAr | 60s |
| 841 | HD 44990 | 06 19 48 | +07 08 | 20 32 50 | | | | | 1500s |
| 842 | Comp | | | | | | | FeAr | 60s |
| 843 - 45 | FLATS X3 | | | | | | | Tung | 5s |
| 46 | BIAS (4) | | | | | | | | |

Spectr.

Focus.

Spectr.

Exp. Mtr.

158

1227

880

Spectr. Temp. Dome Temp./Hum. $+3.4^{\circ}\text{C}$ $66-08^{\circ}\text{H}$ Transparency Conditions PARTLY CLOUDY ...Focus ... E87 ...

Spectr. Temp. Dome Temp./Hum.

90CGAIN CCD T-7-100E56

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------------------|-----------------|-------------|-----------------------------|-------------------|----------|------|--------------|---|---------|
| | | | | CASS CCD | 1800 λ /m G=5920 | 300 μ Full | 6A00A | 1c | | | |
| | | | | | | | | 3/4c | Locus Test | | |
| 158 | 6" | 7.30- 8.07 | F7Ib- 67Ib | | | | | 5 | 6 | STRONG SKY LINE AT \sim PIXEL 580 THROUGH CLOUDS | |
| | | | | | | | | 6 | Sgs | ABORTED DUE TO THICK CLOUDS | |
| | | | | | | | | 7 | | SNR \approx 70 | |
| | | | | | | | | 7 | | | |
| 1227 | 4" | 6.33- 6.75 | F7Ib- F9.5Ib | | | | | 8 | Sys | SAME SKY LINE AT \sim PIXEL 580 THROUGH CLOUDS AGAIN | |
| | | | | | | | | 9 | | SNR \approx 200 | |
| | | | | | | | | 9 | | | |
| 820 | 4" | B 6.5 -8.0 | F7Ib -K1Ib | | | | | 10 | Sys | THROUGH CLOUDS 1.49 AIR MASSES | |
| | | | | | | | | 11 | | | |
| | | | | | | | | | | 13000 MAX ADU | |

Spectr. Temp.

Dome Temp./Hum. $+7.2^{\circ}$ 71.68HTransparency Conditions *mostly cloudy*Focus *6.87*

Spectr. Temp.

Dome Temp./Hum.

*Seeing Test Info
ONLY NE FHM Letter*

58

| Exp. Mtr. | Seeing | V.Mg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|---------------------|---------------|-----------|-------------|-------------------|--------------|----------|------|--------------|--|---------|
| | | | | CASS CCD | 1800/4m G=5920 | 300m FULL | 6400A | 12c. | | | |
| 130 | 3" | 6.54- 7.38 | F5- G1 | | | | | 14c. | Sgs | THROUGH CLOUDS | |
| | | | | | | | | 15c. | | | |
| | | | | | | | | 16c. | | | |
| 3500 | | 1.14 | K0II b | | | | | 17c. | RV Std | | |
| | | | | | | | | 18c. | | | |
| | | | | | | | | 19c. | | | |
| 11.5K | | 1.35 | B7V | | | | | 20c. | Telluric std | | |
| | | | | | | | | 21c. | | | |
| | | | | | | | | 22c. | | | |
| 900 | 3" | 6.9 | K2III | | | | | 23c. | Std vel | cloud again | |
| | | | | | | | | 24c. | | | |
| | | | | | | | | 25c. | | | |
| | Dome SW No wind. | | | | ABOVE 300m slit | | | | Seeing Test | medium cloud | |
| | | | | | | | | | | note last 2 exps have image moved up from dirt specks | |

Spectr. Temp.

Dome Temp./Hum. $+1.6^{\circ}$ 73.48H

Transparency Conditions ... Cloudy

Focus ... 6.87

Spectr. Temp.

Dome Temp./Hum. ... C. 2.14 in 6.8A



| Exp. | Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emission | P.H. | Program | Remarks | Quality |
|------|-----------|--------|-------|----------|------------|------------------|------|----------|------|---------|----------------------|---------|
| 33 | 766 | 2.3 | 69 | | CAS CCD | 1300 6-5920 | 3000 | 6400A | 22ci | Std Vel | Repeat | |
| | | | | | | | | | | 23ci | | |
| | | | | | | | | | | 24ci | | |
| | | | | | | | | | | 25ci | | |
| | | | | | | | | | | 26ci | | |
| | 850 | 3 | 5.25 | Ha II ab | | | | | | 27ci | Std Vel cloud. | |
| | | | | | | | | | | 28ci | | |
| | | | | | | | | | | 29ci | | |
| | | | | | | | | | | 30ci | | |
| | 5400 | | -0.04 | k2 III | | | | | | 27ci | Std Vel (LOW THIN) | |
| | | | | | | | | | | 28ci | | |
| | 5000h | | -0.04 | k2 III | | | | | | 29ci | Std Vel (LOW) | |
| | | | | | | | | | | 28ci | | |
| | | | | | | | | | | 30ci | | |
| | 3500 | | 1.14 | ko III b | | | | | | 31ci | Std Vel (LOW THICK!) | |
| | | | | | | | | | | 32ci | | |
| | | | | | | | | | | 33ci | | |
| | | | | | | | | | | | 12000 MAX ADU | |

(61) p9#1 wed/Thurs

Emulsion Batches:

Date 1994.12.24.R.30.31... Observers Bln./Tn.....

CSS 386 5 sec. Abadaf. D.D.74. M.M.V. Time

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|----------------------|----------------|--------------|---------------------|-------------------------|-----------------------|--------------------|-------------|----------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| CC 20878 79 | Comp / Stellar | Hermiton | | | | | | FoAr Clear | 70/70 |
| 80 | BIHS(A) | | | | | | | | |
| 81 | Comp | | | | | | | FoAr Clear | 68 |
| 82 | HD87901 | 10 0303 | +17 27 22 | 19 29 49 | | | | | 74 |
| 83 | " | " | " | 19 31 22 | | 02 19 E | | | 50 |
| 84 | Comp | | | | | | | FoAr Clear | 66 |
| 85 | Comp | | | | | | | " | " |
| 86 | HD93521 | 10 42 42 | +38 06 00 | 19 39 24 | | 02 40 E | | | 801 |
| 87 | HD93521 | 10 42 42 | +38 06 00 | 19 53 07 | | 02 27 30 E | | | 726 |
| 88 | Comp | | | | | | | FoAr Clear | 603 |
| 89 | BIHS(A) | | | | | | | | |
| 90 | HD93521 | 10 42 42 | +38 06 00 | 20 08 54 | | 02 40 E | | | 691 |
| 91 | " | | | 20 20 47 | | 02 00 E | | | 685 |
| 92 | Comp | | | | | | | FoAr Clear | 603 |
| ⁹³ -95 | FLATS x 3 | | | | | | | Jung Ap 1/2 | 550 |

Spectr
Focus
Spectr

Exp. M

12K

1750

1880

2150

2200

Spectr. Temp.

Dome Temp./Hum. 11.5°C $60.5\% \text{RH}$ Transparency Conditions ... *clearing nicely* ...Focus ... *6.87*

Spectr. Temp.

Dome Temp./Hum. *90CGA11 - CCDT \rightarrow -100°C* 62

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|--------|-------------|------------------|-------------|----------|-------|------------------------------------|-------------------|---------|
| | | | | CASS CCD | 18001- G-6065 | 300 FULL | 6604A | 3/4ci | Focus Test | | S/N |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 5ci | | Tel East Side Row | |
| 12K | | 1.36 | B7V | | | | | 6ci | Telluric Std | 1.405 Air Mass | |
| | | | | | | | | 6ci | " " | | |
| | | | | | | | | 5ci | | | |
| | | | | | | | | 5ci | | | |
| 1750 | 2.4" | 7.04 | O9.15V | | | | | 7ci | Kln O ⁺ μg m | 1.177 air mass | 170/1 |
| 1880 | | | | | | | | 8ci | " | | 174/1 |
| | | | | | | | | 9ci | | | |
| | | | | | | | | 1ci | | | |
| 2150 | 3" | | | | | | | 10ci | | | |
| 2200 | | | | | | | | 11ci | | | |
| | | | | | | | | 5ci | | | |
| | | | | | | | | 12ci | | MAX K ADU | |

Spectr. Temp. Dome Temp./Hum. ^{+00.4°C} 65.5²⁸ Transparency Conditions . Fine . . . sl/hazy

Focus . . . 6.87

Spectr. Temp. Dome Temp./Hum. ^{00.0°C} 69.3⁷⁰
C LAMUDA

(64)

| Exp. | Exp. Mtr. | Seeing | Pl. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------|-----------|--------|----------|-------|-------------|----------------|-------------|----------|------|-------------------------|----------------------------|---------|
| 8 | 1960 | 2" | 704 | 09.5V | CASS CCD | 1800 G-6065 | 300 FULL | 6607A | 13c. | Bln 0 ^x pgrm | | |
| 23 | 1910 | | | | | | | | 10c. | | | |
| | | | | | | | | | 5c. | | | |
| | | | | | | | | | 1c. | | | |
| | | | | | | | | | 5 | | | |
| 16 | 6100 | | 3.66 | H0 | | | | | 15 | | MAX 7.5K ADC AIR MASS 1 | |
| 25 | 6850 | | | | | | | | 15 | Telluride Std. | | |
| | | | | | | | | | 5 | | | |
| 7 | 2070 | 2" | 704 | 09.5V | | | | | 9c. | | | |
| 8 | 2400 | | | | | | | | 16 | Bln 0 ^x pgrm | | 180/1 |
| | | | | | | | | | 17c. | | | |
| | | | | | | | | | 5c. | | | |
| 7 | 2150 | 2.3" | | | | | | | 18c. | | | |
| 20 | 2170 | 2.3" | | | | | | | 19c. | | | |
| | | | | | | | | | 5c. | | | |
| | | | | | | | | | 1c. | | | |

p443

65

Emulsion Batches:

Date 1994. MAR. 30/31... Observers Pln. / Tn.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|----------------------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------------------|
| | | | | | | | | Type/Filter | Exp. |
| CG40070 → CG40073 | HD93521 | 10 4242 | +38 06 00 | | | | | 4x | 67 msec |
| CG40074 -GG 75 | " | | | | | | | 2x | 133 msec |
| CC20912 | " | | | 22 20 00 | | 0 0 E/W | | | 750 ³ |
| CC 20913 | " | | | 22 34 18 | | 0 14 W | | | 700 ³ |
| CC 20914 | " | | | 22 47 18 | | 0 27 W | | | 703 ³ |
| CC 20915 | Comp | | | | | | | FeAr Clear | 60 ³ |
| CC 20916 | HD93521 | 10 4242 | +38 06 | 23 06 54 | | | | | 747 |
| 17 | " | " | " | 23 19 59 | | | | | 733 |
| 18 | Comp | | | | | | | FeAr Clear | 60s |
| 19 | BIAS(4) | | | | | | | | |
| 20 | HD93521 | 10 4242 | +38 06 | 23 36 04 | | 01 16 W | | | 728 |
| 21 | " | " | " | 23 48 40 | | | | | 736 |
| 22 | " | " | " | 00 02 08 | | | | | 707 |
| 23 | Comp | | | | | | | FeAr Clear | 60 sec |
| 24 | | | | | | | | | |
| → 26 | FLATS x3 | | | | | | | TUNG Ap/2 | 5 sec |

Spectr. Temp. Dome Temp./Hum. 100.1°C $70\% \text{H}$ Transparency Conditions *Fine to Slightly*Focus 6.87

Spectr. Temp. Dome Temp./Hum.

ONLY NE Fan on,
MEL ESE Wind

66

| Exp | Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----|-----------|--------|------|-------|-------------|----------------------|--------------------------------|----------|------|-------------|-------------------------|---------|
| | | | 7.04 | 09.5Z | | | ABOVE 300 μs LIT | | | Seeing Test | Dome ESE, Tel East Side | |
| | | | | | | | | | | " | | |
| | 2075 | 2.3" | | | CASS CCD | 1800 lines G-6065 | 300 FULL | 6404A | 20c | Blk 0* Pgm | | |
| | 2100 | | | | | " | " | " | 21c | " | | |
| | 2055 | | | | | " | " | " | 22c | " | | |
| | | | | | | | | | 23c | | | |
| | 2166 | | | | | 1800 lines G-6065 | " | 6404A | 24c | Blk 0* Pgm | | |
| | 2040 | 2" | | | | | | | 25c | | | |
| | | | | | | | | | 9c | | | |
| | | | | | | | | | 1c | | | |
| | 2040 | | 7.04 | 09.5Z | | | | | 26c | Blk 0* Pgm | | |
| | 2050 | 2" | | | | | | | 27c | | | |
| | 2045 | | | | | | | | 28c | | | |
| | | | | | | | | | 5c | | | |
| | | | | | | | | | 29c | 7c | | |
| | | | | | | | | | | | 15.2K ADU MAX | |

Spectr. Temp. Dome Temp./Hum. -00.3°C $84.7\% / \text{H}$ Transparency Conditions $\text{sl hazy} - \text{fog?}$

Focus 6.87

Spectr. Temp. Dome Temp./Hum. -00.9°C 88.0%
 C LAMBDA

69

| Exp. Mtr. | Seeing | Pl. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------|--------|----------|-------|--------------|-------------------|--------------|----------|------|------------|---------|---------|
| 25 2170 | 2-3" | 704 | 09.5E | C1155 CCO | 182014m G 6065 | 300m FULL | 6604A | 24c | Bln 0* ppm | | |
| 70 2130 | | | | | | | | 30c | | | |
| 2045 | | | | | | | | 31c | | | |
| | | | | | | | | 5c | | | |
| | | | | | | | | 1c | | | |
| 88 2050 | | | | | | | | 32c | | | |
| 70 2000 | 3" | | | | | | | 8c | | | |
| 2140 | | | | | | | | 10c | | | |
| | | | | | | | | 9c | | | |
| | | | | | | | | 33c | | MAX | 1-AD4 |
| | | | | | | | | 1c | | | |
| ALL TO PERSEUS & WORM | | | | | | | | | | | |

CCDT → -100.0°C
 Spectr. Temp.
 Focus 6.87
 Spectr. Temp. 90.991.1

Dome Temp./Hum. 54.77% / +4.1°C Transparency Conditions... partially cloudy
 Dome Fans OFF
 Dome Temp./Hum.
 C 27112114480 0 50 1024 4 1 ccdfmt

72

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulstorr | P.H. | Program | Remarks | Quality |
|-----------|--------|------|-----|-------|----------------|-----------|-----------|------|---------------|------------------------|--------------|
| 70 | | | | Cass | 1800 μ /mm | 300 μ | | 3 | | $\gamma = +4.1$ | |
| 70 | | | | CCD | G=6065 | slit | 6604A | 4 | Focus Test | foe = 6.87 | good. |
| | | | | | | | | 1c | | | |
| 63 | | | | | | | | 5 | | | |
| 35 | 12K | 1.36 | B7V | | | | | 6 | Telluric Std. | | |
| | " | | | | | | | 7 | | | |
| | | | | | | | | 8 | | | |
| | | | | | | | | 9c | | | |
| 52 | 2250 | 1.2 | 704 | 09.5V | | | | 10c | Bln O* pgm | AIR MASS 1.180 @ start | S/N 150/1 |
| 60 | 2535 | | | | | | | 11c | | | |
| 68 | 2280 | | | | | | | 12c | | | 150/1 |
| | | | | | | | | 5c | | | |
| 67 | 2700 | 1.2 | | | | | | 13 | Bln O* pgm | | |
| 700 | 2485 | | | | | | | 14 | Bln O* pgm | | |
| 8.6 | 2465 | | | | | | | 15 | Bln O* pgm | | |
| 63 | | | | | | | | 16c | | | |

Page 2
Thurs / Fri

73

Emulsion Batches:

Date 1994 MAR 31 / Apr 1. Observers [Blair] Jr. / Hsu

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|----------------|----------------|--------------|---------------------|-------------------------|-----------------------|---------------------|-------------|---------------------------|------|
| cc20958 | Comp | | | | | | | FeAr Clear | 60s |
| 59 | HD 77327 | 08 56 48 | +47 33 08 | 20 54 57 | | 0 0:13 W | | | 147 |
| 60 | HD 77327 | 08 56 48 | +47 33 08 | 20 58 24 | | 0:17 W | | | 120 |
| 61 | Comp | | | | | | | FeAr Clear | 60s |
| 62 | Comp | | | | | | | " | " |
| 63 | HD 93521 | 10 42 42 | +38 06 | 21 08 20 | | 01 08 E | | | 736 |
| 64 | " | " | " | 21 21 25 | | 0 54 E | | | 763 |
| 65 | " | " | " | 21 34 28 | | 0:42 E | | | 700 |
| 66 | Comp | | | | | | | FeAr Clear | 60s |
| 67 | Bias (4) | | | | | | | | |
| 68 | HD 93521 | 10 42 42 | +38 06 00 | 21:48:50 | | 0:27 E | | | 716 |
| 69 | HD 93521 | 10 42 42 | +38 06 00 | 22:01:10 | | 01 | | | 761 |
| 70 | HD 93521 | 10 42 42 | +38 06 00 | 22:14:34 | | | | | 712 |
| cg40076 -80 | 4x HD 93521 | 10 42 42 | +38 06 00 | 22:28 | | | | 4x | .067 |
| cg40081 82 | 2x HD 93521 | 10 42 42 | +38 06 00 | | | | | 2x* | .133 |

Spectr. Temp. Dome Temp./Hum. $+3.1^{\circ}\text{C}/62.2\%$ Transparency Conditions *Partly Cloudy*
 Focus *6.87*
 Spectr. Temp. Dome Temp./Hum.

74

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | Pr. | Program | Remarks | Quality |
|-----------|--------|------|-------|----------|--------------------|-----------|----------|------|--------------------------------------|---|---------------|
| | | | | Cass CCD | 18002/mm G=6065 | 300 μ | 6604A | 17 | | | |
| 8000 | 3.6 | | A0 | | | | | 18 | Telluric. <i>Star</i> (Low Air mass) | | |
| ~6000 | 3.6 | | A0 | | | | | 18 | Telluric | | |
| | | | | | | | | 19 | | | |
| | | | | | | | | 20a: | | | |
| 2300 | 1.2" | 7.04 | 09.5V | | | | | 21c | Bln O* pgn | | 5/18 140/1 |
| 2597 | | | | | | | | 22 | Bln O* pgn | SNR ~ 155 | |
| 2780 | | 7.04 | 09.5V | | | | | 23 | Bln O* pgn | SNR ~ 160 | |
| | | | | | | | | 24 | | | |
| | | | | | | | | 21 | | | |
| 2475 | | 7.04 | 09.5V | | | | | 25 | Bln O* pgn | Catwalk Humidity = 73% @ 2200 | |
| 2720 | | 7.04 | 09.5 | | | | | 26 | Bln O* pgn | | |
| 2248 | | 7.04 | 09.5V | | | | | 27 | Bln O* pgn | | |
| | | 7.04 | 09.5V | | | | | | Seeing Test. | | |
| | | 7.04 | 09.5V | | | | | | Seeing Test | Also accidentally wrote a file called cg40083 which is not a seeing test. | |

Pg #3

75

the one doing all the work

Date 1994 Mar 31/Apr 1 Observers [Bln] Tn/Hlw/Wde

Emulsion Batches:

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

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|--------------------|------------------|--------------|---------------------|---|-----------------------|-------------------|-------------|-------------------------------|------------|
| cc20971 | Bias (4) | | | | | | | | |
| 972 | Comp | | | | | | | FeAr Clear | 60s |
| 973 | HD93521 | 10 42 42 | +38 06 00 | 22 35 47 | | 0:20 W | | | 800 |
| 974 | HD93521 | 10 42 42 | +38 06 00 | 22 50 15 | | | | | 800 |
| 975 | Comp | | | | | | | FeAr Clear | 60s |
| 976 | HD93521 | 10 42 42 | +38 06 00 | 23 07 05 | | 0:51 W | | | 744 |
| 977 | HD93521 | 10 42 42 | +38 06 00 | 23 ^{19 57} 07 10 | | | | | 670 |
| 978 | HD93521 | 10 42 42 | +38 06 00 | 23 ³¹ 06 33 | | 1:17 W | | | 770 |
| 979 | Comp | | | | | | | | |
| 980 | Bias (4) | | | | | | | | |
| 981 | HD93521 | 10 42 42 | +38 06 00 | 23 48 25 | | 01 33 W | | | 722 |
| 982 | HD93521 | " | " | 00 02 01 | | 01 49 W | | | 900 |
| 983 | HD93521 | " | " | 00 17 42 | | 02 06 W | | | 973 |
| 984 985 -987 | Comp FLATS x3 | | | | | | | FeAr Clear TUNG 4p/2 | 60s 530 |

Spectr. T
Focus.
Spectr.

Exp. Mtr.

2330

2230

2625

2550

2420

2320

2050

1070

Spectr. Temp.

Dome Temp./Hum. $+2.2^{\circ}\text{C}/66.87$

Transparency Conditions ... Hazy, ... some clouds ...

Focus ... 6.87

Spectr. Temp.

Dome Temp./Hum.

76

| Exp. Mtr. | Seeing | Pa. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|----------|-------|----------|--------------------------------------|-----------|----------|------|------------|-------------------------|---------|
| | | | | Cass CCD | 1800 λ/mm G = 6065 | 300 μ | 6604A | 1 | | | |
| | | | | | | | | 28 | | | |
| 2330 | | 7.04 | 09.5V | | | | | 29 | Bln 0* pgm | | |
| 2230 | | 7.04 | 09.5V | | | | | 30 | Bln 0* pgm | | |
| | | | | | | | | 5 | | | |
| 2625 | | 7.04 | 09.5V | | | | | 6 | Bln 0* pgm | | |
| 2550 | | 7.04 | 09.5V | | | | | 7 | Bln 0* pgm | | |
| 2423 | | 7.04 | 09.5V | | | | | 8 | Bln 0* pgm | | |
| | | | | | | | | 9 | | | |
| | | | | | | | | 1 | | | |
| 2320 | 1" | 7.0f | 09.5V | | | | | 10 | Bln 0* pgm | | |
| 2050 | 1.2" | | | | | | | 12ci | " | thin cloud now | |
| 1070 | 1" | | | | | | | 14ci | " | thicker cloud | |
| | | | | | | | | 5ci | | | |
| | | | | | | | | 22ci | | | |
| | | | | | | | | | | S/N only S/N > 100/1 | |

CCD Spectr. Temp. -100.0°C Dome Temp./Hum. $+1.4^{\circ}$ 70.8% Transparency Conditions *incr high cloud*

Focus $6.8.7$

Spectr. Temp. ^{gain} 90

Dome Temp./Hum. 2.2 Air/BD \rightarrow heuriton cache #

78

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Control | Slit | Emulsion | Program | Remarks | Quality |
|-----------|--------|------|-------|-----------------------|--------------------------|-----------|------------------|---------|--------------------------|---|
| 702 | 7-2" | 7.09 | 0915E | Cass CCD | 1800 μ /mm G=6065 | 300 μ | 6604A | 15c | Bln O ^x paper | SNR ~ 80 |
| | | | | | | | | 16c | | |
| | | | | | | | | 2 | | |
| | | | | | | | | 1 | | |
| | | | G2V | | | | | 18 | Tours. | Max ADU ~ 7000 - Done to show on Apr 9 tour in a pinch. |
| | | | | All to Parsons & WORM | | | | | | |
| | | | | Cass CCD | 1800 μ /mm G=5910 | 300 μ | 6395A | 1c | | - New G setting requested by Sgs |
| | | | | | | | 6395A | 3/4 | Focus Test | Ok |
| | | | | | | | | 5 | | |
| 1480 | 4-5" | 6.15 | G0Ib | | | | | 6 | Rm Pgm | 85% catwalk humidity @ 0230 |
| | | | | | | | | 7 | | |
| | | | | | | | | 1 | | \rightarrow field checked in finder, looks okay. |
| | | | | | | | | 8 | | |
| 5000 | | 2.99 | A0V | | | | | 9 | Telluric | Max ADU 9000, Star tracked back and forth on slit |
| | | | | | | | | 10 | | |

Spectr. Temp. Dome Temp./Hum. +0.6°C/73.9% Transparency Conditions ... hazy, some scattered clouds
 Focus ... 6.87
 Spectr. Temp. Dome Temp./Hum.

clouds
 80

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------|--------|---------------|---------------|----------|------------------------------|-----------------------|----------|------|----------------|----------------------------|---------|
| | | | | Cass CCD | 1800 λ /mm G=5910 | 300 μ Fujifilm | 6395A | 11 | | | |
| 3000 | | 2.72 | K3 II | | | | | 12 | Std. Velocity. | | |
| | | | | | | | | 13 | | | |
| | | | | | | | | 1 | | | |
| 428 | 3" | 6.73 -7.54 | F6 -G2 Iab | | | | | 14 | | | |
| | | | | | | | | 15 | Rm pgm | Totally clouded in at end. | |
| | | | | | | | | 14c | | | |
| All to WORM & Perseus | | | | | | | | | | | |

Pg# 1/81 Good Friday.
↓
Fri Sat

Date 1994 Apr. 1/2 Observers H/W/LCK {Vys}

Emulsion Batches:

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

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | | Exp. Mtr. |
|-------------------|--------------|---------------|---------------------|-------------------------|-----------------------|-------------------|----------------|----------------|------------------|-----------|
| | | | | | | | | Type/Filter | aperture Exp. | |
| cc21022/3 | Comp/Stellar | Hartman | | 19:00 | | 0:50 W | +38:26 | FeNe Clear | 20/30 | |
| 24 | Bias x 4 | | | | | | | | | |
| 25 | Comp | | | | | | | " | 60 | |
| 26 | HD95735 | 10 57 54 | 36 38 00 | 19:25:31 | | 3:04 E | | | 600s | 674 |
| 27 | Comp | | | | | | | | 60 | |
| 28 -30 | 3 x Flats | | | | | | | Tung 1/2 ap | 10 | |
| 31 | Bias x 4 | | | | | | | | | |
| 32 | Comp | | | | | | | FeNe Clear | 35s | |
| 33 | BD-02 3000 | 09 48 10 | -03 13 04 | 23 27 50 | | 2:04 W | | | 300s | 7 |
| 34 | Comp | | | | | | | | | |
| 35 | Bias x 4 | | | | | | | | | |
| 36 | BD-02 3000 | 09 48 10 | -03 13 04 | 23 35 22 | | 2:16 W | | | 600s | 16 |
| 37 | Comp | | | | | | | FeNe Clear | 60 | |
| 38 | Comp | | | | | | | " | " | |
| 39 | HD95735 | 10 57 54 | 36 38 00 | 23 55 23 | | 1:20 W | | | 283 | 26 |
| | 40 Comp | FeNe clear | 35s | 41 Bias x 4 | 42-44 | 3 x Flats | Tung 1/2 ap | 10s | | |

*Note: cc21029.FTs is a 10 second dark.
perhaps source misfired -H/W 04-94

ccd
Spectr. Temp. -100.0°C

Dome Temp./Hum. 5.2°C/41.1%

Transparency Conditions Partially cloudy
Fans OFF → mainly

Focus 6.90

Spectr. Temp. gain = 90

Dome Temp./Hum. 480 0 50 1024 4 1 ccd fnt.

(82)

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ center filter | Slit | central emission wavelength | cache filter | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------------------------------|---------------------------|-----------|-----------------------------------|-----------------|-------------|---|------------------------|
| | | | | Cass CCD | 1800 λ /mm | 200 μ | 5303 \AA | 3/4 | Focus Test | T = +5.2°C, foc = 6.90 | set to slightly colder |
| | | | | | G = 5115 | | | 1 | bsum 4. bat | | |
| | | | | | | | | 5 | | | |
| 674 | 7.48 | M2 | | SNR ~ 110 | | | | 6 | Vys Std | Through thick clouds. | |
| | | | | | | | | 7 | | Exterior humidity = 44% | |
| | | | | | | | | 8 | | @ 1935 | |
| | | | | | | | | 1 | | Totally cloudy now.. | |
| | | | | | | | | 9 | | just about to do BD-02 3000 | |
| 7 | 10.54 | M0 | | <u>Weak</u> | | | | 10 | Vys Pgm | Cleared again Exterior humidity: 90% @ | 23 20 !!! |
| | | | | | | | | 11 | | | |
| | | | | | | | | 1 | | 92% @ 2330, + SE winds, | |
| 16 | 10.54 | M0 | | Weak + lts of sky background. | | | | 12 | Vys Pgm | some clouds... → Through many clouds | |
| | | | | | | | | 13 | | 93% @ 2340 | |
| | | | | | | | | 14 | | 94% @ 0000 | |
| 26 | 5-6" | 7.48 | M2 | | | | | 15 | Vys Std. | → to very cloudy. | |

CCD Spectr. Temp. -100°C Dome Temp./Hum. $1.9^{\circ}\text{C}/67.6\%$ Transparency Conditions Clear for a change
 Focus 6.90 Dome Fans OFF
 Spectr. Temp. gain = 9.0 Dome Temp./Hum. $468\ 0\ 50\ 1024\ 4\ 1\ \text{ccd fnt}$

(84)

| Exp. | Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ CTRL/fit | Slit | central emission wavelength | fit | Program | Remarks | Quality |
|------|-----------|--------|------|------|----------|--|------------|-----------------------------------|-----|----------------------------|------------------------------------|---------|
| | | | | | Cass CCD | $1800\ \text{\AA}/\text{mm}$ $G = 5115$ | $300\ \mu$ | $530.3\ \text{\AA}$ | 3/4 | Focus Test | | good |
| | | | | | | | | | 1 | brun 4 sat | | |
| | | | | | | | | | 5 | | | |
| | | | 10.5 | MOI | | <u>weak</u> | | | 6 | Vys Pgm | Twilight. | |
| | | | | | | | | | 7 | | | |
| | 43 | | 10.5 | MOI | | | | | 8 | Vys Pgm | | |
| | | | | | | | | | 9 | | | |
| | | | | | | | | | 1 | | | |
| | | | | | | | | | 10 | | | |
| | 244 | | 8.0 | MI V | | | | | 11 | Vys Std. | | |
| | | | | | | | | | 12 | | | |
| | | | | | | | | | 13 | | | |
| | | | 10.6 | MOI | | | | | 14 | Vys Pgm Vys Pgm | 83% Humidity on cotwalk @ 20 30 | |
| | | | | | | | | | 15 | | | |
| | | | | | | | | | 16 | | | |

pg #2

(85)

EVs3

Emulsion Batches:

Date 1994 Apr 3/4

Observers

HW/LCK

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|----------------|---------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|-----------------|
| | | | | | | | | Type/Filter | Exp. |
| 1 cc21061 | AC+68 3124 | 07 21 38 | +68 49 42 | 20 46 22 | | 2:03 W | | | 1080 |
| 62 | Comp | | | | | | | FeNe Clear | 35 _s |
| 63 | Bias x 4 | | | | | | | | |
| 64 | Comp | | | | | | | " | " |
| 65 | AC+63 14097 | 07 25 17 | +63 09 16 | 21 13 12 | | 2:20 W | | | 642 |
| 66 | Comp | | | | | | | " | 35 |
| 67 | Comp | | | | | | | " | " |
| 68 | AC+55 30267 | 07 27 18 | +55 03 45 | 21 30 36 | | 2:48 W | | | 1268 |
| 69 | Comp | | | | | | | " | 35 |
| cg40084 -87 | 4x HD90861 | 10 24 17 | 29 05 35 | 22:00 | | | | | .067 |
| cg40088 -89 | 2x HD90861 | 10 24 17 | 29 05 35 | | 22 04 | 0:05 W | | | .133 |
| 70 | Comp | | | | | | | " | 35 |
| 71 | HD90861 | 10 24 17 | 29 05 35 | 22:07.42 | | 0:16 W | | | 331 |
| 72 | Comp | | | | | | | " | 35 |
| 73 | Bias x 4 | | | | | | | | |

Spectr. 1

Focus .

Spectr.

Exp. Mtr.

108

50

39

750

Spectr. Temp.

Dome Temp./Hum. +0.6/70.2%

Transparency Conditions Clear

Focus 6.90

Dome Fans OFF

Spectr. Temp.

Dome Temp./Hum.

86

| Exp. Mtr. | Seeing | Mag. √Mag. | Sp. | Inst. | Grating/ Filter | Slit | Emulsion | Si. FH. | Program | Remarks | Quality |
|-----------|--------|---------------|----------|-----------------------|--------------------|-------|----------|-------------|------------------------|---------|---------|
| 108 | 10.9 | M0 V | Cass CCD | 1800.4/mm 6 = 5115 | 300 μ | 5303A | 17 | Vys Pgm | | | |
| | | | | | | | 18 | | | | |
| | | | | | | | 19 | | | | |
| 50 | 10.5 | M0 V | | | | | 20 | Vys Pgm | | | |
| | | | | | | | 21 | | | | |
| | | | | | | | 22 | | | | |
| 39 | 11.3 | M0 V | | | | | 23 | Vys Pgm | Catwalk humidity = 89% | | |
| | | | | | | | 24 | | @ 2150 | | |
| | 6.9 | K2 III | | | | | | Seeing Test | | | |
| | 6.9 | K2 III | | | | | | Seeing Test | | | |
| | | | | | | | 25 | | | | |
| 750 | 6.9 | K2 II | | | | | 26 | Std Vel. | RV = +36.3 ± .4 km/s | | |
| | | | | | | | 27 | | | | |
| | | | | | | | 1 | | | | |

Spectr. Temp.

Dome Temp./Hum. $-0.3^{\circ}\text{C}/73.4\%$

Transparency Conditions .. Clear ..

Focus 6.90

Fans OFF

Spectr. Temp.

Dome Temp./Hum.



| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Central Emission Wavelength | C. P.H. | Program | Remarks | Quality |
|-----------|----------|-----------|------|----------|--------------------|-----------|-----------------------------|---------|------------|---|---------|
| 35 | | | | Case CCD | 18002/nm G=5115 | 300 μ | 5303 Å | 28 | | | |
| 35 | ~3' | 10.5 | M0 V | | | | | 29 | Vys Pgm | | |
| 35 | | | | | | | | 30 | | | |
| 35 | | | | | | | | 31 | | | |
| 35 | | | | | | | | 3/4 | Focus test | T = -0.4°C , foc = 6.90 | Ok. |
| 35 | | | | | | | | 5 | | | |
| 35 | ~200 ~4" | 7.5 | M2 V | | | | | 6 | Vys Std. | | |
| 35 | | | | | | | | 7 | | | |
| 35 | | | | | | | | 8 | | | |
| 35 | 0 | 10.5 | M0 V | | | | | 9 | Vys Pgm | | |
| 35 | | | | | | | | 10 | | | |
| 35 | | | | | | | | 1 | | | |
| 35 | | | | | | | | 11 | | | |
| 35 | 0 | 10.9 | M0 V | | | | | 12 | Vys Pgm | | |
| 35 | | | | | | | | 13 | | | |
| 35 | | | | | | | | 14 | | | |

Spectr. Temp. Dome Temp./Hum. $-0.8^{\circ}\text{C}/74.7\%$ Transparency Conditions *clear* (90)
 Focus 6.90
 Spectr. Temp. Dome Temp./Hum. 468 0 50 1024 4 1 ccdfmt

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | PH | Program | Remarks | Quality |
|--------------------------|--------|-----------|-----|----------|---------------------------|-----------|----------|----|----------|----------------------------------|---------|
| 0 | | 11.2 | M0 | Cass CCD | 1800 lines/mm G = 5115 | 300 μ | 5303 R | 15 | Vys Pgm | Catwalk Humidity = 92% @ 0000 | |
| | | | | | | | | 16 | | | |
| | | | | | | | | 17 | | | |
| 7 | | 10.5 | M0 | | | | | 18 | Vys Pgm | | |
| | | | | | | | | 19 | | | |
| | | | | | | | | 31 | | | |
| | | | | | | | | | | 1 hour lunch break | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 20 | | | |
| ~200 | | 8.5 | MIV | | | | | 21 | Vys Std. | | |
| | | | | | | | | 22 | | | |
| | | | | | | | | 31 | | | |
| | | | | | | | | 1 | | | |
| All to WORM & perseus | | | | | | | | | | | |

91

Wed / Thurs

Emulsion Batches:

Date 1994 Apr. 6/7... Observers ... T.R. ... Eckelke Tel Non Motion Tests.

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

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------------------|--------------------------|-----------|------------------|----------------------|--------------------|----------------|-------------|------------------------|-------|
| ce06917 | Th Ar | | | 21 25 51 | | 00 01 W | -33° | Th Ar | 4sec |
| 18 | " | | | 22 52 01 | | | | | |
| 19 | BIAS | | | | | | | | |
| 20 | Th Ar | | | 23 26 31 | | | | | |
| 21 | " | | | 23 47 16 | | | | | |
| 22 | " | | | 01 03 08 | | | | | |
| 23 | FLAT | | | 01 06 54 | | | | TKMG | 10sec |
| 24 | Th Ar | | | 01 44 13 | | | | | |
| 25 | Before Topup. | | | | | | | | |
| 26 | FLAT, then BIAS | | | 02 29 | Back down | 00 01 W | -33° | TKMG | 10sec |
| 27 | Th Ar | | | 02 31 54 | start of | | | Th Ar | 4sec |
| ce0628- 34 | Th Ar | | | | | | | Th Ar | 19sec |
| 37 | | | | | | | | | |

Spectr.
Focus -
Spectr.

Exp. Mir.

Spectr. Temp. Dome Temp./Hum. $+1.2^{\circ}\text{C}$ Transparency Conditions *SNOW* *92*
 Focus *CCDT left at bottom in -123°C*
 Spectr. Temp. Dome Temp./Hum. $+10.6^{\circ}\text{C}$ *72.4% H₂O @ 210* *90°C @ 1m*
700 m/s *C. L. M. P. I.* *410* *170* *1024* *1* *1* *CCV FMT*

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | X Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-----------------|----------------|------------------------------|-------------|-----------------|--|---|---------|
| | | | | <i>ech tilt</i> | | <i>w 60μ?</i> | | | <i>Point T</i> | | |
| | | | | <i>18.40</i> | <i>0.695</i> | <i>H=90μ</i> | <i>6224</i> | <i>1c1</i> | <i>+1.1 \rightarrow +1.2$^{\circ}$</i> | <i>ONLY the middle CROSS</i> | |
| | | | | | | | | <i>2</i> | <i>+0.8</i> | <i>CCDT = -123.6°C</i> | |
| | | | | | | | | <i>3</i> | <i>0.7</i> | | |
| | | | | | | | | <i>4</i> | <i>0.6</i> | | |
| | | | | | | | | <i>5</i> | <i>0.6</i> | | |
| | | | | | | | | <i>6</i> | <i>0.6</i> | | |
| | | | | | | | | <i>7</i> | <i>0.6</i> | | |
| | | | | | | | | <i>8:</i> | <i>10.5$^{\circ}\text{C}$</i> | <i>CCDT = -123.6°C</i> | |
| | | | | | | | | <i>10c1/3c1</i> | <i>$\xrightarrow{+0.6}$ $\rightarrow +0.7^{\circ}$</i> | <i>Topup complete by 0202</i> | |
| | | | | | | | | <i>9c1</i> | | | |
| | | | | | | | | <i>9c1</i> | <i>+10.6$^{\circ}\text{C}$</i> | <i>0.242</i> | |

Point
(45 min DARK, 1.5 sec comp. w. 1.1m)

Pg #1

93

Tues Fri

Date 1994 Apr. 7/8 Observers [KK] Tn/Hlw

Emulsion Batches:

.....
.....

Noted that CSS 386 Time = U.U.V. Time.....

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-------------------|-------------------------------|--------------|---------------------|---------------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce 06938/9 | Inboard/Outboard Hartman Mask | | | | | | | ThAr Star | 5/4 |
| 40 | Bias (4) | | | | | | | | |
| 41 | Comp | | | | | | | ThAr Star | 5 |
| 42 | HD 34029 | 05 09 18 | +45 54 00 | 20 11 47 20 05 06 | | 3:44 W | 46° | | 70 |
| 43 | Comp | | | | | | | ThAr | 5 |
| 44 | HD 34029 | 05 09 18 | +45 54 00 | 20 16 57 | | | | " | 62 |
| 45 | Comp | | | | | | | " | 5 |
| 46 | Comp | | | | | | | " | " |
| 47 | HD 47105 | 06 31 54 | +16 29 00 | 20 29 06 | | +2:43 W | 16° | | 277 |
| 48 | Comp | | | | | | | ThAr | 5 |
| 49 | Comp | | | | | | | " | 5 |
| 50 | HD 62509 | 07 39 12 | +28 16 00 | 20 41 53 | | | | | 141 |
| 51 | Comp | | | | | | | " | 5 |
| 52 | Bias (4) | | | | | | | | |
| 53 | Comp | | | | | | | " | " |

Filter =
Red

CC

Spectr
Focus
Spectr

Exp. Mtr

500

500

184

400

CCD Spectr. Temp. -100.0 Dome Temp./Hum. $0.3^{\circ}\text{C}/45.6\%$ Transparency Conditions Clear (14)
 Focus $.200$ [for use with Real Filter] [set .239 us OK for no filter work] Dome Fans OFF
 Spectr. Temp. \dots gain $=90$ Dome Temp./Hum. \dots 0 0 256 1024 4 1 ccd fnt

| Exp. Mtr. | Seeing | Pr. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Transmission | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------------------|---------------|-------------|---|---|--------------|----------|------------|---------------------------|------------------------------|
| 50 | | | | Echelle CCD | 300 l/mm 56.95 18.40 cross-grating | 60 μ width = .277 400 μ height = .225 6300 \AA | | 5/6 1 | Focus Test | | set for .25 pixels too cold. |
| 5 | | | | | | | | 2 | | some lines are saturated. | |
| 70 | 500 | 0.09 | G8 III + F | | | | | 3 | KK pgm | | |
| 5 | | | | | | | | 2 | | | |
| 62 | 500 | 0.09 | G8 III + F | | | | | 4 | KK pgm | 13 K ADU max | |
| 5 | | | | | | | | 2 | | | |
| 27 | 184 | B ⁺ 1.9 | A0 IV | | | | | 3 | KK pgm | | |
| 5 | | | | | | | | 2 | | | |
| 5 | | | | | | | | 2 | | | |
| 14 | 400 | 1.14 | K0 III b | | | | | 5 | Std. Vel. | | |
| 5 | | | | | | | | 2 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 2 | | | |

Spectr. Temp. Dome Temp./Hum. $-0.1^{\circ}\text{C}/43.3\%$ Transparency Conditions ... Clear

Focus 200

Spectr. Temp. Dome Temp./Hum.

96

| Exp. Mtr. | Seeing | H. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------|----------------|---------|-------|----------------|--|--|----------|------|----------|-----------------------|---------|
| 340 5 | 263 | 1.9 | A2 IV | Echelle CCD | 300/mm 18.40 cross- grating .5695 | width = 60 μ height = 400 μ | 6300 Å | 6 | KK pgm | | |
| 300 5 | 230 | 1.9 | A2 IV | | | | | 3 | KK pgm | | |
| | | | | | | | | 2 | | | |
| | | | | | | | | 2 | | | |
| 271 525 | 225 | 3" | 3.52 | F6 II A1-5X | | | | 3 | KK pgm | DIAX = 8 K AD4 | |
| | 225 | | | | | | | 2 | | | |
| 234 54 | 225 | 2-3" | 3.52 | F6 II A1-5X | | | | 3 | KK pgm | | |
| | | | | | | | | 2 | | | |
| | | | | | | | | 7.5 | | | |
| 202 50 | 400 | 0.34 | F5 IV | | | | | 4 | KK pgm | | |
| | | | | | | | | 2 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 2 | | | |
| 217 5 | 397 | 1.35 | B7 V | | | | | 5 | Telluric | Air Mass @ End = 1.46 | |

Spectr. Temp.

Dome Temp./Hum. $-0.5^{\circ}\text{C}/47.9\%$

Transparency Conditions

Fine

(98)

Focus ... 200

Spectr. Temp.

Dome Temp./Hum.

| Exp | Exp. Mtr. | Seeing | $\frac{H\alpha}{\text{Mag.}}$ | Sp. | Inst. | Grating/ Tilt | Slit | $\frac{\lambda}{\text{bandwidth}}$ | P.H. | Program | Remarks | Quality |
|-----|-----------|--------|-------------------------------|--------|----------------|------------------|---------------------|------------------------------------|------|---------|---|---------|
| 537 | | | | | Echelle CCD | 300/mm | 60 wide 400 long | 6300Å | 2 | KK pgm | α CCD 112 middle ORDER 6200-6248Å | |
| 537 | 562 | | $B=1.9$ | F2 | | | | | 6 | | 1.457 AIR MASS. | |
| 539 | 330 | 2" | $B=1.9$ | F2 | | | | | 2 | | | |
| 539 | 330 | 2" | $B=1.9$ | F2 | | | | | 3 | KK pgm | | |
| 539 | 344 | | $B=1.9$ | F2 | | | | | 4ci | KK pgm | | |
| 539 | | | | | | | | | 2 | | | |
| 539 | | | | | | | | | 2 | | | |
| 539 | 127 | | 3.65 | A0 III | | | | | 5 | KK pgm | | |
| 539 | | | | | | | | | 2 | | | |
| 539 | 117 | | 3.65 | A0 III | | | | | 6 | KK pgm | | |
| 539 | | | | | | | | | 2 | | | |
| 539 | | | | | | | | | 1 | | | |
| 539 | | | | | | | | | 2 | | | |
| 539 | 272 | | 2.69 | G0 IV | | | | | 3 | KK pgm | | |
| 539 | | | | | | | | | 2 | | | |

Spectr. Temp.

Dome Temp./Hum. $-1.4^{\circ}\text{C}/53.7\%$ Transparency Conditions *Clear - sl. hazy*Focus *260*

CATWILK H=60% only

Spectr. Temp.

Dome Temp./Hum.

100

| Exp. Mtr. | Seeing | $\sqrt{\text{Mag.}}$ | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion camera | P.H. | Program | Remarks | Quality |
|-----------|--------|----------------------|-----------------------|----------------|-----------------------------|-------------|--------------------|----------------------|----------|---|---------|
| 250 | | 2.69 | G0IV | Echelle CCD | 300m 18.40 xg = .5695 | 60m 400m | 6300A | 4 | KK Pgm | | |
| 350 | | | G0IV K0III | | | | | 6c. | Std vel | MAX 13K ADU 1.16 AIR MASS | |
| 350 | | | | | | | | 6c. 2c. | Std vel | | |
| 150 | 3.4' | 3.52 | F6II | 1A1-5V | | | | 2c. 3c. 7c. | KK pgm | 4500 ADU MAX except 1st pixel H.R MASS 1.755 | |
| 160 | | | | | | | | 4c. 2c. 1 2 | KK pgm | | |
| 300 | | 1.35 | B7V | | | | | 5 2 | Telluric | X _{end} = 1.81 | |

Pg # 5

(101)

Emulsion Batches:

Date 1994 Apr. 7/8 Observers [KK] T_n/Hw

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp |
|-----------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| Ce07002 | HD87901 | 10 03 03 | +12 27 22 | 01 02 08 | [Filter = Red] | +3:45 W | | | 200 |
| 3 | Comp | | | | | | | Th Ar | 5 |
| 4 | Comp | | | | | | | " | " |
| 5 | HD175492 | 18 50 32 | +22 31 06 | 01 14 14 | | 4:30 E | | | 1200 |
| 6 | Comp | | | | | | | " | 5s |
| 7 | HD175492 | 18 50 32 | +22 31 06 | 01 36 28 | | 4 11 E | | | 116f |
| 8 | Comp | | | | | | | Th Ar | 5s |
| 9 | BIAS(4) | | | | | | | | |
| 10 | Comp | | | | | | | Th Ar | 5s |
| 11 | HD185734 | 19 35 26 | +29 55 22 | 02 03 38 | | 4 32 E | | | 950 |
| 12 | Comp | | | | | | | Th Ar | 5s |
| 13 | HD185734 | 19 35 26 | +29 55 22 | 02 22 11 | | 4 09 E | | | 1200 |
| 14 | Comp | | | | | | | " | 5 |
| 15 | Comp | | | | | | | " | " |
| 16 | HD161096 | 17 38 30 | +04 37 00 | 02 50 14 | | 1:58 E | | | 400 |
| 17 | Comp wint | | | | | | | " | 5 |

Spectr. Te

Focus... C

Spectr. Te

Exp. Nr.

306

50

65

10

71

257

Spectr. Temp. Dome Temp./Hum. $-1.6^{\circ}C/51.4\%$ Transparency Conditions Clear
 Focus .. 0.200 .. with Real Filter of course
 Spectr. Temp. Dome Temp./Hum.

102

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|---------------|-------------|------------------|-----------------|----------|------|--------------|----------------|----------------|
| 306 | | 1.35 | B7V | Echelle CCD | 300L/mm 1R.40 | 60μm x 400μm | 6300Å | 5 | Telluric std | Xend = 2.29 | |
| | | | | | xg: 5695 | | | 2 | | | |
| | | | | | | | | 2 | | | |
| 50 | 3-4" | 4.59 | G4III +A6V | | | | | 6 | KK pgm | 200 AIRMAGS | S/N ≈ 200/1 |
| | | | | | | | | 2 | | | |
| 65 | 3" | 4.59 | G4III +A6V | | | | | 6 | KK pgm | | |
| | | | | | | | | 7c | | | |
| | | | | | | | | 1c | | | |
| | | | | | | | | 2c | | | |
| 60 | 2-3 | 4.69 | G8II-IV | | | | | 3c | KK pgm | AIRMAGS = 1.84 | |
| | | | | | | | | 2 | | | |
| 71 | | 4.69 | G8II-IV | | | | | 3c | KK pgm | | |
| | | | | | | | | 2 | | | |
| | | | | | | | | " | | | |
| 257 | 3-4" | 2.77 | K2III | | | | | 4 | Std. Vel. | | |
| | | | | | | | | 2 | | | |

Spectr. Temp.

Dome Temp./Hum. $-1.9^{\circ}\text{C}/50.9\%$

Transparency Conditions

Clear

104

Focus $\cdot 200$

Spectr. Temp.

Dome Temp./Hum.

| Exp. Mtr. | Seeing | ✓ F. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------------|----------|----------------|--|-------------------------|----------|------|-----------|----------------------|---------|
| 365 | 45" | 2.77 | K2 III | Echelle CCD | 300 λ /mm 1K.40 xg = .5615 | 60 μ x 400 μ | 6300A | 5 | Std. Vel. | | |
| | | | | | | | | 2ci | | | |
| | | | | | | | | 3ci | | | |
| 76 | 4" | 3.23 | B9.5 III | | | | | 6i | KK, pgm | 2.97 Air mass | |
| | | | | | | | | 2ci | | | |
| 75 | | 3.23 | B9.5 III | | | | | 3ci | KK pgm | | |
| | | | | | | | | 2 | | | |
| | | | | | | | | 2ci | KK pgm | | |
| 365 | 3" | 2.69 | G0 IV | | | | | 4ci | KK pgm | High Air mass Repeat | |
| | | | | | | | | 7ci | | | |
| 335 | | 2.69 | G0 II | | | | | 4 | KK pgm | | |
| | | | | | | | | 2ci | | | |
| | | | | | | | | 2ci | | | |
| 410 | | B = 1.9 | F | | | | | 3ci | KK pgm | | |

Pg #7

105

Date 1994 Apr 7/8 Observers [KK] Tn/Hlw

Emulsion Batches:

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------------------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|--------|
| ce07034 | HD8890 | 01 22 36 | 88 46 00 | 04 44 54 | [Filter=Red] | 08 57 E | | | 36 |
| 35 | Comp | | | | | | | THAT | 55 |
| 36 | BIAS(A) | | | | | | | | |
| 37-41 | 5x Flats | | | | | 1:52 W | +67° | Tung | 1 sec. |
| 42 → 47 | 6x FLATS | | | | | 0 00 | +200 | JUNG | 1 sec |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |

Spectr.

Focus.

Spectr.

Exp. Mtr

353

#1 (107) FTI / SAT

Emulsion Batches:

Date 1994 Apr. 8/9..... Observers [F.H.] T.H.....

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|------------|----------------|--------------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CE07048 | BIAS(4) | | | | | | | Reel ORDER sep Filter in | |
| 49 | Comp | | | | | | | THAr | 5s |
| 50 | HD8890 | 01 22 36 | +88 46 | 19 58 50 | | 06 47W | | | 447 |
| 51 | Comp | | | | | | | THAr | 5s |
| → 52 56 | FLATS x 5 | Back to Polaris posn for flats | | | 20 32 | 06 48W | +89 15 | TUNG | 1s |
| 57 | BIAS(4) | Big Gap due to clouds | | | | 11 W | " | | |
| 58 | Comp | | | | | | | THAr | 5s |
| 59 | HD8890 | 01 22 36 | +88 46 | 23 06 05 | | 09 54W | | | 535 |
| 60 | Comp | | | 23 16 | | | | THAr | 5 |
| 61 | HD8890 | | | 23 16 51 | | | | | 654 |
| 62 | Comp | | | 23 29 | | | | THAr | 5s |
| 63 | HD8890 | | | 23 30 04 | | | | | 488 |
| 64 | Comp | | | | | | | THAr | 5s |
| 65 | BIAS(4) | | | | | | | | |
| 66 | Comp for α Boo | | | | | | | | |

CCD Spectr.
 Focus. C.G.
 Spectr.

Exp. Mir.

0

62

68

27

CED
Spectr. Temp. -100°C

Dome Temp./Hum. $+3.3^{\circ}\text{C}$ $44\% \text{H}$

Transparency Conditions $\dots V \dots$ cloudy.....

(108)

Focus $\dots 2.05 \dots$ with Red Filter

Spectr. Temp. $\dots 9.0 \dots$

Dome Temp./Hum. $+3.0^{\circ}\text{C}$ $44\% \text{H}$ 20:10

Polaris just visible on TV view

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | X Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|----------|----------|------------------------|--------------------|----------------------|----------|------|---------|----------------------|-------------|
| | | | | 5 decl/200 300 in/hour | | 600 = 277 | | 1ci | | Jel encoders NORM on | S/N 70/1 |
| | | | | 18.40 HLT 5695 | | 400 H 63008 | | 3ci | | HR 3275 at Zenith | |
| 44 | 0 | 1.2 | B 1.9 | F | | 3.225 | | 4ci | Kk pgn | SRH -0019 54 | |
| | | | | | | | | 5ci | | Sdel 00 00 48 | |
| | | | | | | | | 7ci | | MAX 805 K AD4 | |
| | | | | | | u=62 H=522 = .715 | | 1ci | | | |
| | | | | | | Back to 400 H hour | | 3ci | | | |
| 62 | | | | | | | | 5ci | Kk pgn | half cloudy | |
| | | | | | | | | 3ci | | | |
| 68 | 2" | B 1.9 | F | | | | | 6ci | | | |
| | | | | | | | | 3ci | | | |
| 27 | | | | | | | | 5ci | | | |
| | | | | | | | | 8ci | | | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 3ci | | | |

py #2 (109)

Emulsion Batches:

Date 1994 Apr 8/9..... Observers KK./Tn.....

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|-------------|------|
| | | | | | | | | Type/Filter | Exp. |
| ce07067 | HD124897 | 141106 | +19 42 | 23 50 20 | | 01 33E | | | 40 |
| 7068 | Comp | | | | | | | ThAr | 5sec |
| 69 | HD124897 | 141106 | +19 42 | 23 55 04 | | | | | 190 |
| 70 | Comp | | | | | | | ThAr | 5sec |
| 71 | Comp | | | | | | | " | " |
| 72 | HD121370 | 134955 | +18 54 | 00 06 22 | | 00 50 E | | | 424 |
| 73 | Comp | | | | | | | ThAr | 5s |
| 74 | HD121370 | 13 49 55 | +18 54 | 00 20 37 | | | | | 274 |
| 75 | Comp | | | | | | | ThAr | 5s |
| 76 | | | | | | | | | |
| 80 | FLATS x 5 | | | | | | | TUNG | 1sec |
| 81 | BIAS(4) | | | 01 12 | | | | | |
| ce07084 | BIAS(4) | | | 02 13 | | 00 01 W | -33 20 | | |
| only 7085 | Comp | | | 23 | | 3 11 | " | ThAr | 4sec |

ce07084/83 written by
 ce07084
 only 7085
 TO
 ce0

08/09/94
 For Non motion Tests
 Repeat ~~NOT TESTED~~

(FLAT 9secs)

Spectr.
 Focus
 Spectr.

Exp. Mtr

166

208

76

25

30

Spectr. Temp. Dome Temp./Hum. $+21.9^{\circ}\text{C}$ 50% Transparency Conditions ... *mostly cloudy*

Focus ... 205

Spectr. Temp. Dome Temp./Hum. $+21.3^{\circ}\text{C}$ 52%
C.L.H.M.B.D.A.

(110)

| Exp. | Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------|-----------|--------|------|--------|-------|--------------|---------------------------------|----------|------|---------|--|---------|
| 49 | 166 | | | | | | 60um 900um H | 6300A | | std vel | | |
| 58 | | | | | | | | | | | | |
| 100 | 208 | 5.5 | | K2 III | | | | | | std vel | | |
| 522 | | | | | | | | | | | | |
| 524 | 76 | 4* | 2.69 | G0 IV | | | | | Sci | K4 pgn | 1.13 Air mass cloud again | |
| 5 | | | | | | | | | | | | |
| 234 | 25 | 2* | | | | | | | Sci | Kk pgn | cloudy a bit | |
| 51 | | | | | | | | | | | | |
| 52 | | | | | | | 60um width 500um H FOR FLATS | | Sci | | | |
| | | | | | | | | | 1c | | Hi! TO WORKING FOR SCIS. Top up by 01:30 | |
| | | | | | | | | | 1c | | Dome T = $+22.2^{\circ}\text{C}$ <small>CCD Temp</small> 340/126/100/635/1 | |
| 48 | | | | | | | | | 3c | | Dome T = $+20.2 \rightarrow 21.0^{\circ}\text{C}$ @ 02:30 EST | |
| | | | | | | | | | | | 90CGM CCD Temp 2 - 120°C 30 min between exps | |

pg#11

111

Date 1994 Apr. 9/10... Observers [K.H.] T.M.....

Emulsion Batches:

No Red Filter used.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | | Exp. Mo. |
|--------------|--------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|-------------|-------|----------|
| | | | | | | | | Type/Filter | Exp. | |
| CE0797 98 | Inboard/OUTBOARD HORTMAN | | | | | | | ThAr | 5/3 | 11/8 |
| 99 | BIAS(A) | | | | | | | | | |
| 7100 | Comp | | | 21 59 30 | | | | ThAr | 5sec | |
| 101 | HD8890 | 012236 | +8846 | 22 00 47 | | 8 49 W | | | 197 | 265 |
| 102 | Comp | | | | | | | ThAr | 5sec | Too much |
| 103 | Comp | | | | | | | ThAr | 3sec | |
| 104 | HD8890 | 012236 | +8846 | 22 09 01 | | | | | 824 | 165 |
| 105 | Comp | | | | | | | ThAr | 3sec | |
| 106 | HD8890 | 012236 | +8846 | 22 26 17 | | | | | 618 | 19 |
| 107 | Comp | | | | | | | ThAr | 3sec | |
| 108 | BIAS(A) | | | | | | | | | |
| 109 | Comp | | | | | | | ThAr | 5 sec | |
| 110 | HD124897 | 14 11 06 | +1942 | 22 56 31 | | | | | 227 | 6 |
| 111 | Comp | | | | | | | ThAr | 5sec | |
| 112 | HD124897 | 14 11 06 | +19 42 | 23 02 31 | | 2 06 E | | | 680 | 42 |
| 113 | COMP | | | | | | | ThAr | 5sec | |

CD Spectr. Temp. -100°C

Dome Temp./Hum. $+12^{\circ}\text{C}$ $70\% \text{H}$

Transparency Conditions... *P.A.T. Clearing*.....

Focus 2.50

2 Large SAT TOURS looked at good

CGAIN Spectr. Temp. 90

Dome Temp./Hum.

DBI STAR COR Caroli

C LAMBDA

FIRST of TOUR SEASON

112

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | XGrating/ 300m Tilt | Slit | Emulston | P.H. | Program | Remarks | Quality |
|-----------|----------------------------------|-----------|-----|---------------------------|------------------------|--------------------------|----------|------|------------|------------------------------------|---------|
| 5/2 | 11.8°C | set. 250 | | Echelle CCD 18.40 Tilt | 300/m -5695 | 60m width 100m height | | 3/4 | focus test | out vs Blue ≈ 2 pixels | |
| 5/2 | 265 | B 1.9 | F | | | | | 5ci | kkpym | 3300404 real max 1.456 Air mass | |
| 5/2 | Too many str lines sl saturated. | | | | | | | | | | |
| 3/2 | 165 | 3.5° | | | | | | 6ci | | URA - 1819 1 dec - 00 0254 | S/N |
| 3/2 | | | | | | | | 5ci | kkpym | had thick cloud | > 200/L |
| 3/2 | | | | | | | | 3ci | | | |
| 6/2 | 19 | | | | | | | 4ci | kkpym | thick cloud | |
| 3/2 | | | | | | | | 6ci | | | |
| 3/2 | | | | | | | | 1ci | | | |
| 5/2 | | | | | | | | 3ci | | | |
| 5/2 | 6 | 3-5° | 04 | KK211 | | | | 4ci | std vel | very cloudy | |
| 5/2 | | | | | | | | 3ci | | | |
| 5/2 | 42 | | | | | | | 4ci | std vel | 1.23 Air mass | |
| 5/2 | | | | | | | | 3ci | | | |

pg 42 (113)
SAT 154M

Date 1994 Apr 9 110..... Observers KK/Tn.....

Emulsion Batches:

.....

Note CSS Time 5secs ahead of WWV Time

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|--|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| ce07114 → 119 | FLATS x 6 | | | 23 33 | | 00 00 | +43° | | 1sec |
| 120 | BIAS(4) | | | (Long cloudy stretch) | | | | | |
| 121 | Comp | | | 01 29 | | | | THAr | 5sec |
| 122 | HD 8890 | 01 22 36 | +88 46 | 01 30 13 | | 12 21W | | | 600s |
| 123 | Comp | | | | | | | THAr | 5sec |
| 124 | BIAS(4) | | | | | | | | |
| 125 | HD 8890 | 01 22 36 | +88 46 | 01 44 34 | | | | | 442 |
| 126 | Comp | | | | | | | THAr | 5s |
| <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p>Apr 10 after Topup completed Non Motion Tests commenced @ 02 55 30min Sep Between 4sec THAr exps</p> </div> | | | | | | | | | |
| | | | | | | 00 00 | -31:30° | THAr | 4sec |

Spectr. Temp. Dome Temp./Hum. $+10.3^{\circ}\text{C}$ $78\% \text{H}$ Transparency Conditions ... *cloudy*

Focus 250

Spectr. Temp. Dome Temp./Hum. $+9.1^{\circ}\text{C}$ $82\% \text{H}$

114

| Exp. Mtr. | Seeing | Pg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|---------|----------|-----|---------------------------------|---------------------|------------------------------------|----------|------|---|--|---------|
| 152 | | | | <i>E. 1010</i> 18:40 Tilt | 300nm ± 5695 | 60um width 500um height = 0.215 | 6300A | 2ci | | MAX = 98 KADU | |
| | | | | | | | | 1ci | <i>All To Perseus & work to here.</i> | | |
| 52 | | | | | | <i>with 60um height 400um gain</i> | | 3ci | | Pome T $+9.5^{\circ}\text{C}$ 01:30 EST | |
| 81 | $3-4''$ | B 1.9 | F | | | | | 4ci | <i>KKpgm</i> | LR4 - as 0953 compare ISOE - 000330 with 1st set | |
| | 4 | | | | | | | 5ci | | | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 6ci | <i>KKpgm</i> | Too cloudy again | |
| | | | | | | | | 5ci | | | |
| | | | | | | | | | | <i>Last Batch 121-126 only to work</i> | |
| | | | | | | | | | | <i>Pome T @ 40 = $+8.8^{\circ}\text{C}$</i> | |
| | | | | | | | | | | <i>" @ 2:55 = $+8.7^{\circ}\text{C}$</i> | |
| | | | | | | | | | | <i>Du710 T @ 15:19 = $+9.7^{\circ}\text{C}$</i> | |
| | | | | | | | | | | <i>" @ 18:44 = $+9.3^{\circ}\text{C}$</i> | |

py 41

Sun / Mon

115

Emulsion Batches:

CSS 386 6 secs Ahead. from 1st.....

Date 1944 Apr 10/11... Observers K.K.J. T.G.....

No ORDER SEP. Filter used. OR needed of this?

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|---------------|---------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|-------------|--------|
| | | | | | | | | Type/Filter | Exp. |
| CE07164 68 | FLATS x 5 | | | | | 00 10 E | +43° | | 1 sec |
| 69 | BIAS (A) | | | | | | | | |
| 70 | Comp | | | | | | | ThAr | 5 sec |
| 71 | HD 8890 | 01 22 36 | +88 46 | 19 41 05 | | 06 30 W | | | 88 sec |
| 72 | Comp | | | | | | | ThAr | 5 sec |
| 73 | HD 8890 | 01 22 36 | +88 46 | 19 45 30 | | | | | 255 |
| 74 | Comp | | | | | | | ThAr | 5 sec |
| 75 | HD 8890 | 01 22 36 | +88 46 | 19 53 01 | | | | | 300 |
| 76 | Comp | | | | | | | ThAr | 5 sec |
| 77 | BIAS (A) | | | | | | | | |
| 78 | Comp | | | | | | | | |
| 79 | HD 8890 HD 34029 | 05 09 18 | +45 54 00 | 20 12 43 | | 03 55 W | | | 46 sec |
| 80 | Comp | | | | | | | | |
| 81 | HD 34029 | | | 20 15 20 | | | | | 435 |
| 82 | Comp | | | | | | | ThAr | 53 |
| 83 → 85 | FLATS x 3 | | | | | 04 W | +45 54 | TWIG | 2 sec |

CCD
SpectrFocus
CCD
Spectr

Exp. Mtr

2000

392

980

1080

862

882

CCD Spectr. Temp. -100°C Dome Temp./Hum. 7.4°C 570H Transparency Conditions *Fine* 11.6

Focus 250 ** note Found that echelle Tilt was*

CCD Gain Spectr. Temp. 90 Dome Temp./Hum. *C LAMEDA* *Really 18:51 This and previous nights*

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. * | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality | |
|-----------|--------|-----------|-----|---------------------|---------------|-------------------------|----------|----------|---------------|--|--------------|--|
| 159 | | | | <i>* 18.40 Tilt</i> | <i>300</i> | <i>W 60u H 500u</i> | 6300 | 5c 1c | | <i>MAX 9K ADU CCOT = -101.7°C</i> | | |
| 550 | | | | ↓ | ↓ | | | 3c | | | | |
| 880 | | | | | | | | | 4c | <i>KK ppm</i> | | |
| 550 | | | | | | | | | | 5c | | |
| 855 | | | | | | | | | | 4c | <i>K ppm</i> | |
| 550 | | | | | | | | | | | | |
| 300 | | | | | | | | 4c | | <i>MAX 11K ADU</i> | | |
| 550 | | | | | | | | 1c | | | | |
| 700 | | | | | | | | 6c | <i>KK ppm</i> | <i>10.5 K ADU MAX 1.316 Air MASS</i> | | |
| 550 | | | | | | | | 5c | | | | |
| 550 | | | | | | | | 6c | | <i>7K MAX ADU</i> | | |
| 550 | | | | | | | | 3c | | | | |
| 550 | | | | | | | | 2c | | <i>MAX KK ADU</i> | | |

Zeroed/1st?

392 ?

980

1080

862

882

B 1.9 F

0.09 G811 + F

↓ ↓

Spectr. Temp. Dome Temp./Hum. 7.5°C $56\% \text{RH}$ Transparency Conditions ... *Fine*

Focus ... 250

118

Spectr. Temp. Dome Temp./Hum. 7.5°C 57%
Change to other side of flex for gaps between orders

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|--------|--------|--------------------|-------------------|-------------|----------|------|-----------------|---------------------------------|---------|
| | | | | <i>eduelle</i> | 300 l/m | 60μ | | $2c$ | | $\text{MAX } 12.3 \text{ KADU}$ | |
| | | | | 17.60 mm | $.5685$ | 500μ | | $1c$ | | | |
| | | | | | $W=60\%$ | $H=400 \mu$ | | 3 | | | |
| 880 | 0.09 | | $G81V$ | | | | | $4c$ | KK pgm | $\text{MAX } 6.4 \text{ KADU}$ | |
| | | | $+F$ | | | | | 5 | | | |
| | | | | | | | | 6 | | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | $5c$ | | | |
| 900 | | B | | | | | | $3c$ | Gem KK | $\text{MAX } 13 \text{ KADU}$ | |
| 900 | | 1.9 | $ACIV$ | | | | | $5c$ | | $\text{AIR MASS } 1.55$ | |
| | | | | | | | | $6c$ | KK pgm | | |
| | | | | | | | | $5c$ | | | |
| | | | | | | | | 1 | | | |
| 1180 | | V | | | | | | $3c$ | KK pgm | $\text{MAX } 11 \text{ KADU}$ | |
| | | 0.34 | $FSIV$ | | | | | 5 | | 1.60 AIR MASS | |
| | | | | | | | | 1 | | | |

p9#3

(119)

Emulsion Batches:

Date 1994 Apr. 10/11..... Observers .. K.K. / T.M.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|---------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|-------------|------|
| | | | | | | | | Type/Filter | Exp. |
| ce07204 | HD61421 | 07 3404 | +05 29 | 21 2016 | | 2 42W | | | 118s |
| 05 | Comp | | | | | | | Th Ar | 55s |
| 06 | Comp | | | | | | | " | " |
| 07 | HD62509 | 07 3912 | +28 1600 | 21 2811 | | 2 44W | | | 143 |
| 08 | Comp | | | | | | | Th Ar | 55 |
| 09 | HD62509 | 07 3912 | +28 1600 | 21 3523 | | | | | 180 |
| 10 | Comp | | | | | | | Th Ar | 55 |
| 11 | " | | | | | | | " | " |
| 12 | HD40183 | 05 5212 | +44 5615 | 21 4448 | | 4 49W | | | 329 |
| 13 | Comp | | | | | | | Th Ar | 55s |
| 14 | HD40183 | 05 5212 | +44 5612 | 21 5446 | | | | | 310 |
| 15 | Comp | | | | | | | Th Ar | 55s |
| 16 | Comp | | | | | | | | |
| 17 | HD83808 | 9 35.8 | +10° 21' | 22 1325 | 22 36 | | | | |
| 18 | Comp | | | | | | | Th Ar | 55s |

Pg #4 (121)

Emulsion Batches:

Date 1994 Apr 10/11 Observers KK/TN

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|--------------|------|
| | | | | | | | | Type/Filter | Exp. |
| CE07219 | HD 83808 | 9 35.8 | +10° 21' | 22 41 50 | 23 09 50 | | | | 167 |
| 20 | comparison | | | | | | | ThA clear | 5 |
| 21 | bias (4x) | | | | | | | | |
| 22 | Comp | | | | | | | ThA | 5 |
| 23 | HD 87901 | 10 0303 | +12 27 22 | 23 18 07 | | 02 13 W | | | 264 |
| 24 | Comp | | | | | | | ThA | 5 |
| 25 | HD 87901 | 10 0303 | +12 27 22 | 23 25 03 | | | | | 295 |
| 26 | Comp | | | | | | | ThA | 5 |
| 27 | Comp | | | | | | | n | 4 |
| 28 | HD 123299 | 14 01 14 | +64 51 14 | 23 38 12 | | 01 12 E | | | 913 |
| 29 | Comp | | | | | | | ThA | 5 |
| 30 | HD 123299 | 14 01 14 | +64 51 14 | 23 56 10 | | 00 51 E | | | 1085 |
| 31 | Comp | | | | | | | ThA | 5 |
| 32 | Comp | | | | | | | n | 5 |
| CE07235 | HD 8890 | 01 22 36 | +88 46 | 00 30 21 | | | | | 456 |
| x 35 | Comp | | | 39 | | | | | |

Spectr. Temp. ~~+30~~ Dome Temp./Hum. $+4^{\circ}\text{C}/59.1\%$ Transparency Conditions *Fire* (122)

Focus *250*

Spectr. Temp. Dome Temp./Hum.

C LAMBERT

| Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----|-----------|--------|-----------|--------------|-------|--------------|----------------------|----------|----------|--------------|---|---------|
| 87 | 900 | | 3.52 | Fb II A V | 17.60 | 3.0 .285 | 60 μ 10 μ | 6300A | 3 | KK/kin Sp | | 6000 |
| 5 | | | | | | | | | | | | |
| 5 | | | | | | | | | 1c | | | |
| 24 | 1065 | | 1.36 | B7V | | | | | 5c 2c | Telluric Std | <i>mirror flashed on during exp</i> AIR MASS 1.356 | |
| 45 | 1120 | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 1 | | | | | | | | | 5c | | | |
| 83 | 630 | 3" | 3.65 | A0 III | | | | | 3c 5c | KK pyro | 5" ADU MAX 1.082 AIR MASS min SIN for middle ORDER at Ref end in 20011 | |
| 5 | | | | | | | | | | | | |
| 28 | 900 | 2" | | | | | | | 4c | | | |
| 5 | | | | | | | | | | | | |
| 3 | | | | | | | | | 5c | | | |
| 42 | | 2" | 1.9 | F | | | | | 6c | written | Letter | |

pg#5

123

Emulsion Batches:

Date 1994 Apr 10/11..... Observers K.H./Tu.....

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|--------------------------------|---------------------|--------------|---------------------|---------------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CE07234 | FLAT | | | | | | | | 1.5 |
| 36 37 | FLATS x2 | | | | | | | (100TSCALE) | 1.55 |
| 38 | Comp | | | | | | | JHA | 0.5! |
| 39 | HD 8890 | 01 22 36 | +88 46 | 00 53 14 | 00 57 | | | | 230 |
| 40 | Comp | | | | | | | JHA | 5 |
| 41 | HD 8890 | " | " | 01 00 19 | | | | | 225 |
| 42 | Comp | | | | | | | | |
| 43-45 | FLATS | | | | | | | | 1.5 |
| 46 | bias (4x) | | | Dewar Topup & Temp reduced | | | | | |
| 47 | comp | | | CCD Temp Brought back to -100°C | | | | JHA | 5" |
| 48 | HD 137 909 | 15 23 42 | +29 27 00 | 02 03 37 | | | | | 85A |
| 49 | Comp | | | | | | | JHA | 55 |
| 50 | SIAS(4) | | | | | | | | |

Spectr.

Focus.

Spectr.

Exp. Mtr.

760

798

600

Spectr. Temp. Dome Temp./Hum. Transparency Conditions FINE 124
 Focus 250
 Spectr. Temp. Dome Temp./Hum. +2.9°C 67.8%

| Exp. Mtr. | Seeing | F _{0.6} Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|--------------------------------|-----|---|--------------|-----------------|----------|------|---------|---------------------------------|---------|
| | | | | ecol/17.60 | W 60u | H 500u | 6300A | | | | |
| | | | | X .5685 | | " | | | | | |
| | | | | ecol/18.51 | | H = 40u = .225 | | | | Back Too original side of blaze | |
| | | | | X .5695 | | | | | | | |
| 760 | | 2 | F2 | | | | | | | | 10000 |
| 798 | | 2 | F2 | | | | | | | | |
| | | | | | | H = 500u = .215 | | | | | |
| | | | | | | | | | | All to worm now. | |
| 600 | 3.5 | 3.5 ^{3.66} | F0p | ecol/18.51 | H = 800u | 6301 | 4c1 | | | | |
| | | | | Note, Forgot to Reduce Height to 400u for these last observations | | | | | | | |
| | | | | Note! April, not right to | | | | | | | |
| | | | | | | | 5c | | KK pym | 1.037 A.R. mess | |
| | | | | | | | 4c | | | | |
| | | | | | | | 1c | | | | |
| | | | | | | | | | | All to worm in 6 Perseus. | |
| | | | | | | | | | | Exabyx to C007120 test night. | |

Pg #1 125 Mon/Tue

Emulsion Batches:

Date 1994 Apr 11/12 Observers [KK] Tn/Hlw

css 386 clock is 8 seconds AHEAD of WWV clock.

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-------------------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|-------------|------|
| | | | | | | | | Type/Filter | Exp. |
| α07251 | Comp | | | | [No filter] | | | ThAr | 5 |
| 52 | HD8890 | 01 22 36 | 88 46 00 | 20 41 40 | | 7:45 W | | | 816 |
| 53 | Comp | | | | | | | ThAr | 5s |
| 54 | HD8890 | 01 22 36 | +88 46 | 20 56 50 | | 8:00 W | | | 600s |
| 55 | Comp | | | | | | | ThAr | 5 |
| 56 | HD8890 | 01 22 36 | 88 46 00 | 21 09 03 | | 8:11 W | | | 600s |
| 57 | Comp | | | | | | | ThAr | 5 |
| 58 | Bias (4) | | | | | | | | |
| 59 | Comp | | | | | | | ThAr | 5 |
| 60 | HD34029 | 05 09 18 | +45 54 00 | 21 29 19 | | <u>5:19 W</u> | | | 237 |
| 61 | Comp | | | | | | | " | 5 |
| 62 | HD34029 | 05 09 18 | +45 54 00 | 21 35 22 | | 5:25 W | | | 225 |
| 63 | Comp | | | | | | | " | 5 |
| 64 | Comp | | | | | | | | |
| 65 | HD 62509 | 07 39 12 | +28 16 00 | 21 44 31 | | 3:12 W | | | 600 |

CCD Spectr. Temp. -100°C Dome Temp./Hum. $+5.8^{\circ}\text{C}/43.9\%$ Transparency Conditions *cloudy, but thin*
 Focus 250 Fans OFF
 Spectr. Temp. *again = 9.0* Dome Temp./Hum. 0 0 256 1024 4 1 ccd fmt 126

| Exp. Mtr. | Seeing | Mag. $\sqrt{\text{Mag.}}$ | Sp. | Inst. | Grating/Tilt | Slit | Central Emission Wavelength | F.H. C. | Program | Remarks | Quality |
|-----------|--------|---------------------------|---------------|-------------|-------------------|----------------|-----------------------------|---------|----------|-----------------------------|---------|
| | | | | Echelle CCD | 300 l/mm | 18.51 | 6300 Å | 3 | | | |
| 100 | 2" | 2 | F2 | | x-grating 5695 | 60 μ x400 μ | | 4 | KK pgm | Through clouds | |
| | | | | | | | | 3c: | | | |
| 220 | 2" | 2 | F2 | | | | | 5c: | KK pg. 6 | | |
| | | | | | | | | 3 | | | |
| 255 | 2" | < | F2 | | | | | 6 | KK pgm | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 3 | | | |
| 846 | | 0.1 | G8 III + F | | | | | 4 | KK pgm | Note AirMass = 1.71 at end. | |
| | | | | | | | | 3 | | | |
| 820 | | 0.1 | G8 III + F | | | | | 5 | KK pgm | AirMass (end) = | |
| | | | | | | | | | | | |
| 593 | | 1.14 | K0 III | | | | | 6 | Std. Vel | | |

Spectr. Temp.

Dome Temp./Hum.

4.4°C / 50.6%

Transparency Conditions ... Thin clouds

Focus ... 250

Spectr. Temp.

Dome Temp./Hum.

128

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|---------------------------------|--------------------|------------------|----------|------|-----------|-------------------------|---------|
| 5 | | | | Echelle CCD | 300l/mm 18.51 | 60x 400μ | 6301 A | 3 | | | |
| 475 | 733 | 2-3" | 1.14 | KOIIIb | x-grating .5675 | | | 4 | Std. Vel. | | |
| 5 | | | | | | | | 3 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 2c | | MAX 14K ADU | |
| | | | | Echelle tilt x-grating | 17-60 .5675 | H=500μ H=500μ | 6300 | 2c | | other side fingers now | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 4 | Std. Vel. | | |
| | 475 | | 1.14 | KOIIIb | | | | 3 | | | |
| | | | | | | | | 5 | Std Vel | Cloud thickened at end. | |
| | 392 | | 1.14 | KOIIIb | | | | 3 | | | |
| | | | | All to W.O.R.M. and perseus. | | | | 1 | | | |

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. $+10.5^{\circ}\text{C}/70.8\%$ Transparency Conditions Clear

130

Focus $6.85/6.82$

Spectr. Temp. gain = 90 Dome Temp./Hum. 480 0 50 1024 4 1 ccd fnt

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------------|--|---------------------------|----------|------|---------------|------------------------------------|---------|
| | | | | Cass CCD | 1800 $\mu\text{m}/\text{mm}$ G=5115 | 300 μm | 5303 | 1 | | | |
| | | | | | | | | 3/4 | Focus Test | T=10.4 foc=6.85 | good |
| | | | | | | | | 5 | | | |
| 53 | | | 10.5 | M0 | | | | 6 | Jys Pgm | | |
| | | | | | | | | 7 | | | |
| | | | | | | | | 8 | | | |
| 406 | | | 7.5 | M2 | | | | 9 | Jys Std. | | |
| | | | | | | | | 10 | | | |
| | | | | | | | | 11 | bsum 4. Lat | | |
| | | | | Cass CCD | 1800 $\mu\text{m}/\text{mm}$ G=6065 | 300 μm FULL | 6600A | 1 | | START of Blk pgn work | |
| | | | | | | | | 3/4 | Focus Test | T=10.8 $^{\circ}\text{C}$ foc=6.82 | good |
| | | | | | | | | 5 | | | |
| 4900 | | | 3.6 | A1X | | | | 6 | Telluric Std. | MAX 16 K ADC | |
| | | | | | | | | 7 | | | |

Pg #2

131

Date 1994 Apr 14/15 Observers [Bln] Tn/Hlw

Emulsion Batches:

Position Encoders. Not functioning

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination From Dec | Comparison | |
|---------------------|----------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------------------|----------------|----------------|
| | | | | | | | | Type/Filter | Exp. |
| CC 21133 | Comp | | | | | | CIRCLE | FeAr Clear | 60sec |
| 34 | HD93521 | 10 42 42 | +38 06 00 | 21 14 56 | | | +37 34 | | 743 |
| 35 | " | " | " | 21 30 56 | | | | | 653 |
| CG 40090 - 40093 | " | " | " | 22 1 42 | (Image a box slit) | | | 4x | 0.67sec |
| CG 40094/5 | " | " | " | | | | | 2x | .133 sec |
| CC 21136 | Comp | | | | | | | FeAr Clear | 60s |
| 37 | HD93521 | 10 42 42 | +38 06 00 | 21 46 38 | | 00 24 W | | | 655 |
| 38 | " | " | " | 21 57 59 | | 0:35 W | | 699 seconds | 600 |
| 39 | " | " | " | 22 10 06 | | 0:48 W | | | 701 |
| 40 | Comp | | | | | | | FeAr Clear | 60sec |
| 41 | HD 93521 | 10 42 42 | +38 06 00 | 22 24 06 | | 1:02 W | | | 713 |
| 42 | " | " | " | 22 37 11 | | | | | 905 |
| 43 | " # | " | " | 22 52 41 | | 1:33 W | | | 820 |
| 44 | Comp | | | | | | | FeAr Clear | 60 |
| 45 | HD93521 | 10 42 42 | +38 06 00 | 23 09 43 | | 1:51 W | | | 902 |

Spectr. Temp. Dome Temp./Hum. $t. 10.5^{\circ}C \dots 72.9^{\circ}H$ Transparency Conditions $\dots S1 \text{ Hazy} \dots (132)$

Focus $\dots 6.82$

Spectr. Temp. Dome Temp./Hum.

Both fans on at START
N E FAN on only after opening

C. LAMBERTA

| Exp | Exp. Mtr. | Seeing | Fl. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----|-----------------------|--------|----------|------|----------|------------------------------|-------------------|----------|------|-------------|--|---------|
| 652 | Exp meter Failed here | | | | CHSS CCD | 1800 λ /mm G=6065 | 300 μ Full | 6604R | | | | S/N |
| 733 | 53?? | 7.04 | 09.5 | V | | | | 6604R | 9c. | Bln 0* pgm | | 180/1 |
| 653 | ?? | 1-2" | " | " | | | | | 10c. | " | | 160 |
| 654 | " | " | " | " | | | | | | Seeing TEST | Tel East side Dome S E, no wind | |
| 655 | 1400 | 1-2" | 7.04 | 09.5 | V | | | | 11 | | | |
| 656 | 1290 | " | " | " | | | | | 12c. | Bln 0* pgm | | 160 |
| 711 | 1500 | " | " | " | | | | | 13c. | " | | 150 |
| 657 | | | | | | | | | 14c. | " | | 150 |
| 658 | | | | | | | | | 15 | | | |
| 73 | 920 | | 7.04 | 09.5 | V | | | | 16 | Bln 0* pgm | 88% Rel. Humidity on catwalk @ 2240 | 150 |
| 9.5 | 1500 | 2" | " | " | | | | | 17 | " | | ↑ |
| 8.0 | 1460 | " | " | " | | | | | 14 | " | | 150 170 |
| 6.0 | | | | | | | | | 18 | | 90% catwalk @ 2320 | |
| 9.0 | 1300 | | 7.04 | 09.5 | V | | | | 19 | Bln 0* pgm | | 145 |

Spectr. Temp. Dome Temp./Hum. 8.2°C/80.4% Transparency Conditions Clear, a bit hazy...
 Focus 6.82
 Spectr. Temp. Dome Temp./Hum.

(134)

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality SNR |
|-----------|--------|-----------|-------|----------|------------------------------|-----------|----------|------|------------|-------------------------|-------------|
| 1300 | | 7.04 | 09.5V | Cass CCD | 1800 λ /mm G=6065 | 300 μ | 6604 | 20 | Bln 0* pgm | | 145 |
| | | | | | | | | 21 | | | |
| | | | | | | | | 1 | | | |
| 1320 | 2' | 7.04 | 09.5V | | | | | 22 | Bln 0* pgm | | 150/1 |
| 1160 | | | | | | | | 23 | " | AIRMASS 1.151 | 135 |
| 960 | 2-4' | | | | | | | 24 | " | | 120 |
| | | | | | | | | 25 | | | |
| | | | | | | | | 26 | | MAX 123K ADU/pixel | |
| 1000 | | 7.04 | 09.5V | | | | | 27 | Bln 0* pgm | | 130 |
| 937 | | " | " | | | | | 28 | Bln 0* pgm | | 125 |
| | | | | | | | | 5 | | 95% ! on catwalk @ 0100 | |
| | | | | | | | | 1 | | | |
| 780 | | 7.04 | 09.5V | | | | | 6 | Bln 0* pgm | | |
| | | | | | | | | 7 | | | |

Spectr. Temp. Dome Temp./Hum. $+6.4^{\circ}\text{C}$ $85.3\% \text{H}$ Transparency Conditions ... *incr. Fog*
 Focus .. 6.82
 Spectr. Temp. Dome Temp./Hum.

136

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|-----|----------------------------|--------------------|--------------------------|----------|------|--------------|---|---------|
| 62 | 180 | 136 | BTV | C155 CCD | 18001/mm G=6065 | 300 _u Full | 6604A | 9c | Telluric Std | MAX 7.5 K ADU | |
| 71 | 250 | | | | | | | 10c | " | MAX 12.7 K ADU AIR MASS = 2.64 | |
| | | | | | | | | 11 | | <u>VERY Deep</u> Telluric lines | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 13 | | Max ADU = 11.7 K | |
| | | | | East Side of Piers | | | | | | Humidity Close: | |
| | | | | All to W.O.R.M. & Perseus. | | | | | | Fog + Dripping + 96% Relative Humidity | |

Spectr. Temp.
 Focus 6.82 #
 Spectr. Temp.

Dome Temp./Hum. +3.2°C 61%
 Temp dropping fast
 Dome Temp./Hum.

Transparency Conditions ... PARTIAL CLEARING...
 Top up from Ambient by O2EST (138)

C L111180A

| Exp. Mtr. | Seeing | √ Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|----------|-------------------|------|----------|------|------------|----------------------|----------------|
| | | | | Cass CCD | 1800/mm G=5910 | 300 | 6395A | 3/4 | focus test | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 5 | | | |
| 234 | 4" | 6.15 | GO II | | | | | 6 | Rm pgm | Totally cloudy now | 5/14 170/11 |
| | | | | | | | | 7 | | | |
| | | | | | | | | 8 | | | |
| 1836 | | -0.04 | K2 III | | | | | 9 | Sta. Vel. | Through thick clouds | |
| | | | | | | | | 10 | | | |
| | | | | | | | | 10 | | | |
| | | | | | | | | 1 | | | |

Spectr. Temp. Dome Temp./Hum. .. +5.3°C 44.8H Transparency Conditions ... Fine

Focus

140

Spectr. Temp. Dome Temp./Hum. C LAMBDA

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emission | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------|--------------------|-------------|----------|----------------|---------|---------------|---------|
| | | | | | 18006/mm G-4815 | 300 FULL | 4870 | | | | |
| | | | | | | | | 1 | | | |
| 520 | | | | | | | c 4870A | 5 | | | |
| 311 | | 2.98 | B2M | | | | c 4870A | 6 | | | |
| 820 | | 1 | " | | | | | 7 | | | |
| 352 | | 4 | " | | | | | 8 | | | |
| 537 | | | | | | | | 5ci | | | |
| 530 | | | | | | | | 5ci | | | |
| 1000 | | 362 | B8lt | | | | | 9ci | | AIR MASS 3.93 | |
| | | 4 | " | | | | | 10ci | | | |
| | | 2 | " | | | | | 9ci | | | |
| | | | | | | | | 11ci | | | |
| | | | | | | | | 12ci | | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 5 | | | |

S/N
R H 130/1

Pg #2

141

Emulsion Batches:

Date .. 1.9.94. Apr. 17/18 Observers .. K.G.S. .. I. Tu ..

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|-----------|----------------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| CC21205 | HD 22192 | 3 ^h 29.4 ^m | +47° 51' | 21 15 55 | | | | | 352 |
| 206 | " | " | " | 21 22 57 | | | | | 528 |
| 207 | Comp. | | | | | | | FeAR clear | 60 |
| 208 | Comp | | | | | | | " | 60 |
| 209 | HD 22630 | 4 ^h 59.5 | +41° 06' | 21 38' 08 | | | | | 215 |
| 210 | " | " | " | 21 42 43 | | | | | 382 |
| 211 | Comp | | | | | | | FeAR clear | 60 |
| 212 | b125(4) | | | | | | | | |
| 213 | Comp | | | | | | | FeAR clear | 60 |
| 214 | HD 103287 | 11 ^h 48.6 | +54° 15' | 22 04 28 | | | | | 291 |
| 215 | " | " | " | 22 10 19 | | 00 06 E | | | 602 |
| 216 | Comp | | | | | | | FeAR clear | 60 |
| 217 | Comp | | | | | | | " | 60 |
| 218 | HD 34759 | 5 ^h 14.7 ^m | +41° 42' | 22 30 56 | | 06 53 W | | | 946 |
| 219 | " | " | " | 22 47 22 | | | | | 890 |

Spectr

Focus

Spectr

Exp. M

Not

count

180

276

431

533

0

0

Spectr. Temp. Dome Temp./Hum. 23.7 74.3% Transparency Conditions 142

Focus

Spectr. Temp. Dome Temp./Hum. c LAMBDA Tel on East Side of Piers Tonight

| Exp. | Exp. Mtr. | Seeing | Fl. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------|--------------|--------|----------|-----|----------|--------------------|--------------|----------|------|---|--------------------------------|---------------|
| 22 | Not Counting | 8" | 4.23 | BSV | CASS CCD | 1800 h/m G-4815 | 300μ Full | 4870A | 13 | | | |
| 56 | | | " | " | | | | | 14 | | | |
| 60 | | | | | | | | | 5 | | | |
| 25 | | | 2.99 | BSV | | | | | 5 | | | |
| 25 | | | " | " | | | | | 15 | | 4 Retu | SIN 170/1 |
| 25 | | | | | | | | | 16 | | | |
| 25 | | | | | | | | | 5 | | | |
| 25 | | | | | | | | | 1 | | | |
| 25 | | | | | | | | | 5 | | | |
| 25 | 180 | 6" | 2.44 | AOV | | | | | 17 | * SPECTRUM STD Std Star | 4.5KAD4 MAX AIR MASS 1.02 | SIN 7200/1 |
| 25 | 276 | | | | | | | | 18 | note* Program stars all had very Large AIR masses. | | |
| 25 | 431 | | | | | | | | 5 | | | |
| 25 | 533 | | | | | | | | 5 | | | |
| 25 | 0 | 8" | 5.09 | BSV | | | | | 19 | Std Star | (70/1 SIN) Cloudy, high air | 2.65 AIR MASS |
| 25 | 0 | 1 | " | " | | | | | 20 | | | |

Spectr. Temp. Dome Temp./Hum. ... +3° ... +43.1 Transparency Conditions

Focus

Spectr. Temp. Dome Temp./Hum. *lambda*

144

| Exp. Mtr. | Seeing | Pg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------|--------|----------|-----|-------------|-------------------|--------------|----------|---------------|----------|------------------------|---------|
| | | | | CASS CCD | 1800/16 G=4815 | 300- Full | 4870AP | 5 | | Tel still on East side | |
| | | | | | | | | 21 | | | |
| | | | | | | | | 22 | | | |
| 10801 | | 3.31 | A2V | | | | | 23 | Std Star | max = 6 K AD4 | |
| 12010 | | " | " | | | | | 24 | | | |
| | | | | | | | | 5 | | | |
| 18782 | | 2.14 | A3V | | | | | 25 | | | |
| 18844 | | " | " | | | | | 26 | | | |
| 9637 | | " | " | | | | | 26 | | | |
| | | | | | | | | 5 | | | |

py # 4

(145)

Emulsion Batches:

Date 1994 April 7/18... Observers KOK, I.Ta... (SN for BH)

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|---------------|----------------------------------|--------------|---------------------|--------------------------------------|-----------------------|-------------------|-------------|---------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| CC21239 40 | Comp / Stellar | | Hα + Ti + AN | | | | | FENE A 1/8 | 4/6 |
| 42 | BIAS(A) | | | | | | | | |
| 41 | Comp | | 1950 | | | | | FENE A 1/8 | 6 sec |
| 43 | SN 1994I | 13 27 48 | +17 26 58 | 01 04 47 | | 01 14W | | | 699 |
| 44 | Comp | | | | | | | FENE A 1/8 | 6 sec |
| 45 | SN 1994I | | | 01 24 45 | | | | | 1070 |
| 46 | SN 1994I Comp OR M51 nucleus? | | | 01 43 30 | | | | | 325 |
| 47 | Comp | | | | | | | FENE A 1/8 | 6 sec |
| 48 | BIAS(A) | | | | | | | | |
| 49 | Comp | | 1950 | | | | | FENE A 1/8 | 6 sec |
| 50 | Feige 92 | 14 09 41 | +50 21 07 | 01 59 28 | | 01 31W | | | |
| 51 | Comp | | | | | | | FENE A 1/8 | 6 sec |
| → 52 55 | FLATS A | | | Red Filter in | | 01 40W 50° | Ap/18 | Tung Ap/18 | 9 sec |
| 56 - 58 | FLATS x3 | | | Red Filter OUT | | " | " | " | 7 sec |
| 59 | Comp | | | No Red Filter. (At 1100 Cas 93 posh) | | | | FENE A 1/8 | 6 sec |

For Comp only
Red ORDER SEP FILTER

Spectr.

Focus.

Spectr.

Exp. Mtr.

+20

0

Spectr. Temp. Dome Temp./Hum $+2.5^{\circ}$ 96.4^{911} Transparency Conditions sl hazy 146
 Focus ... 7.10 Another Topup done Before SN1994I
 Spectr. Temp. Dome Temp./Hum. i $Umbrella$ Tel still east side of Piers

| Exp | Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----|------------|--------|------|-----|-------------|------------------|--------------|----------|-------|---------|---|---------|
| 46 | +2.8C, set | | 7.10 | | CASS CCD | 15D G 2400 | 300μ FULL | 6250A | 29/30 | | Focus test OK | |
| 20 | | | | | | | | | 5ci | | | |
| 24 | 0 | peak | 13? | | | | | | 6ci | SN1994I | very hard to see o.i. slit | |
| 28 | | | | | | | | | 8ci | | | |
| 32 | | | | | | | | | 9ci | | | |
| 35 | | | | | | | | | 10ci | | some H α emission seen The "fuzzy" but brighter image 3 15 arc secs NE of previous SN1994I frames | |
| 38 | | | | | | | | | 5ci | | | |
| 42 | | | | | | | | | 1ci | | | |
| 46 | | | | | | | | | 5ci | | | |
| 50 | | peak | 11.6 | | | | | | 11ci | | std for SN1994I | |
| 54 | | | | | | | | | 2ci | | | |
| 58 | | | | | | | | | 3ci | | | |
| 62 | | | | | | | | | 4ci | | | |

log #5 (147)

Date ... 1994 Apr. 17/18. Observers ... K. K. [E.L.] ... J. n.

Emulsion Batches:

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|---------------------------------------|--------------|---------------------|-------------------------|-----------------------|---------------------|----------------------|-----------------|------|
| | | | | | | | | Type/Filter | Exp. |
| CC 21260 | Nova Cas 93 | 23 36 54 | +56 57 45 | 02 45 53 | | | no filters | | 440 |
| 61 | Nova Cas 93 Nova Cas 93 | " | " | 03 04 13 | | 06560 40 | filters in | Felto Apr 18 | 529 |
| 62 | Comp | | | | | | no filter | Felto Apr 18 | 65e |
| 63 | B1115C4) | | | | | | | | |
| 64 | Comp | | | | | | 11/1 filters removed | Fear clear | 60se |
| 265 | HD 193182 | 20 13 48 | 39 16 59 | 03.34.57 | | | | | 60 |
| 266 | " | " | " | 03 47 07 | | | | | 835 |
| 267 | Comp. | | | | | | | Fear clear | 60 |
| 268 | " | | | | | | | " | 60 |
| 269 | HD 199407 | 20 26 | 36 39 7 | 04 08 33 | | | | | 894 |
| 270 | " | " | " | 04 24 19 | | | | | 1152 |
| 271 | Comp | | | | | | | Fear clear | 60se |
| 272 | bias (4) | | | | | | | | |
| 273-77 | plots x 4 | | | | | | | | |
| 278 | bias (4) | | | | | | | Tung A | 9s. |

Spectr. Temp. Dome Temp./Hum. $+1.7^{\circ}$ $51\%H$ Transparency Conditions $S1. hazy$
 Focus $7:10$
 Spectr. Temp. Dome Temp./Hum.

148

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------------|-------------------------|-------------------|----------|------|-----------------|--------------------|---------|
| | poor | | | CASS CCD | 150 μ /m G-2400 | 300 μ FULL | 6250A | 12c | 10 μ CUS 93 | ? Very difficult | |
| | | | | | | | | 13c | " " | Hd vu waakt | |
| | | | | | | | | 4c | | | |
| | | | | | | | | : | | | |
| | | | | CASS CCD | 1800 μ /mm G4815 | | 4869A | | | | |
| | | | | | | | 4869A | 5 | | | |
| | | | | | | | 4869A | " | | | |
| | | | | | | | | 6 | | | |
| | | | | | | | | " | | | |
| | | | | | | | | 7 | Kot pym | S/N (H. Acta) 60/1 | |
| | | | | | | | | 8 | " | | |
| | | | | | | | | 2 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 28 | | | |

Focus 6.50 now

1787 6.51 69 III
esh

1676 6.51 89 III
esh

757 4 $^{\circ}$ 75 B5

976 " "

(149)

Date 1994 APRIL 18/M Observers [RBT]/Sgs./Tn.....

Emulsion Batches:

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

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|--|---------------------------|-------|
| CC 212 79 | COMP | | | | | | Red Filter | Felle Ap/18 | 6s |
| 80 | BIAS (4) | | 1950 | | | | | | |
| 81 | SN 1994 I | 13 27 48 | 47 26 58 | 0:54:08 | 0:54:08 | | OG 560 | | 274s |
| 82 | " | " | " | | | | " | | |
| 83 | " | " | " | 01 21 32 | | | " | | 1003s |
| 84 | COMP | | | | | | Red Filter | Felle Ap/18 | 6s |
| 85 | BIAS (4) | | | | | | | | |
| 86-88 | FLATS X3 | | | | | | OG 560 RED FILTER IN (same as stellar filter) ^{0000ME +420} | TUNG Ap/18 | 7sec |

Spectr. Temp. Dome Temp./Hum. $+7.0^{\circ}\text{C}/66.9\%$ Transparency Conditions PARTLY CLOUDY; HAZY
 Focus ... 7.05
 Spectr. Temp. Dome Temp./Hum. $+7.2^{\circ}\text{C}/70\%$ 90CGAIN Than solid cloud (150)
CITATION

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------------|---------------------------------|---------------------------|----------|------|---------|---|---------|
| | | | | CASS CCD | 150 μm $G = 2400$ | 300 μm FULL | 6250 Å | 3c | | | |
| | | | | | <u>2nd ORDER</u> | | | 1c | | | |
| | no | | | | | | | 4c | BT1 | VERY HARD TO SEE ANYTHING ON TV THERE MIGHT BE SOMETHING IN SPECTRUM OFFSETS: Ra: -0.06 Dec: +0.03 | |
| | " | | | | | | | 5c | " | | |
| | " | | | | | | | 6c | " | After using Home posn to see M51 nucleus better (got it now) (2 H α em. components) | |
| | | | | | | | | 8c | | No, probably HII Region of M51 says Ernie Squist Th 4/27 | |

(151) Pg #1 Tues/Wed

Date 1994. April. 19/20. Observers KOK. I.T.A.

Emulsion Batches:

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.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|----------------|---------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-----------------|---------------------------|-------|
| CC21289 90 | Comp / Stellar | HARTMAN | | | | 00 | A4F | FeAr Clear | 60/75 |
| 91 | BIASCAJ | | | | | | | | |
| 92 | Comp | | | | | | Fake | FeAr clear | 60 |
| 93 | 5/ (HD 126315) HR 5191 | 1343.6 | 49 20 | 00 20 32 | | | | | 53 |
| 94 | " | " | " | 00 23 41 | | | | | 48 |
| CC21295 | Comp | | | | | | | FeAr Clear | 60s |
| CG40096 -99 | HD 120245 | 134311 | +3823 33 | 20045 | | | | 4x | 67ms |
| CG40100 101 | " | " | " | | | | | 2x | 133ms |
| CC21296 | bias (4) | | | | | | | | |
| 97 | Comp | | | | | | | FeAr Clear | 60s |
| 98 | HD 183656 | 19 2533 | +03 14 08 | 01 07 40 | | | | | 799 |
| 99 | " | " | " | 01 22 14 | | | | | 910 |
| 1300 | Comp | | | | | | | FeAr CLEAR | 60s |
| 01 | " | | | | | | | " | " |
| 02 | HD 192954 | 20 12.6 | 15 33 734 | 01 46 32 | | 04 28 E | | | 1646 |

Spectr. Temp.

Dome Temp./Hum. $+50^{\circ}\text{C}$ $57\frac{5}{8}\%$ Transparency Conditions *PART. cloudy*Focus *6.9A**clearing up* (152)

Spectr. Temp.

Dome Temp./Hum. *L'AMBAL 90 CGAIN CCDT $\rightarrow -100^{\circ}$*

| Exp. Mtr. | Seeing | V. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------|----------------------------------|----------|-----------------------|---|--|--|----------|--------------|--|--------------|--------------------------------|
| <i>6.7</i> 6.90 | <i>T</i> $+15.0^{\circ}\text{C}$ | | | CASS CCD | <i>1800μm</i> G: 4815 | <i>300μm</i> FULL | 4869A | <i>3/4c.</i> | Focus Test | | |
| <i>6.8</i> 7978 | | 1.67 | B3V C ₁ | | | | | 6ci | KoK pgm | | |
| <i>6.8</i> 7860 | | <i>1</i> | <i>C</i> | | | | | <i>u</i> | | | |
| <i>6.9</i> | <i>poor</i> | 6.7 | F2 | No Fans tonight Above 300 μm slit | | | | | Seeing Test Done west <i>u u med strong WNW wind</i> | | |
| <i>6.9</i> 799 | <i>8"</i> | 6.05 | A0e skull | | | | | 7ci | KoK pgm | | <i>SNY</i> <i>>100/1</i> |
| <i>6.9</i> 998 | | | | | | | | 8ci | <i>u u</i> | 3.12 AIRMASS | |
| | | | | | | | | 5ci | | | |
| | | | | | | | | 5ci | | | |
| <i>6.6</i> 600 | <i>7"</i> | 7.3 | B9 | | | | | 9ci | KoK pgm | 2.60 AIRMASS | |

Spectr. Temp. Dome Temp./Hum. $+3.5^{\circ}\text{C}$ 76.4% Transparency Conditions *CLEAR*

Focus ... *6:90*

(154)

Spectr. Temp. Dome Temp./Hum.

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|--------------------|-----------|------------|-------------|-----------------|----------------------------|---------------------|--------------|------------|----------------|----------------------|-----------------------|
| <i>199</i> 490 | <i>5"</i> | <i>7.3</i> | <i>B9</i> | <i>CASS CCD</i> | <i>1800/1mm G=7815</i> | <i>300 FULL</i> | <i>4869A</i> | <i>10c</i> | <i>Kok pgm</i> | | |
| | | | | | | | | <i>5c</i> | | | |
| | | | | | | | | <i>1c</i> | | | |
| | | | | | | | | <i>5c</i> | | | |
| <i>770</i> 1400 | <i>6"</i> | <i>608</i> | <i>A104</i> | | | | | <i>11c</i> | <i>Kok pgm</i> | <i>2.05 HIA mass</i> | |
| <i>639</i> 1400 | | <i>'</i> | <i>7</i> | | | | | <i>12c</i> | | | |
| | | | | | | | | <i>5c</i> | | | |
| | | | | | | | | <i>13c</i> | | <i>MAX 12.5 HAD4</i> | |
| | | | | | | | | <i>14c</i> | | | |
| <i>414</i> 320 | <i>5"</i> | <i>7.9</i> | <i>B8</i> | | | | | <i>15c</i> | <i>Kok pgm</i> | | <i>S/N ~ 70/1</i> |
| <i>52</i> 380 | | | | | | | | <i>16c</i> | | | |
| <i>58</i> 486 | | | | | | | | <i>17c</i> | | | |
| | | | | | | | | <i>5c</i> | | | |
| | | | | | | | | <i>18c</i> | | | |
| | | | | | | | | <i>1a</i> | | | |

pg 11, 155 Wed/Thurs

Smt = Smith, of YOKU (RM)

Emulsion Batches:

Date 1994 Apr 20/21 Observers Sys/Smt./Tn.....

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|--------------|--------------|---------------------|--|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| CC21321-2 | COMP/STELLAR | | | | | | | | |
| 23 | BIAS (4) | | | | | | | | |
| 24 | COMP | | | | | | | FeAr Clear | 60s |
| 25 | HD123782 | 14 04 36 | 49 56 00 | 20 06 42 19 54 36 | | 4h 20E | | | 172 |
| 26 | COMP | | | | | | | FeAr Clear | 60s |
| 27 | COMP | | | | | | | FeAr Clear | 60s |
| 28 | HD126053 | 14 18 06 | 01 43 | 20 18 10 | | 4h 15E | | | 663 |
| 29 | COMP | | | | | | | FeAr Clear | 60s |
| 30 | Comp | | | | | | | FeAr Clear | 60s |
| 31 | HD123782 | 14 04 36 | 49 56 00 | 20 39 41 | | 3h 38 E | | | |
| 32 | Comp | | | | | | | FeAr Clear | 60s |
| 33-35 | FLATS X3 | | | | | 03 35E +50° | | Tung 1/2 | 5s |
| 36 | BIAS (4) | | | | | | | | |
| 37 | COMP | | | | | | | FeAr Clear | 60s |
| 38 | HD126053 | 14 18 06 | 01 43 | 23 01 39 | | 1h 36E | | | 441s |
| 39 | COMP | | | | | | | FeAr Clear | 60s |

Spectr. Temp. Dome Temp./Hum. $+5.4^{\circ}\text{C}/41.0\%$ Transparency Conditions MOSTLY CLEAR
 Focus 6.83 HIGH CLOUDS AT TIMES
 Spectr. Temp. Dome Temp./Hum. 156

| Exp. | Exp. Mtr. | Seeing | V _{avg} Mag. | Sp. | Inst. | Grating/Tilt | Slit | Cont. λ FWHM | P.H. | Program | Remarks | Quality |
|------|-----------|--------|-----------------------|---------|-------------|--------------------------------------|-------------------|----------------------|-------------------------------------|---------|--|--------------|
| | | | | | CASS CCD | 1800 nm/nm G=5910 | 300 μ FULL | 6400 \AA | | | GOOD NORMALISATION | |
| 172 | 8000 | 3" | 5.25 | M2IIIab | | | | | 5ci 7ci <i>std vel</i> | | 12k MAX AOV | |
| 63 | 1000 | 3"-4" | 6.27 | G1V | | | | | 8ci 9ci <i>std vel</i> | | 2.96 AIR MASS CLOUDS COMING IN | |
| 925 | 3-4" | 5.25 | M2IIIab | | | | | | 10ci 11ci 12ci <i>Std Vel</i> | | some SOME CLOUDS | S/N 200/1 |
| | | | | | | | | | 13ci 14ci | | FLATS @ 3h 30E, + 50' Arc 14k MAX AOV | |
| | | | | | | | | | 15ci 16ci <i>std vel</i> | | | |
| 443 | 1146 | 4" | 6.27 | G1V | | | | | 17ci | | | |

Spectr. Temp.

Dome Temp./Hum. $+33^{\circ}\text{C}/44.7\%$

Transparency Conditions . FEN. CLOUDS. SOUTH.

Focus 6.83

Spectr. Temp.

Dome Temp./Hum.

158

| Exp. Mtr. | Seeing | $\sqrt{+}$ Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Center Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|--------------------|--------|-------------|---------------------|-------------|-------------------------------|------|---------|---|---------|
| | | | | CASS CCD | 1800 h/nm G=5910 | 300 FULL | 6400A | 1ci | | | |
| | | | | | | | | 18ci | | | |
| 2000 | 4" | 5.25 | Mattab | | | | | 19ci | RV STD | MOSTLY CLEAR NOW | |
| | | | | | | | | 20ci | | | |
| | | | | | | | | 21ci | | | |
| 1000 | 3.5" | 6.27 | G1V | | | | | 22ci | RV STD | | |
| | | | | | | | | 23ci | | | |
| | | | | | | | | 24ci | | | |
| 2000 | 4.6" | 5.25 | Mattab | | | | | 25ci | RV STD | | |
| | | | | | | | | 26ci | | | |
| | | | | | | | | 26ci | | | |
| 1000 | 6" | 6.27 | G1V | | | | | 27ci | RV STD | | |
| | | | | | | | | 28ci | | | |
| | | | | | | | | 29ci | | AT POSITION OF CC21351 17.5K MAX ADU | |

Spectr. Temp.

Dome Temp./Hum.

+2.7°C 46.9%RH

Transparency Conditions

Focus ... 6.83

Spectr. Temp.

Dome Temp./Hum.

C LAMBDA

160

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|--------|-------------|----------------------------------|-------------------|----------|------|---------|---------------------------|---------|
| | | | | CASS CCD | 1800 \ln/mm G = 5910 | 300 μ FULL | (400A) | 2c. | | | |
| 1000 | ~8" | 6.15 | G0Ib | | | | " | 30ci | Sgs p9m | CLOUDS IN N SEEING BAD | |
| | | | | | | | | 31ci | | | |
| | | | | | | | | 2ci | | | |
| 2000 | 4" | 5.25 | M2IIab | | | | | 3ci | RV Std | THROUGH CLOUDS | |
| | | | | | | | | 2ci | | | |
| | | | | | | | | 4ci | | | |
| 1050 | 5" | 6.27 | G1Y | | | | | 5ci | RV Std | THROUGH CLOUDS | |
| | | | | | | | | 8ci | | | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 8ci | | | |
| 2030 | 4"-5" | 5.25 | M2IIab | | | | | 9ci | RV Std | CLEARING | |
| | | | | | | | | 10ci | | | |
| | | | | | | | | 11ci | | | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | | | 12.6 K MAX ADU | |

Pg #4

161

Emulsion Batches:

Date 1994. 20/21. Apr. Observers Sgs/Smt/Tn

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | | Exp. M |
|----------------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|-------|--------|
| | | | | | | | | Type/Filter | Exp. | |
| CC21374 | COMP | | | | | | | FEAR CLEAR | 60s | |
| 75 | HD 126053 | 14 18 06 | 01 43 | 1 35 11 | | 0h 59m W | | | 477s | 1020 |
| 76 | COMP | | | | | | | FEAR CLEAR | 60s | |
| 77 | COMP | | | | | | | " | 60s | |
| 78 | HD 123782 | 14 04 36 | 49 56 00 | 1 53 26 | | 1h 27m W | | | 138s | 2050 |
| 79 | COMP | | | | | | | FEAR CLEAR | 60s | |
| CG46102 -05 | HD 144579 | | | | | | | 4X | 67ms | |
| CG40106 -07 | " | | | | | | | 2X | 133ms | |
| CC21380 | COMP | | | | | | | FEAR CLEAR | 60s | |
| 81 | HD 126053 | 14 18 06 | 01 43 | 2 14 46 | | 1h 35m W | | | 270s | 1140 |
| 82 | COMP | | | | | | | FEAR CLEAR | 60s | |
| 83 | BIAS(4) | | | | | | | | | |
| 84 | COMP | | | | | | | FEAR CLEAR | 60s | |
| 85 | HD 123782 | 14 04 36 | 49 56 00 | 02 29 05 | | 2h 2m W | | | 150s | 2030 |
| 86 | COMP | | | | | | | FEAR CLEAR | 60s | |
| 87-89 | FLATS x3 | | | | | 2h 5m W | | TUNG 1/2 | 5s | |

Spectr. Temp. Dome Temp./Hum. $+2.3^{\circ}\text{C}$ 47.9% Transparency Conditions

Focus ... 6.83

Spectr. Temp. Dome Temp./Hum.

162

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | CENTRAL 2 Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|------|--------|-----------------------------|---------------------------|-----------------------|------|-------------|------------------|---------|
| 60s | | | | CASS | 1800 $\text{\AA}/\text{mm}$ | 300 μm FULL | 6400 \AA | 10ci | | | |
| 477s | 1020 | 5" | 6.27 | 61V | 6.5910 | | | 11ci | RV STD | THIN CLOUDS | |
| 60s | | | | | | | | 12ci | | | |
| 60s | | | | | | | | 12ci | | | |
| 131s | 2050 | 4.5" | 5.25 | M2IIab | | | | 13ci | RV STD. | FURTHER CLEARING | |
| 60s | | | | | | | | 14ci | | | |
| 61ms | | | | | NE FAN ON ALL NIGHT | | | | SEEING TEST | DOME WEST | |
| 13ms | | | | | | | | | " | MED. NW WIND | |
| 60s | | | | | | | | 15ci | | | |
| 280s | 1140 | 3" | 6.27 | 61V | | | | 16ci | RV STD. | CLEAR | |
| 60s | | | | | | | | 17ci | | | |
| | | | | | | | | 1ci | | | |
| 67s | | | | | | | | 18ci | | | |
| 150s | 2030 | 3" | 5.25 | M2IIab | | | | 19ci | RV STD | CLEAR | |
| 60s | | | | | | | | 20ci | | | |
| 61s | | | | | | | | 21ci | | 12.5K ADV MAX | |

Pg #5 (163)

Date 1994 20/21 Apr Observers Sgs/Smt/Tn

Emulsion Batches:

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

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| 2021390 | COMP | | | | | | | FeAr CLEAR | 60s |
| 91 | HD 126053 | 14 18 06 | 01 43 | 02 45 34 | | 2h 07m W | | | 315s |
| 92 | COMP | | | | | | | FeAr CLEAR | 60s |
| 93 | BIAS (4) | | | | | | | | |
| 94 | COMP | | | | | | | FeAr CLEAR | 60s |
| 95 | HD 123782 | 14 04 36 | 49 56 00 | 03 01 50 | | 2h 35m W | | | 147s |
| 96 | COMP | | | | | | | FeAr CLEAR | 60s |
| 97 | COMP | | | | | | | FeAr CLEAR | 60s |
| 98 | HD 126053 | 14 18 06 | 01 43 | 03 13 34 | | 2h 34m W | | | 278s |
| 99 | COMP | | | | | | | FeAr CLEAR | 60s |
| CC21400 | COMP | | | | | | | FeAr CLEAR | 60s |
| 01 | HD 123782 | 14 04 36 | 49 56 00 | 03 26 37 | | 3h 00m W | | | 145s |
| 02 | COMP | | | | | | | FeAr CLEAR | 60s |
| 03 | BIAS (4) | | | | | | | | |
| 04-06 | FLATS x3 | | | | | 3h 05m W | | TUNG 1/2 | 5s |

Spectr. Temp. Dome Temp./Hum. 11.6°C $47.9\% \text{H}$ Transparency Conditions

Focus 6.8.3

Spectr. Temp. Dome Temp./Hum.

(164)

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | C. LAMPADA Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------------|------------------|-------------|---------------------------------|---------------------------|------------------------|-----------------|--------------------|--------------------|---------|
| | | | | CASS CCD | 1800 ln/mm 6 - 5910 | 300 μm FULL | 6400 \AA | 22ci | | | |
| 1000 | 4"-5" | 6.27 | 61V | | | | | 23ci | RV STD. | CLEAR!! | |
| | | | | | | | | 24ci | | | |
| | | | | | | | | 1ci | | | |
| | | 5.25 | M20ab | | | | | 24ci | RV STD. | CLEAR!! | |
| 2000 | 3"-4" | 5.25 | M20ab | | | | | 25ci | RV STD. | CLEAR!! | |
| | | | | | | | | 26ci | | | |
| | | | | | | | | 26ci | | | |
| 1020 | 4" | 6.27 | 61V | | | | | 27ci | RV STD. | CLEAR!! | |
| | | | | | | | | 28ci | | | |
| | | | | | | | | 28ci | | | |
| 2010 | 3"-4" | 5.25 | M20ab | | | | | 29ci | RV STD. | CRYSTAL!! | |
| | | | | | | | | 30ci | | | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 31ci | | | |
| | | | | | | | | 32ci | | | |
| | | | | | | | | | | 12.0K MAX ADU | |

Spectr. Temp. Dome Temp./Hum. $+0.9^{\circ}\text{C}$ 50.7% H Transparency Conditions ... F.I.R.

Focus 6.83

Spectr. Temp. Dome Temp./Hum. $+0.6^{\circ}\text{C}$ 51.6% H

166

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | CEVRE 2 Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-------|------|-------------|--------------------|--------------|---------------------|------|---------|--|---------|
| 6/s | | | | CASS CCD | 1000 l/h G-5910 | 300µm FVL | 6400Å | 2ci | | | |
| 302s | 1000 | 4"-5" | 6.27 | G1V | | | | 3ci | RV STD. | CRYSTAL !! | |
| 6/s | | | | | | | | 4ci | | | |
| 6/s | | | | | | | | 4ci | | | |
| 6/s | 2000 | 3"-4" | 5.25 | M2 IIIab | | | | 5ci | RV STD. | CRYSTAL. | |
| 6/s | | | | | | | | 6ci | | | |
| 6/s | | | | | | | | 1ci | | | |
| 6/s | | | | | | | | 2ci | | | |
| 49s | ? | 5"-6" | 6.27 | G1V | | | | 7ci | RV STD. | CRYSTAL . CLEAR. ₅ | |
| 6/s | | | | | | | | 8ci | | perhaps spectrograph (exposure controller failure. _{refer}) | |
| 6/s | | | | | | | | 8ci | | | |
| 6/s | ? | | 7.48 | 60IB | | | | 9ci | Sgs Pgm | " + SUN COMING UP | |
| 6/s | | | | | | | | 10ci | | ↑ almost 100:1 SNR | |
| 6/s | | | | | | | | 11ci | | 12.8 K MAX ADU | |
| 6/s | | | | | | | | 1ci | | | |

Pg #1

(167)

 ΣV_{s}

Emulsion Batches:

Date 1994 Apr 21/22

Observers ~~H/W~~ [Bln] T_n/H/W.....
.....
.....

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-------------------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| cc21424 | Bias x 4 | | | | | | | aperture | |
| 25/26 | Comp/stellar | Hartman | | | | | | FeNe clear | 20/30 |
| 27 | Comp | | | | | | | " | 35 |
| 28 | HD95735 | 10 57 54 | 36 38 00 | 19:43:47 | | 1:32 E | | | 283 |
| 29 | Comp | | | | | | | " | 35 |
| 30 | HD95735 | 10 57 54 | 36 38 00 | 19:52:11 | | 1:23 E | | | 230 |
| 31 | Comp | | | | | | | " | |
| 32 | Bias x 4 | | | | | | | | |
| 33 | Comp | | | | | | | FeNe clear | 35 |
| 34 | BD-02 3000 | 09 48 10 | -03 13 04 | 20 16 56 | | 0:18 W | | | 736 |
| 35 | Comp | | | | | | | " | 35 |
| 36 | BD-02 3000 | 09 48 10 | -03 13 04 | 20:31:58 | | 0:33 | | | 737 |
| 37 | Comp | | | | | | | " | 35 |
| 38-40 | 3x Flats | | | | | | | Tung 1/2 Ap | 10s |
| 41 | Bias x 4 | | | | | | | | |

C.D.
Spectr.
Focus.
C.C.D.
Spectr.

Exp. Mtr.

690

520

61

60

CLD
Spectr. Temp. -100°C

Dome Temp./Hum. 6.2°C/39.4% Transparency Conditions Clear

Focus 6.85

Spectr. Temp. CCD 6.4 in 90.5 gain

Dome Temp./Hum. 465 0 50 1024 41 ccd/mnt

168

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-------|-----|----------|--------------------------|-------------------|----------|------|-------------|---|---------|
| | | | | Cass CCD | 1800 μ /mm G=5115 | 300 μ FULL | S303A | 1 | bsum 4. bat | | |
| | | | | | | | | 3/4 | Focus Test | Heurikon crashed after saving cc21426, had to be reset. | |
| | | | | | | | | 3 | | | |
| 690 | 7.48 | | MZ | | | | | 4 | Vys std. | | |
| | | | | | | | | 5 | | | |
| 520 | 7.48 | | MZ | | | | | 4 | Vys Std | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 1 | bsum 4. bat | | |
| | | | | | | | | 6 | | check if written, then ccs 886 froze up | S/N |
| 61 | 2" | 10.54 | MO | | | | | 1cc | Vys Pgm | Heurikon Reset before this exp | 44/1 |
| | | | | | | | | 2 | | | |
| 60 | | 10.54 | MO | | | | | 3 | Vys Pgm | | |
| | | | | | | | | 4 | | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 1 | | | |

Pg#2

169

Emulsion Batches:

Date 1994 Apr 21/22 Observers [Bln] Tn/Hlw

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|------------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|--------|
| CC21442/3 | Comp/Stellar | Hartman | | | | | | FeAr clear | 60/60 |
| 44 | Bins (4) | | | | | | | | |
| 45 | Comp | | | | | | | " | 60 |
| 46 | HD 77327 | 08 56 48 | +47 33 08 | 21 05 36 | | 01 46 W | | | 94 |
| 47 | Comp | | | | | | | FeAr clear | 60 |
| 48 | Comp | | | | | | | " | " |
| 49 | HD 93521 | 10 42 42 | +38 06 00 | 21 15 32 | | | | | 606 |
| 50 | HD 93521 | 10 42 42 | +38 06 00 | 21 26 47 | | | | | 720 |
| 51 | HD 93521 | 10 42 42 | +38 06 00 | 21 39 14 | | 0:45 W | | | 637 |
| 52 | Comp | | | | | | | FeAr Clear | 60 |
| 53 | Bins (4) | | | | | | | | |
| 54 | HD 93521 | 10 42 42 | +38 06 00 | 21 57 27 | | | | | 635 |
| CG 40108 | 4x " | " | " | =2210 | | | | 4x | 67msc |
| CG 4012/13 | " | " | " | | | 1:05 W | | 2x | 133msc |
| CC21455 | HD 93521 | " | " | 22:11:58 | | | | | 665 |

Spectr. Temp. Dome Temp./Hum. 4.2°C/41.1% Transparency Conditions ClearFocus 6.85

Spectr. Temp. Dome Temp./Hum.

170

| Exp. Mtr. | Seeing | P _v Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|---------------------|-------|----------|------------------------------|----------------------|----------|------|------------------------|---------------------------|--------------|
| | | | | Cass CCD | 1800 λ /mm G=6065 | 300 μ | 6604A | 3/4 | Focus Test | | good. |
| | | | | | | | | 1 | | | |
| | | | | | | | | 5 | | | |
| 5100 | <2" | 3.6 | A0 | | ~330 | S.N.R. | | 6c | Telluric Std | Max adu ~8000 | |
| | | | | | | | | 7c | | | |
| | | | | | | | | 8 | | | |
| 1700 | | 7.04 | 09.5V | | | | | 9 | Bln 0 ⁺ pgm | | |
| 2100 | | 7.04 | 09.5V | | | | | 10 | Bln 0 ⁺ pgm | | |
| 2044 | | 7.04 | 09.5V | | | | | 11 | Bln 0 ⁺ pgm | | |
| | | | | | | | | 12 | | | |
| | | | | | | | | 1 | | | |
| 2008 | <2" | 7.04 | 09.5V | | | | | 13 | Bln 0 ⁺ pgm | Auto-Guiding with SBIG | S/N 170/1 |
| | | " | " | | | Above 300 μ slit | | | Seeing test | | |
| | | " | " | | | | | | " " | | |
| 2200 | | | | | | | | 14 | Bln 0 ⁺ pgm | | - 180 S.N.R. |

Spectr. Temp. Dome Temp./Hum. $3.3^{\circ}\text{C}/40.9\%$ Transparency Conditions ClearFocus 6.85

Spectr. Temp.

Dome Temp./Hum. 1.7°C 48.4% H

172

| Exp. Mtr. | Seeing | √ Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Central Emulsion wavelength | S. F.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------|----------|---------------------------|-------------|-----------------------------------|------------|-------------|--------------------------------|-------------|
| 2200 | | 7.04 | 07.5V | Cass CCD | 1800 ℓ /mm G=6065 | 300 μ m | 6604 \AA | 15 | Bln O* pgrm | Auto-guiding with SBIG | SNR ~185 |
| | | | | | | | | 16 | | | |
| | | | | | | | | 1 | | | |
| 1700 | | 7.04 | 09.5V | | ~155 | SNR. | | 17 | Bln O* pgrm | } Auto-guiding | |
| 1830 | | 7.04 | 09.5V | | ~160 | S.N.R. | | 18 | Bln O* pgrm | | |
| 1820 | | 7.04 | 09.5V | | | | | 15 | Bln O* pgrm | | |
| | | | | | | | | 18 | | | |
| 2150 | 1.2" | | | | | | | 19. | | } 1.25 Air mass hand guide. | |
| 1915 | 2" | | | | | | | 20 | | | |
| 1990 | | | | | | | | 21 | | | |
| | | | | | | | | 22 | | | |
| | | | | | | | | 23 | | | |
| 1948 | | | | | | | | 23 | | | |
| 1930 | | | | | | | | 24 | | | |
| 2170 | 2" | | | | | | | 25 | | | |
| | | | | | | | | 26 | | | |
| | | | | | | | | 1c1 | | | |

Spectr. Temp. Dome Temp./Hum. $7.1.8^{\circ}\text{C}$ $49.1\% \text{H}$ Transparency Conditions *Fine* 174
 Focus *6.85*
 Spectr. Temp. Dome Temp./Hum. 0.0°C $57.2\% \text{H}$ *CLM 1/2 H* *Tel East side all night*

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|-------|-------------|--------------------|-------------|----------|------|-------------------------|--------------------------------|---------|
| | | | | CASS CCD | 1800nm G=6065 | 300 Full | 6600R | 2c | | | |
| 2030 | 2" | 7.04 | 09.5V | | | | | 27c | Bln 0* pgm | Auto-guiding with SBIG | |
| 2000 | | | | | | | | 28c | " | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 6 | | | |
| 7400 | | | | | | | | 7 | Telluric std | MaxAAU ~ 14000 Xand ~ 3 | |
| | | | | | | | | 8 | | | |
| | | | | | | | | 9 | | | |
| 1596 | 2" | 7.04 | 09.5V | | | | | 10 | Bln 0* pgm | Auto-guided | |
| | | | | | | | | 11 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 29 | | | |
| Focus | 7.15 | | | CASS CCD | 150nm/mm G=2335 | 300 Full | 5640A | 3c | | Blue half weak MAX 15 K ADU | |
| 0 | | 13 | | | | | | 4c | SN 1994I pgm | (SBIG guided) | |
| | | | | | | | | 5 | 6.0 sec Int. on SBIG | (Focus mark) | |
| | | | | | | | | 1 | | | |

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions ... *Fine - v. sl. hazy*Focus .. *7:15*

Spectr. Temp.

Dome Temp./Hum.

*Tel still East side**176*

| Exp. Mtr. | Secing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------------------|--------|----------------|-------|-------------|-------------------------|-------------|----------|------|---------|------------------------------------|---------|
| | | | | CASS CCD | 150 μ /mm G-2335 | 300 FULL | 5640A | 5c | | | |
| | 0 | 2 ^h | 11.62 | | | | | 6c | | sl. fox S Nova | |
| | | | | | | | | 5c | | | |
| | | | | | 150 μ /mm G-2400 | 300 | 6250A | 9c | | | |
| | | | | | | | | 10c | | sl. fox S Nova | |
| | | | | | | | | 11 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 11 | | | |
| | 0 | 13? | | Twilight. | | | | 12 | SN pgn | ok on SBIG vid. Difficult guiding. | |
| | | | | ↓ | | | | 13 | | | |
| | | | | Dawn | | | | 14 | | | |
| | | | | | | | | 1 | | | |
| <i>All to Perseus & WORM.</i> | | | | | | | | | | | |

Pg#1

177

Date 1994 Apr 22/23 Observers Kok/Hlw

Emulsion Batches:

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------|-------------------------------|--|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-----------|
| cc21512/3 | Comp/Stellar | Hartman | | | | 0:20W | +41:48 | Fear Clear | 30/40 |
| 514 | Bias (avg of 4) | | | | | | | Fear Clear | 60 |
| 515 | Comp | | | | | | | Fear Clear | 60 |
| 516 | HD15963 | 2 ^h 28 ^m 54 ^s | 57 38 7.7 | 201242 | | 7:30W | | | 300 |
| 517 | HD15963 | " | " | 201944 | | 8:01W | | | 180s |
| 518 | Comp | | | | | | | Fear Clear | 60 |
| 519 | Bias (4) | | | | | | | | |
| 520 | Comp | | | | | | | Fear Clear | 60 |
| 521 | ^{wrong star} HD24841 | 1994.3: 5 50 57 | 28 15 39 | 21 11 57 | | | | | 600 |
| 522 | Comp | | | | | | | Fear Clear | 60 |
| 523 | HD248411 | 5:45:30 | +28:14 | 21 34 26 | | 5:40W | | | 608 |
| 524 | " | " | " | 21 45 46 | | 6:10W | | | 1800 |
| 525 | Comp | | | | | | | Fear Clear | 60 |
| 526 | Bias ^{**} (4) | | | | | | | | |
| 527 | → Comp | | | | | | | | |
| 528 | HD45910 | 6 ^h 25.6 | 05 56 | 22 26 08 | | 6:04W | | Fear Clear | 60 867 |

pg #2

179

Date ..1994...Apr..22/23 Observers ...Kakj..H.l.w.....

Emulsion Batches:

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.....
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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| CC21529 | HD45910* | 6h 25.2 | 05 56 | 22 54 45 | | 60047W | | | 394 |
| 530 | Comp | | | | | | | | 60 |
| 531/2 | Comp/stellar | Hertman | | | | | | fear clear | 20/30 |
| 533 | Bias(4) | | | | | | | | |
| 534 | Comp | | | | | | | fear clear | 60 |
| 535 | HD183656 | 19 25 32 | 3 14 08 | 00 55 48 | | | | | 601 |
| 536 | Comp | | | | | | | fear clear | 60 |
| 537 | HD183656 | 19 25 32 | 3 14 08 | 01 09 13 | | | | | 1200 |
| 538 | Comp | | | | | | | fear clear | 60 |
| 539 | Comp | | | | | | | fear clear | 60 |
| 540 | HD192954 | 20 12 07 | 15 33 07 | 01 38 41 | | | | | 900 |
| 541 | " | " | " | 01 53 59 | | | | | 908 |
| 542 | Comp | | | | | | | " | 60 |
| 543 | Bias(4) | | | | | | | | |
| 544 | Comp | | | | | | | fear clear | 60 |

Spectr. Temp.

Dome Temp./Hum. + 4.2.....38.7

Transparency Conditions Clear + some

Focus 6.90/6.95

Spectr. Temp.

Dome Temp./Hum.

180

very thin
cloud.

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------|-------|------------------------|------|----------|------|---------|-----------------------|---------|
| | | 6.77 | B211e | | | | | 16 | | | |
| | | | | | | | | 18 | | | |
| | | | | | 1200 lines G = 4460 | 300μ | 4370A | 3/4 | | Focus changed to 6.95 | |
| | | | | | | | | 5 | | | |
| 772 | | 6.05 | A0esh | | | | | 6 | | | |
| | | | | | | | | 7 | | | |
| 2150 | | 6.05 | A0esh | | | | | 8 | | | |
| | | | | | | | | 9 | | | |
| | | | | | | | | 10 | | | |
| 452 | | 7.3 | B9 | | | | | 11 | | | |
| 478 | | " | " | | | | | 12 | | | |
| | | | | | | | | 13 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 14 | | | |

We do not see emission at H γ , is this the right star? It's the only one in the field. - 120 → S/N

Pg #3

181

Emulsion Batches:

Date 1994 Apr 22/23 Observers Kok/Hlw

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|------|
| | | | | | | | | Type/Filter | Exp. |
| cc21545 | HD193182 | 20 13 49 | +39 16 59 | 02 18 46 | | | | | 912 |
| 546 | " | " | " | 02 34 37 | | | | | 902 |
| 547 | Comp | | | | | | | Fe Ar clear | 60 |
| 548 | bias (4) | | | | | | | | |
| 549 | Comp | | | | | | | Fe Ar clear | 60 |
| 550 | HD 195407 | 20 26 | 36 39 27 | 02 57 07 | | | | | 900s |
| 551 | HD 195407 | 20 26 00 | 36 39 08 | 03 12 49 | | | | | 900 |
| 552 | Comp | | | | | | | Fe Ar clear | 60 |
| 553 | Comp | | | | | | | " | " |
| 554 | HD 195325 | 20 25 30 | 10 33 39 | 03 34 21 | | | | | 700 |
| 555 | " | " | " | 03 46 26 | | | | | 700 |
| 556 | Comp | | | | | | | Fe Ar clear | 60 |
| 557 | bias (4) | | | | | | | | |
| 558 | Comp | | | | | | | Fe Ar clear | 60 |
| 559 | HD 220300 | 23 17 00 | 55 49 00 | 04 09 16 | | | | | 1064 |

Spectr. Temp.

Dome Temp./Hum.

+2.3°C / +3.9%

Transparency Conditions ...

Clear

Focus 6.95

Spectr. Temp.

Dome Temp./Hum.

182

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | pH C. | Program | Remarks | Quality |
|-----------|--------|------|-------|----------|---------------------|------|----------|----------|---------|---------|---------|
| 1012 | | 6.5 | B2sh | Cass CCD | 1800/mm G = 4460 | 300μ | 4340A | 15 | Kok pgm | | |
| 2016 | | " | " | | | | | 16 | | | |
| | | | | | | | | 17 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 18 | | | |
| 313 | | 7.0 | B2sh | | | | | 19 | | | |
| 350 | | 7.7 | B0sh | | | | | 20 | | | |
| | | | | | | | | 21 | | | |
| | | | | | | | | 22 | | | |
| 1285 | | 6.08 | A1esh | | | | | 23 | | | |
| 1415 | | " | | | | | | 24 | | | |
| | | | | | | | | 25 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 26 | | | |
| 338 | | 7.6 | B8 | | | | | 27 | | | |

pg #4 183

Emulsion Batches:

Date ... 1994 Apr. 22/85 Observers ... Koh / Hlw

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|------------------|---------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|-------------|---------------------|
| | | | | | | | | Type/Filter | Exp. |
| CC21560 | HD 220300 | 23 17 00 | 55 49 00 | 04 28 24 | | | | | 60 60 |
| 561 | Comp | | | | | | | FEAR | 60 |
| 562 | brass (?) | | | | | | | clear | |
| 563-7 | Flats x5 | | | | | | | Tung | 30 |
| 568-72 | Flats x5 | | | | | | | " | 40 |

Spectr.
 Focus.
 Spectr.

Exp. Mtr.
 21
 22
 23

Spectr. Temp. Dome Temp./Hum. ... $\rightarrow 2.2.2. + 6.3.9$ Transparency Conditions ... *clear* 184
 Focus
 Spectr. Temp. Dome Temp./Hum.

| Exp. Mtr. | Seeing | Prism Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------|--------|------------|-----|-------|---------------------|-----------|----------|---------------|------------|--|---------|
| 270 358 | | | | | 1800 l/mm G=4460 | 300 μ | 4340A | 28 29 1 | pyram star | Into Sunrise, some GZ \bar{W} background | |
| | | | | | | | 4540A | | | | |
| | | | | | 150 / G=4015 | | 4861r1 | | | Because we forgot to do them at the beginning | |

PD#1

185

Emulsion Batches:

Date ... 1994 Apr. 26/27 Observers ... Kakl./Hlw.....

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------------|------|
| | | | | | | | | Type/Filter | Exp. |
| CC 21573 | Bias (4) | | | | | | | | |
| 74 | Camp | | | | | | | FeAR clear | 60 |
| 75 | HD 32630 | 4h59m | 41 06 | 22 42 29 | | | | | 447 |
| 76 | Camp | | | | | | | FeAR clear | 60 |
| 77 | Camp | | | | | | | FeAR clear | 60 |
| 78 | HD 34759 | 5 14.7 | 41 42 | 22 58 30 | | | | | 610 |
| 79 | Camp | | | | | | | FeAR clear | 60 |
| 580-2 | Plots X3 | | | | | ~7 W | +41° | FeAR ung clear | 30s |
| 583 | Bias (4) | | | | | | | | |
| 584 | Camp | | | | | | | FeAR clear | 60 |
| 585 | HD 97633 | 11 09 00 | 15 59 00 | 23 30 37 | | | | | 200 |
| 86 | " | " | " | 23 35 52 | | | | | 200 |
| 87 | Camp | | | | | | | " | 60 |
| 88 | Camp | | | | | | | " | 60 |
| 89 | HD 102647 | 11 43 00 | 15 08 00 | 23 50 27 | | | | | 886 |
| 90 | " | " | " | 23 54 43 | | | | | 235 |

Spectr. Temp. ^{CD} -100°C

Dome Temp./Hum. r15.6...78.8

Transparency Conditions... clear with haze

Focus... 6.85

Fan ON

186

Spectr. Temp. ... gain = 90

Dome Temp./Hum.

480 0 50 1024 4 1 ccd fnt

| Exp. Mtr. | Seeing | Pg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|----------|-----|----------|-------------------|------|----------|------|----------|--|---------|
| | | | | Cass CCD | 18000/mm G=446 | 300μ | 4340A | | | | |
| 1100 | 2.97 | B3V | | | | | | 3ci | | Spent first 3 hours trying to remove moisture from CCD window. Used hair dryer, etc. | |
| | | | | | | | | 4ci | Pym star | | |
| | | | | | | | | 5ci | | | |
| 244 | 4.91 | B5V | | | | | | 6ci | | 87% Relative Humidity on catwalk @ 2300 90% @ 2330 92% @ 0000 | |
| | | | | | | | | 7ci | 1guistar | | |
| | | | | | | | | 8ci | | | |
| | | | | | | | | 9ci | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 10 | | | |
| 4700 | 3.31 | A2V | | | | | | 11 | stand. | | |
| 4300 | 4 | 2 | | | | | | 12 | 11 | | |
| | | | | | | | | 13 | | | |
| | | | | | | | | 14 | | | |
| 5000 | 2.4 | A3V | | | | | | 15 | stand. | | |
| 10000 | 4 | 4 | | | | | | 16 | u | | |

Pg #2

187

Emulsion Batches:

Date 1994 Apr. 26/27 Observers Kokf. Hlu.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------------------|---------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| cc 21591 | Camp | | | | | | | TeAr clear | 60 |
| 592 | bias (4) | | | | | | | | |
| 593-5 | Flats x 3 | | | | | | | Tung clear | 30 |
| CG 40114 7 | 4x HD 128718 | 14 33 24 | 48 39 00 | ~ 00:20 | | 0:13 E | +48° | | .067 |
| CG 40118.9 | 2x " | " | " | | 0:24 | | | | .133 |
| cc 596-7 | Camp/Stellar Hartman | | | | | | | FeNe clear | 20/30 |
| 21598 | bias (4) ← this was saved | | | | | | | | |
| cc 21599 | Camp | | | | | | | FeNe clear | 60 |
| 600 | HD 183656 | 19 25 32.8 | 3 14 08 | 00 24 50.52 | | 4 35 E | +3° | | 1272 |
| 601 | " | " | " | 01 12 46 | | | | | 1289 |
| 602 | Camp | | | | | | | FeNe clear | 60 |
| 603 | Bias (4) | | | | | | | | |
| 604-608 | 5x Flats | | | | | | | Tung clear | 60s |

Spectr. Temp. Dome Temp./Hum. ... +14.8 ... 84.5 Transparency Conditions ... partially cloudy ...
 Focus 6.85 hazy. 1000
 Spectr. Temp. Dome Temp./Hum.

| Exp. Mtr. | Seeing √Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|-----------------|------|-------|--------------------|------|----------|---------------------------|--------------|---|---------|
| | | | | 1800l/mm G=4460 | 300μ | 4345 | 17 18 18 | | | |
| | 6.7 | F2 | | | | | | Seeing Test | North Fan ON South Fan OFF Dome NW light S wind very humid and hot | |
| | " | " | | | | | | Seeing Test | | |
| | | | | 1800 G=4310 | 300μ | 4101A | 3/4 | Focus Test | | good |
| | | | | | | | 1 | | 92% Hum. on catwalk @ 0040 | |
| 246 | 6.05 | HRsh | | | | | 5 | Tuba | | |
| 436 | " | " | | | | | 6 | Program Star | | |
| | | | | | | | 7 | " | | |
| | | | | | | | 8 | | | |
| | | | | | | | 1 | | | |
| | | | | | | | 9 | | | |
| | | | | | | | | | Closing due to high humidity (93%) and increasing clouds. | |
| | | | | | | | | | All to WORM and perseus | |

Wed - Thurs 189

Emulsion Batches:

Date .. 1994 Apr. 27/28. Observers .. Sgs. / Tu

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| CC21609 | BIAS(4) | | | | | | | | |
| 10 | COMP | | | | | | | FeAr Clear | 60s |
| 11 | HQ161096 | 17 38 30 | 04 37 00 | 23 14 43 | | 4h 20m E | | | 74s |
| 12 | COMP | | | | | | | FeAr Clear | 60s |
| 13-15 | FLATS X3 | | | | | 24 18 E | ±14 70 | Tung 1/2 | 5s |
| 16 | BIAS(4) | | | 00 08 | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |

CC
Spectr.
Focus
Spectr.
Exp. Mtr.

^{CCD}
Spectr. Temp. -100°C

Dome Temp./Hum. +7.0°C 57.5%
54.5%
.....

Transparency Conditions Positive Clarity

Focus 6.80

465 0 50 1024 4 1 CCD FMT

Spectr. Temp. Dome Temp./Hum.

90CGAIN G

1970

| Exp. Mtr. | Seeing | ✓ Prg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-------------|-----|-------------|----------------------------------|---------------------|----------|------|---------|---------------|---------|
| | | | | CASS CCD | 1800 lines/mm G=5910 | 300 μ m FULL | 6400R | | | | |
| | | | | | | | | | 3ci | | |
| | | | | | | | | | 4ci | Rv std | |
| | | | | | | | | | 5ci | | |
| | | | | | | | | | 6ci | 11000 MAX ADU | |

2000

2.77K2III

11000 MAX ADU

CCD
Spectr. Temp. -100°C
Focus 6.90
Gain 90
Spectr. Temp. 90

Dome Temp./Hum. $+6.8^{\circ}\text{C}/59.9\%$
Dome Temp./Hum. $+5.3^{\circ}\text{C}/60.1\%$

Transparency Conditions... Partially Cloudy
Dome Fans OFF
465 0 50 1024 4 1 ccd fnt.

192

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | central emission wavelength | P.M. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|--|--------------|-----------|-----------------------------|------|-----------------------------------|--|---------|
| | | | | Cass CCD | 18002/mm | 300 μ | 5303A | 1 | bsum 4 bat | | |
| | | | | | G=515 | | | 3 | | | |
| | 4" | 7.5 | M2 | *Check <u>All</u> Comps, Could be a Hartman Mask problem! | | | | 4 | Vys Std ^{Std} | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 6 | | *Note: Rack Motor malfunctioning mirrors not guaranteed to end up at the same position. \rightarrow check these comps. | |
| | 0 | 10.9 | M0 | | | | | 7 | Vys Pgm | | |
| | | | | | | | | 8 | | *Note also. we got a weird prompt: 'Hartman Mask Running' could be a glitch due to hitting the Manual/Auto switch | |
| | | | | | | | | 9 | | | |
| | ~200 | 8.5 | M1 | | | | | 10 | Vys Stds | *Note also: Aperture wheel is being set by hand, and could be getting out of sync and in the way of comps. | |
| | | | | | | | | 11 | | | |
| | | | | | | | | 12 | | | |
| | 0 | 10.6 | M0 | | | | | 13 | Vys Pgm | Cut out early due to | |
| | | | | | | | | 14 | | CLOUDS | |
| | | | | | | | | 15 | | | |
| | | | | | | | | 1 | | | |

* This indicates something is wrong because 15 seconds clear should have saturated. Perhaps aperture is in the way. Perhaps Mask is in the way

Spectr. Temp. Dome Temp./Hum. $+4.7^{\circ}\text{C}/61.4\%$ Transparency Conditions *Lots of clouds.*

Focus

Spectr. Temp. Dome Temp./Hum.

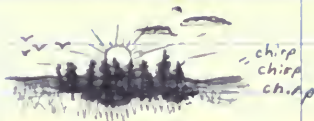
(194)

| Exp. Mtr. | Seeing | Prg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|----------|---|-----------|----------|------|----------|---|---------|
| | | | | Cass CCD | 1800 λ /mm G = S115 | 300 μ | 5303A | 16 | | | |
| 175 | | 8.5 | M2 | | | | | 17 | Vys Pgm | Through some clouds. | |
| | | | | | | | | 18 | | *Aperture wheel set by hand. | |
| | | | | | | | | 19 | | | |
| 0 | | 10.2 | MO | | Spectrum looks <u>WRONG</u> Field OK | | | 20 | Vys Pgm | Through even more clouds. (It's been perfectly clear between stellar exposures...) | |
| | | | | | | | | 21 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 22 | | 80% humidity on catwalk @ 0235 | |
| 33 | | 9.8 | MO | | | | | 23 | Vys Std. | | |
| | | | | | | | | 24 | | | |
| | | | | | | | | 25 | | | |
| 48 | 4" | 10.0 | M1 | | | | | 26 | Vys Pgm | | |
| | | | | | | | | 27 | | | |
| | | | | | | | | 28 | | | |
| 32 | | 9.1 | MS | | | | | 29 | Vys Pgm | | |
| | | | | | | | | 30 | | | |

Spectr. Temp. Dome Temp./Hum. $3.2^{\circ}\text{C}/65.6\%$ Transparency Conditions *partially cloudy*
 Focus
 Spectr. Temp. Dome Temp./Hum.

196

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---|--------|-----------|-----|----------|----------------|-----------|----------|------|------------|--------------|---------|
| | | | | Cass CCD | 1800 μ /mm | 300 μ | S303A | 1 | bsum 4.bat | | |
| | | | | | G=5115 | | | | | | |
| 106 | | M&A 9.3 | | | | | | 31 | | | |
| | | | | | | | | 32 | Vys Pgm | Into Sunrise | |
| | | | | | | | | 33 | | | |
| <p>All to WORM & perseus</p> | | | | | | | | | | | |
| <p>The early bird always gets the WORM.</p> | | | | | | | | | | | |



chirp
chirp
chirp

Pg #1

Sun/Mon

197

Date 1994 MAY 1/2 ... Observers Tr. [Vyspam] ... H/w

Emulsion Batches:

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------|----------------------------|---------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC21657 | BIAS(A) | | | | | | | | |
| 58 | Comp | | | | | | | FeNe clear | 35s |
| 59 | VYS 560 | 09 48 10 | -03 13 04 | 22 57 09 | | 2:46 W | -4° | | 1214 |
| 60 | Comp | | | | | | | FeNe clear | 35s |
| 61 | VYS 560 Comp | 09 48 10 | -03 13 04 | 22 23 07 | | 3:07 W | -4° | | 901 |
| 62 | Comp | | | | | | | FeNe clear | 35s |
| 63 | Comp | | | | | | | " | 35s |
| 64 | BD+01 2447 | 10 23 49 | +01:21:36 | 23:01:05 | | 3:08 W | +1° | | 839 |
| 65 | Comp | | | | | | | FeNe clear | 35s |
| 66/67 | Comp/Stellar | Hartman Mask. | | | | 3 15 W | +1° | | 20/30 |
| 68 | Bias x 4 | | | | | | | | |
| 69 | Comp | | | | | | | FeNe clear | 35s |
| 70 | HDI 19850 | 13 40 36 | +15 27 00 | 23:33:35 | | 0:20 W | +15° | | 600s |
| 71 | Comp | | | | | | | " | 35 |
| 72 | Comp | | | | | | | " | " |

CCO
Spectr.Focus
CGA
Spectr.

Exp. Mtr.

CCD
Spectr. Temp. -100°C
Focus $6:90$
Spectr. Temp. 90

Dome Temp./Hum. $+4.5^{\circ}\text{C}$ 67.6%

Transparency Conditions *clearing... some haze.*

Fans Off
465 0 50 1024 4 1 ccdfmt

198

Dome Temp./Hum. *120% Creating unbalanced since last night (Disabled)*

| Exp. Mtr. | Seeing | W. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|---------|-----|-------------|------------------------------|-----------------------------------|----------|--------|-------------|---|---------|
| | | | | CASS CCD | 1800 <i>in/mm</i> G. 5115 | 300 Full | 5303A | 1c. | bias 4. bat | | |
| | | | | * Note: | | Hartman mask could be in comp. | | 3c: | | spec contr MAX 5K MANUAL mode for source | |
| 10 | 3.4" | 10.54 | M0 | | | ≈ 30 SNR | | 4c: | Vys pgn | | |
| | | | | * Note: | | Hartman mask could be in comp | | 5c: | | MINI ACQU | |
| 5 | | 10.5 | M0 | | | | | 6c: | Vys pgn | | |
| | | | | * Mask | | probably fine now. | | 7c: | | | |
| | | | | | | | | 8c: | | should be no Hartman MASK in other than Home | |
| 31 | | 9.7 | M2 | | | | | 9 | Nys Std. | | |
| | | | | | | | | 10c: | | | |
| | | | | | | | | 11/12c | Focus Test. | | |
| | | | | | | | | 1 | bsum 4. bat | | |
| | | | | | | | | 13 | | | |
| 253 | | 8.5 | M1 | | | | | 14 | Vys Std. | | |
| | | | | | | | | 15 | | | |
| | | | | | | | | 16 | | | |

Set 6:90 Temp + 3.1°C

pg #2 (199)

Emulsion Batches:

Date 1994 May 1/2 Observers Tn/Hlw & VysE

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-------------------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CCZ1673 | AC+14 1105-9 | 13 57 29 | +14 10 07 | 23 50 42 | | 00 31W | | FeNe Clear | 1244 |
| 74 | Comp | | | | | | | | 35 |
| 75 | Bias x 4 | | | | | | | | |
| 76 | Comp | | | | | | | FeNe Clear | 35 |
| 77 | BD+21 2763 | 15 17 55 | +21 20 06 | 00 21 11 | | 0:14 E | +21° | FeNe Clear | 1388 |
| 78 | Comp | | | | | | | | 35 |
| 79 | Comp | | | | | | | " | 35 |
| 80 | AC+26 3703D | 15 23 45 | +26 08 16 | 00 52 24 | | 0:08 W | +26° | FeNe Clear | 1244 |
| 81 | Comp | | | | | | | | 35 |
| 82 | Bias x 4 | | | | | | | | |
| 83-85 | 3x Flats | | | | | | | Tung Clear | 15 |
| 86 | Comp | | | | | | | FeNe Clear | 35 |
| 87 | AC+38 34548 | 15 30 11 | +38 15 00 | 01 34 54 | | 0:49 W | +38° | | 1517 |
| 88 | Comp | | | | | | | " | 35 |
| cg40120 -3 | 4x HD144579 | 16 01 30 | +39 25 36 | 02 10 | | | | | .067 |
| cg40124/5 | 2x HD144579 | 16 01 30 | +39 25 36 | | 02 12 | | | | .133 |

Spectr. Temp. Dome Temp./Hum. 2.9°C/74.7% Transparency Conditions Clear with Aurora borealis

Focus

Spectr. Temp. Dome Temp./Hum.

200

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|----------|----------------------|-------|----------|------|-------------|---|---------|
| // | | 10.7 | MO | Cass CCD | 1800l/mm G = S115 | 300µm | S303A | 17 | Vys Pgm | 88% Hum. on catwalk @ 0000 | |
| | | | | | | | | 18 | | | |
| | | | | | | | | 1 | bsum4.bat | | |
| | | | | | | | | 19 | | | |
| 86 | | 10.1 | MO | | SNR ~ 55 | | | 20 | Vys Pgm | | |
| | | | | | | | | 21 | | | |
| | | | | | | | | 22 | | | |
| 0 | | 11.1 | MO | | | | | 23 | Vys Pgm | Auto-guiding screwed up - 2x star- ingge | |
| | | | | | | | | 24 | | | |
| | | | | | | | | 1 | | | |
| | | | | | Max ADU ~ 12K | | | 25 | | | |
| | | | | | | | | 26 | | | |
| 0 | | 11.3 | MO | | | | | 27 | Vys Pgm | 92% Hum. on catwalk @ 0130 | |
| | | | | | | | | 28 | | | |
| | | 6.7 | G8V | | | | | | Seeing Test | Light WNW wind Dome WSW | |
| | | 6.7 | G8V | | | | | | Seeing Test | 94% Hum @ 0200 | |

pg#3 / 201

Emulsion Batches:

Date 1994 May 1/2 Observers Tn/Hlw {Vys}

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------|------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| cc21689 | Comp | | | | | | | FeNe Clear | 35s |
| 90 | HD144579 | 16 01 30 | +39 25 36 | 02 15 53 | | 0:38 W | +39° | " | 305 |
| 91 | Comp | | | | | | | " | 35s |
| 92 | Bias x 4 | | | | | | | | |
| 93 | Comp | | | | | | | FeNe Clear | 35s |
| 94 | BD-074156 | 15 54 29 | -07 58 11 | 02 29 42 | | 1 15 W | -8° | " | 1361 |
| 95 | Comp | | | | | | | FeNe Clear | 35s |
| 96 | Comp | | | | | | | " | " |
| 97 | BD+053409 | 17 25 28 | +05 37 49 | 03 04 16 | | 00 10 W | +6° | " | 808 |
| 98 | Comp | | | | | | | FeNe Clear | 35s |
| 99 | Comp | | | | | | | " | " |
| cc21700 | BD-08 4352 | 16 50 05 | -08 09 47 | 03 25 09 | | 1:06 W | -8° | " | 804s |
| 701 | Comp | | | | | | | FeNe Clear | 35s |
| 702 | Bias x 4 | | | | | | | | |
| 703 | Comp | | | | | | +45° | " | " |

Spectr. Temp.

Dome Temp./Hum. 1.4°C/83.6%

Transparency Conditions

Hazy

Focus 6:90

Spectr. Temp.

Dome Temp./Hum.

202

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|---------------|----------------|--------------|--------------------|---------------|----------|------|-------------|--------------------|---------|
| | | | | Cass CCD | 1800Å/mm G=5115 | 300µm Full | S303A | 29 | | | |
| 600 | | 6.7 | G8V | | | | | 30 | Std. Vel. | RV = -60 ± .3 km/s | |
| | | | | | | | | 31 | | | |
| | | | | | | | | 1 | | | |
| 23 | 3" | 10.50 | M0 | | | | | 4c | Vys pgm | | |
| | | | | | | | | 5c | | START button used | |
| | | | | | | | | 7c | | " " | |
| 100 | 3" | 9.3 | M | | | | | 8c | Vys pgm | | |
| | | 3" | 9.3 | M | | | | 9c | | | |
| | | | | | | | | 10c | | | |
| 159 | | 9.0 | M5 | | | | | 11c | Vys pgm | | |
| | | | | | | | | 12 | | START button fired | |
| | | | | | | | | 1 | bsum 4. bat | | |
| | | | | | | | | 13 | | Auto fired OK | |

pg #4

203

Emulsion Batches:

Date 1994 May 1/2 Observers Hlaw. / T.N.

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|------------|------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| cc21704 | BD+45 2743 | 18 32 26 | +45 39 53 | 03:48:41 | | 0:03E | +45° | | 1216 |
| 05 | Comp | | | | | | | FeNe clear | 355e |
| 706 | Comp | | | | | | | " " | " " |
| 707 | HD161096 | 17 38 30 | +4:37 | 04:14:51 | | 0:55W | +4 | | 40 |
| 708 | Comp | | | | | | | FeNe clear | 355 |
| 707 | FLHTS x3 | | | | | | | TUNG clear | 155 |
| - 11 | | | | | | 01 W | +4 | | |
| 12 | BIAS x4 | using BSUM4, BAT | | | | | | | |

Spectr.

Focus.

Spectr.

Exp. Mir

65

230

Spectr. Temp. Dome Temp./Hum. $+1.2^{\circ}\text{C}/83.6\%$ Transparency Conditions Some Haze, humid.
 Focus ... 6:20
 Spectr. Temp. Dome Temp./Hum. $+1.4^{\circ}\text{C}/83\%$

204

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|----------------------|-------------|----------|------|---------------|---------------------------------|---------|
| 65 | | 9.8 | M0 | | 1800 lines G-5715 | 300 FULL | 5303A | 14 | Vys Std. | | |
| | | | | | | | | 15 | | Auto comp timing | |
| | | | | | | | | 16 | | " " " | |
| 2300 | | | | | | | | 17 | Std. Velocity | | |
| | | | | | | | | 18 | | had to push start this time. | |
| | | | | | | | | 19 | | " " " | |
| | | | | | | | | 10 | | N/A KADU max | |
| | | | | | | | | | | | |

All to WORM
& Perseus

205
 pg#1 Mon/Tues

Date 1994 MAY 21.3... Observers [Blair, V. J. S. / B. H. I.]... H. L. W. / I. T. N.

{V4s}

Emulsion Batches:

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------------------|-----------------------|---------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| cc21713 | Comp | | | | | | | FeNe Clear | 35s |
| 14 | Bias x4 | | | | | | | | |
| 15 | HD95735 | 10 57 54 | +36 38 00 | 19:42:43 | | 0:50 E | +36° | | 300 |
| 16 | HD95735 | 10 57 54 | +36 38 00 | 19:48:10 | | 0:44 E | +36° | | 335 |
| 17 | Comp | | | | | | | FeNe Clear | 35s |
| 18 | Comp | | | | | | | FeNe Clear | 35s |
| 19 | BD-02 3000 | 09 48 10 | -03 13 04 | 20 08 14 | | 1:00 W | -3° | | 1200s |
| 20 | Comp | | | | | | | " | 35 |
| 21 | Bias x4 Comp | | | | | | | | |
| 22 | BD+05 2447 | 10 23 49 | | | | | | FeNe Clear | 35s |
| 23 | BD+01 2447 | 10 23 49 | +01:21:36 | 20.34:15 | | 0:43 W | +1° | | 721 |
| 24 | Comp | | | | | | | FeNe Clear | 35s |
| 25 | Bias x4 | | | | | | | | |
| → ⁷⁶ 29 | FLATS x4 | | | | | 00 48 W | +1° | Tung Clear | 5 |
| cc21730/1 | Comp / Stellar | Hartman | | | | | | FeAr Clear | 60/60 |

ccd
Spectr. Temp. -100° Dome Temp./Hum. 7.8°C 38.5% H Transparency Conditions ... Fine
Focus ... 6.90 great seeing (206)

^{cGAP} Spectr. Temp. 9.0. gain Dome Temp./Hum. 465 0 50 1024 4 1 cadfront

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | central emission wavelength | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|----------|--------------------------------|-----------|-----------------------------|------|-------------|---|--------------------------|
| | | | | Cass CCD | 1800 λ /mm G = 5115 | 300 μ | 5303A | 3 | | | |
| | | | | | | | | 1 | bsun 4. but | | |
| 4730 | 1" | 7.5 | M2 | | | | | 4 | Vys Std. | Still Twilight. Lots of sky background, G2* | |
| 2480 | | 7.5 | M2 | | | | | 4* | Vys Std. | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 6, | | | |
| 231 | | 10.54 | M0 | | | | | 7 | Vys Pgm | | |
| | | | | | | | | 8 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 9 | | | |
| 227 | 4" | 9.6 | M2 | | | | | 10 | Vys Std. | | |
| | | | | | | | | 11 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 12c | | 12.2 K HD4 mark | |
| | | | | Cass CCD | 1800 λ /mm G = 6065 | 300 μ | 6604A | 3/4 | Focus Test | T = +6.8°C, foc = 6.85 | set for 1/4 pix too cold |

Pg#2 207 Mon/Tues

Date 1994 May 2/3 Observers [Bin] Tn/Hlw

Emulsion Batches:

CSS 386 a 5 secs ahead of U.W.V. Time

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|---------------|-----------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| cg40126 -9 | 4x HD93521 | 10 42 42 | +38 06 00 | | | | | | .067 |
| cg40130 -2 | 3x HD93521 | 10 42 42 | +38 06 00 | | | | | | .133 |
| CC21732 | Comp | | | | | | | FeAr Comp | 60s |
| 33 | HD93521 | 10 42 42 | +38 06 | 21 06 21 | | 0:52 W | | | 537 |
| 34 | HD93521 | 10 42 42 | +38 06 00 | 21 15 44 | | 1:03 W | | | 626 |
| 35 | HD93521 | 10 42 42 | +38 06 00 | 21 26 35 | | 1:16 W | | | 711 |
| 36 | Comp | | | | | | | FeAr Comp | 60s |
| 37 | Bias (4) | | | | | | | | |
| 38 | HD93521 | 10 42 42 | +38 06 00 | 21 42 28 | | | | | 742 |
| 39 | " | " | " | 21 55 19 | | 1:45 W | | | 747 |
| 40 | " | | | 22 08 30 | | 1:58 W | | | 723 |
| 41 | Comp | | | | | | | FeAr Clear | 60s |
| 42 | Bias (avg of 4) | | | | | | | | |
| 43 | HD93521 | 10 42 42 | +38 06 00 | 22 24 07 | | 2:15 W | | | 782 |
| 44 | HD93521 | 10 42 42 | +38 06 00 | 22 37 36 | | | | | 776 |

Spectr. Temp. Dome Temp./Hum. $+6.7^{\circ}\text{C}/40.9\%$ Transparency Conditions ... Clear

Focus ... 6.85

208

Spectr. Temp. Dome Temp./Hum.

| Exp. Mtr. | Secing | $\sqrt{\text{Mag.}}$ | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | PH EI | Program | Remarks | Quality |
|-----------|--------|----------------------|-------|-------------|------------------------------|-------------------|----------|----------|-------------|--------------------------|---------|
| 067 | | 7.04 | 09.5V | CASS CCD | 1800 λ /mm G=6065 | 300 μ FULL | 6604A | | Seeing Test | | |
| 55 | | 7.04 | 09.5V | | | | | | Seeing Test | | |
| 57 | 2150 | 7.04 | 09.5V | | | | | 5 | | | |
| 66 | 2576 | 1" | 7.04 | 09.5I | | | | 6 | Bln 0* pgm | | |
| 71 | 2677 | 7.04 | 09.5E | | | | | 7 | Bln 0* pgm | | |
| | | | | | | | | 8 | Bln 0* pgm | | |
| | | | | | | | | 9 | | | |
| | | | | | | | | 10 | | Average of 9 bias frames | |
| 72 | 2340 | 1.5" | | | | | | 11 | | | |
| 73 | 2300 | | | | | | | 12 | | | |
| | | | | | | | | 13 | | | |
| | | | | | | | | 1 | | | |
| 72 | 2160 | 7.04 | 09.5V | | | | | 14 | Bln 0* Pgm | | |
| 72 | 2230 | 7.04 | 09.5V | | | | | 15 | Bln 0* Pgm | | |

Spectr. Temp.

Dome Temp./Hum.

+5.8°C/41.9%

Transparency Conditions

Clear

Focus... 6.85

North Fan on

Spectr. Temp.

Dome Temp./Hum.

210

| Exp | Exp. Mtr. | Seeing | ✓ Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | Att. # | Program | Remarks | Quality |
|-----|-----------|--------|-----------|-------|----------|---------------------------|-----------|----------|-----------|---------------|----------------|---------|
| 752 | 2260 | | 7.04 | 09.54 | Cass CCD | 800 μ /mm G = 6065 | 300 μ | 6604Å | 16 | Bln O* pgm | | |
| 760 | | | | | | | | | 17 | | | |
| | | | | | | | | | 1 | | | |
| 780 | 2450 | 2" | | | | | | | 18 | Bln O* pgm | 180/1 SN | |
| 777 | 2370 | | | | | | | | 19c | " | | |
| 729 | 2300 | | | | | | | | 20c | " | | |
| 730 | | | | | | | | | 21c | | | |
| 731 | | | | | | | | | 22c | | 120Ax ADU 129K | |
| 732 | 2100 | | | | | | | | 23c | Bln O* pgm | 1.33 Air mass | |
| 783 | 1870 | | | | | | | | 24c | " | | |
| 817 | 1830 | | | | | | | | 25 | Bln O* pgm | | |
| | | | | | | | | | 26 | | | |
| | | | | | | | | | 1 | | | |
| | | | | | | | | | 27 | | | |
| 825 | 4100 | | 5.37 | 89.54 | | | | | 28 | Telluric Std. | Low Air Mass | |
| | | | | | | | | | 29 | | | |

Spectr. Temp.

Dome Temp./Hum. $+4.8^{\circ}\text{C}/44.9\%$

Transparency Conditions .. Clear

Focus ... 6.85

Faint Aurora tonight

Spectr. Temp.

Dome Temp./Hum.

(212)

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|-------|--|--------------------|-------------|----------|------|---------------|---|---------|
| | | | | CSS CCD | 1820/180 G 6065 | 300 | 6604A | 30 | | | |
| 4200 | 2.99 | | A0In | | | | | 31 | Telluric std. | Air Mass = 1.81 | |
| | | | | | | | | 32 | | | |
| | | | | | | | | 22 | | | |
| | | | | | 150/180 G 2318 | 300 Full | 5450A | | | | |
| ○ | | | | Signal to Noise of Supernova ~14 | " | " | " | 4c | SN attempt | CCD UNIT 500 0.50 1024 4 1 (OFF towards M51 at start) Then on SN for most. | |
| | | | | | | | | 5c | | | |
| | | | | | | | | 6c | | | |
| ○ | 1.5" | | 11.62 | | | | | 7c | SN std star | | |
| | | | | | | | | 8 | | | |
| | | | | | | | | 9 | | | |
| | | | | | | | | 1 | | | |

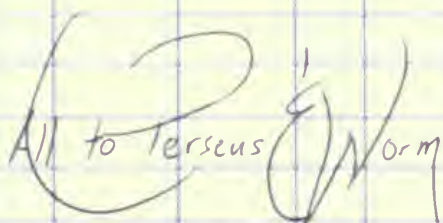
Spectr. Temp. Dome Temp./Hum. $+4.0^{\circ}\text{C}/45.6\%$ Transparency Conditions Clear

Focus 7.15

214

Spectr. Temp. Dome Temp./Hum. 410 0 50 1024 4 1 ccdfmt

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|----------|---------------------|------|----------|---------------|---------|------------------------------------|---------|
| | | | | Cass CCD | 831 1/4mm G=3616 | 300μ | 6563A | 13 | | ^{Range-} 6300Å - 6750Å | |
| 151 | 0 | ~12 | em | | | | | 13 | | This is it. | |
| 123 | 0 | ~12 | em | | | | | 15 | | | |
| | | | | | | | | 16 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 2 | | | |
| | | | | | | | | 1 | | | |

All to Terseus

 1

Pg#1 Tues/Weed. 215

Emulsion Batches:

Date 1994 May 3/4 Observers KK/HLW

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|-----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|-------------|------------|
| | | | | | | | | Type/Filter | Exp. |
| CE07285 | Hartmann IN | | | | | | | | |
| 7286 | Hartmann OUT | | | | | | | | |
| 87 88 | ^{Comp} HD 87901 | 10 03 03 | +12 27 22 | 19 57 19 | | 0:21W | | ThAr | 1s 142s |
| 89 | Comp | | | | | | | ThAr | 1s |
| 90 | HD 87907 | 10 03 03 | +12 27 22 | 20 02 48 | | 0:25W | | | 90s |
| 91 | Comp | | | | | | | ThAr | 1s |
| 92 | Bias (4) | | | | | | | | |
| 93 | Comp | | | | | | | ThAr | 1s |
| 94 | HD 83808 | 09 35 48 | +10 21 00 | 20 18 29 | | 1:14W | | | 464 |
| 95 | HD 83808 Comp | | | | | | | ThAr | 1s |
| 96 | HD 83808 | 09 35 48 | +10 21 00 | 20 28 09 | | 1:24W | | | 487 |
| 97 | Comp | | | | | | | ThAr | 1s |
| 98 | Comp | | | | | | | ThAr | 1s |
| 99 | HD 95735 | 10 57 5A | +36 38 | 20 45 31 | | 0:43W | | | 1800 |
| 7300 | Comp | | | | | | | ThAr | 1s |

Spectr. Temp.

Dome Temp./Hum. +10.4%/35.3%

Transparency Conditions Clear, some haze + wispy

Focus 0.245

Dome Fans Off

clouds

Spectr. Temp.

Dome Temp./Hum.

0 0 256 1024 4 1 ccdfmt

216

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|--------|-----|------------------|------------------|------|----------|-------------|-----------------|---------|---------|
| | | | | ichelle 18.51 | 300 .5682 | 6pm | 6300 | | | | |
| 1450 | 1.35 | B7V | | | | | | 3 4 | Telluric Std. | | |
| 1380 | 1.35 | B7V | | | | | | 3 4 | | | |
| 900 | 3.52 | F6II-A | | | | | | 1 3 4 | KK pgm | | |
| 760 | 3.52 | F6II-A | | | | | | 3 4 | KK pgm | | |
| 9 | 7.60 | M2Ve | | | | | | 3 4 | Harvey std vel. | | |

Pg #2 217

Emulsion Batches:

Date 1994 May 3/4 Observers KK/Hlw

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|-------------|------|
| | | | | | | | | Type/Filter | Exp. |
| ce07301 | Bias (4) | | | | | | | | |
| 302 | Comp | | | | | | | ThAr | 1s |
| 303 | HD8890 | 01 22 36 | +88 46 00 | 21 29 34 | | 9:50 W | | | 194s |
| 304 | Comp | | | | | | | ThAr | 1s |
| 305 | HD8890 | " | " | 21 34 | | 9:53 W | | | 123s |
| 306 | Comp | | | | | | | ThAr | 1s |
| 307 | HD8890 | " | " | 21 38 32 | | 9:57 W | | | 99s |
| 308 | Comp | | | | | | | ThAr | 1s |
| 309 | Comp | | | | | | | ThAr | 1s |
| 310 | HD116657 | 13 19 55 | +55 27 00 | 21 51 38 | | 0:55 E | | | 362 |
| 311 | Comp | | | | | | | ThAr | 1s |
| 312 | HD116657 | 13 19 55 | +55 27 00 | 22 00 30 | | 0:48 E | | | 321 |
| 313 | Comp | | | | | | | ThAr | 1s |
| 314 | HD116656 | 13 19 54 | +55 27 00 | 22 08 18 | | 0:44 E | | | 98s |
| 315 | Comp | | | | | | | ThAr | 1s |

Spectr. Temp. Dome Temp./Hum. $+9.4^{\circ}\text{C}/37.2\%$ Transparency Conditions Clear

Focus Fans Off

Spectr. Temp. Dome Temp./Hum.

218

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------------------------|--------------|-----------------------------|----------|-------------|---------|----------------|---------|
| | | | | Echelle CCD 18.51 | 300 .5682 | 60 μ $\times 400\mu$ | 6300A | 1 3 | | | |
| 800 | | 2 | F | | | | | 4 3 | KK pgm | Max ADU ~ 15K | |
| 500 | | " | " | | | | | 4 3 | KK pgm | Max ADU ~ 8600 | |
| 565 | | " | " | | | | | 4 3 3 | KK pgm | | |
| 500 | | 4.0 | Am | | | | | 4 3 | | | |
| 510 | | 4.0 | Am | | | | | 4 3 | KK pgm | | |
| 600 | | 2.4 | A2V | | | | | 4 3 | KK pgm | | |

Spectr. Temp. Dome Temp./Hum. $+8.5^{\circ}\text{C}/41.67$. Transparency Conditions ... *Clear*

Focus

220

Spectr. Temp. Dome Temp./Hum.

| Exp. Mtr. | Seeing | $\sqrt{\text{Mag.}}$ | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|----------------------|--------|-------------------------|------------------|-----------------------|----------|------|-------------|---------|---------|
| | | | | Echelle CCD 18 51 | 300 .5682 | 60 μ x40 μ | 6300A | 1 | bias 4. bat | | |
| | | | | | | | | 3 | | | |
| 520 | 1.8 | | K0IIIa | | | | | 4 | KK pgm | | |
| | | | | | | | | 3 | | | |
| 530 | 1.8 | | K0IIIa | | | | | 4 | KK pgm | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 3 | | | |
| 505 | 4.3 | | F2IV | | | | | 4 | KK pgm | | |
| | | | | | | | | 3 | | | |
| 500 | 4.3 | | F2IV | | | | | 4 | KK pgm | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 3 | | | |
| 135 | 6.2 | | G8V | | | | | 4 | KK pgm | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 3 | | | |

Spectr. Temp.

Dome Temp./Hum. $+6.8^{\circ}\text{C}/44.0\%$

Transparency Conditions ... Hazy

Focus

Spectr. Temp.

Dome Temp./Hum.

222

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|---------------|-------------|--------------------------|------------------------------------|----------|------|-----------|--|---------|
| 550 | | 0 | K2III | Echelle CCD | 1851 3002/nm .5682 | 60 μ $\times 400$ | 6300A | 4 | Std. Vel. | | |
| | | | | | | | | 3 | | | |
| 720 | | 0 | K2III | | | | | 4 | Std Vel. | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 3 | | | |
| 511 | 602 | 3.7 | F0p | | | | | 4 | KK pgm | Double lines \Rightarrow Zaman splitting | |
| | | | | | | | | 3 | | | |
| 555 | 650 | 3.7 | F0p | | | | | 4 | KK pgm | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 3 | | | |
| 507 | 506 | 4.59 | G4III +A6V | | | | | 4 | KK pgm | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 5 | | | |
| | | | | | | 60 μ $\times 600\mu = .215$ | | 1 | Auto | Norm and Perseus | |

CCD
 Spectr. Temp. $\sim -117^\circ\text{C}$
 Focus $.248$
 Spectr. Temp.

Dome Temp./Hum. $+12.2^\circ\text{C}/50.9\%$ Transparency Conditions ... Some scattered thin clouds.
 224
 to Completely Cloudy.

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|----------------------------|----------------------------|--|---|------|------------------|---|---|
| | | | | Echelle CCD | 18.51 300 l/mm .5682 | 60 μ x 600 μ = .215 60 μ x 400 μ = .225 | | 3/4 | Focus Test | T = 12.1°C / foc = .248 | |
| 50 | | 2 | F | | | | Max ADU ~ 1500 | | 5 6 | KK pgm | Through some clouds Very thick at end. |
| | | | | | | | 60 μ x 500 μ 60 μ x 500 μ | | 5 1 2 1 | Note: CCD temperature was not turned up. Left at "Coldest" all night. | |
| | | | | All to Worm AND Perseus | | | | | | | |

Spectr. Temp.

Dome Temp./Hum. $+8.4^{\circ}\text{C}/78.8\%$

Transparency Conditions

Partial Clouds

Focus 2480

Spectr. Temp.

Dome Temp./Hum. $+6.5^{\circ}\text{C}/1.84\%$

Dome Fans ON

South one

turned off at 2100

226

101k

~~101k~~ pressure / Bar Pressure 22.2 EST going up

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|--------|------|----------------|---|-----------------------|----------------|------|-------------|---|----------|
| | | | | Echelle CCD | 18.51 300#/mm x-grating @.5682 | 60 μ 400 μ | 6300A F.225 | 3 | | DRH -0142 \uparrow +00520 | |
| 830 | 3.2 | F | | | | | | 7 | KK pgm | Max ADU ~ 14.2 K | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 2 | | Topped up CCD dewar. | |
| | | | | | | | | | Focus Test. | foe = .2480, T = 7.9 $^{\circ}\text{C}$ | good |
| | | | | | | | | 3ci | | | |
| 30 | 3* | 7.72 | MOIV | Mid-chip SNR. | | ≈ 100 | | 4 | KK pgm | 1.158 Airmass | East One |
| | | | | | | | | 3ci | | | |
| 32 | | 7.62 | MOIV | | | | | 5ci | KK pgm | 1.796 Airmass | West One |
| | | | | | | | | 6ci | | | |
| | | | | | | | | 1 | | Barometric Pressure | |
| | | | | | | | | 6 | | 101.8 kPa | |
| 359 | 352 | F6II+A | | | | | | 4 | KK pgm | | |
| | | | | | | | | 3 | | | |

no focus change needed

W: 60 μ H: 600 μ 60 \times
400 μ

Pg #2

227

Date 1994 May 6/7 Observers [KK] Tn/Hlw

Emulsion Batches:

.....
.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|----------|--------------|---------------------|-----------------------------------|-----------------------|-------------------------------|-------------|-------------|------|
| | | | | | | | | Type/Filter | Exp. |
| ce07377 | Comp | | | | | | | ThAr | 1 |
| 78 | HD87901 | 10 03 03 | +12 27 22 | 22 53 43 | | 3:32 W | | | 268 |
| 79 | Comp | | | | | | | " | 1 |
| 80 | HD87901 | 10 03 03 | +12 27 22 | 22 59 55 | | | | " | 358 |
| 81 | Comp | | | | | | | " | 1 |
| 82 | Comp | | | | | | | " | " |
| 83 | HD8890 | 01 22 36 | +88 46 00 | 23 17 58 | | 11:48 W | | | 274 |
| 84 | Comp | | | | | | | " | 1 |
| 85 | HD8890 | 01 22 36 | +88 46 00 | 23 23 ^{23 49} | | 11:55 W | | | 312 |
| 86 | Comp | | | | | | | " | 1 |
| 87 | HD8890 | 01 22 36 | +88 46 00 | 23 30 19 | | 12:02 W 11:58 W | | | 334 |
| 88 | Comp | | | | | | | " | 1 |
| 89 | Bias (4) | | | | | | | " | " |
| 90 | Comp | | | | | | | " | " |
| 91 | HD95689 | 10 57 36 | +62 17 00 | 23 43 19 | | 3:26 W | | | 270 |

Spectr. Temp.

Dome Temp./Hum.

16.6°C/84.4%

Transparency Conditions

Grungy

Focus 24.80

Spectr. Temp.

Dome Temp./Hum.

228

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|--------|----------------|----------------------------|-------------|----------|------|---------------|---------|---------|
| | | | | Echelle CCD | 18.51 300l/mm @.5682 | 60μ 400μ | 6300Å | 3 | | | |
| 28 | ~1100 | 1.35 | BTV | | | | | 5 | Telluric Std. | | |
| | | | | | | | | 3 | | | |
| 35 | ~1300 | 1.35 | BTV | | | | | 5 | Telluric Std. | | |
| | | | | | | | | 6 | | | |
| | | | | | | | | 6 | | | |
| 27 | 1000 | 2 | F | | | | | 5 | KK pgm | | |
| | | | | | | | | 6 | | | |
| 32 | 1000 | 2 | F | | | | | 5 | KK pgm | | |
| | | | | | | | | 6 | | | |
| 54 | 1000 | 2 | F | | | | | 5 | KK pgm | | |
| | | | | | | | | 6 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 6 | | | |
| 28 | 1000 | 1.79 | KOIIIa | | | | | 5 | KK pgm | | |

Spectr. Temp. Dome Temp./Hum. 6:6°C/84.4% Transparency Conditions Hazy

Focus 12480

very very light west wind tonight

Spectr. Temp. Dome Temp./Hum.

230

| Exp. | Exp. Mtr. | Seeing | Eq. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------|-----------|--------|----------|--------|-------------|---------------------------|------------|----------|------|---------|-----------------|--------------|
| | | | | | Echelle CCD | 18.51 3002/mm .5682 | 60x 400 | 6300A | 6 | | | |
| 2.7 | 965 | | 1.79 | K0 III | | | | | 5 | KK pgm | | |
| | | | | | | | | | 6 | | | |
| | | | | | | | | | 6 | | | |
| 2.2 | 340 | 2.3' | B=4.34 | F2 II | | | | | 5 | KK pgm | 1.75 A.A. mass | S/N 250/1 |
| | | | | | | | | | 3c | | | |
| 2.3 | 238 | 3' | | | | | | | 5c | KK pgm | | |
| | | | | | | | | | 3c | | | |
| | | | | | | | | | 1c | | | |
| | | | | | | | | | 3c | KK pgm | | |
| 2.2 | 50 | 2.3 | 6.21 | G8V | | | | | 4c | KK pgm | 1.277 A.A. mass | |
| | | | | | | | | | 3 | | | |
| | | | | | | | | | 3 | | | |
| 6.7 | 617 | | B=2.27 | G0 | | | | | 5 | KK pgm | | |

Pg# 4

231

Emulsion Batches:

Date 1994 May 6/7 Observers [KK] Tn/HW

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Companion Type/Filter | Exp. |
|-----------|----------|--------------|---------------------|-----------------------------------|-----------------------|-------------------|-------------|--------------------------|------|
| ce07407 | HD121370 | 13 49 54 | +18 54 00 | 01 26 22 | | 2:24 W | | | 600 |
| 408 | Comp | | | | | | | ThAr | 1 |
| 409 | Comp | | | | | | | " | " |
| 410 | HD124897 | 14 11 06 | 19 42 00 | 01 44 ⁴⁹ 88 | | 2:12 W | | | 66 |
| 411 | Comp | | | | | | | " | 1 |
| 412 | HD124897 | 14 11 06 | 19 42 00 | 01 47 37 | | 2:15 W | | | 60 |
| 413 | Comp | | | | | | | " | 1 |
| 414 | Bias (4) | | | | | | | | |
| 415 | Comp | | | | | | | " | " |
| 416 | HD8890 | 01 22 36 | +88 46 00 | 01 59 16 | | 9:46 E | | | 433 |
| 417 | Comp | | | | | | | " | 1 |
| 418 | HD8890 | 01 22 36 | +88 46 00 | 02 08 24 | | 9:39 E | | | 341 |
| 419 | Comp | | | | | | | " | 1 |
| 420 | HD8890 | 01 22 36 | +88 46 00 | 02 15 33 | | 9:32 E | | | 324 |
| 421 | Comp | | | | | | | " | 1 |
| 422-26 | 5 x Flat | | | | | | | Tung | 1 |

Spectr. Temp. Dome Temp./Hum. 5.4°C/87.9% Transparency Conditions ... Pretty hazy, some clouds.
 Focus
 Spectr. Temp. Dome Temp./Hum.

232

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---------------------------|--------|----------------------|-----|----------------|--------------------------|--------------|----------|------------------|---------------|--------------------------------------|---------|
| 620 | | ^K 3.27 | G0 | Echelle CCD | 18.51 3002/mm 5682 | 60 x 400μ | 6300Å | 5 3 3 | KK pgm | Very humid, 97% on catwalk @ 0130 | |
| 848 | | 0 | K0 | | | | | 4 3 | Std Velocity | | |
| 872 | | 0 | K0 | | | | | 4 3 1 3 | Std. Velocity | Max ADU ~13 K. | |
| 880 | | 2 | F | | | | | 4 3 | KK pgm | | |
| 700 | | 2 | F | | | | | 5 3 | KK pgm | | |
| 700 | | 2 | F | | | | | 4 3 | KK pgm | | |
| All to WORM & Perseus | | | | | | | | 3 | | | |
| 60m 800m Height for Flats | | | | | | | | | | | |

Pg#1 (233) Sun/Mon

Emulsion Batches:

Date 1994 MAY 8/9..... Observers ..K.K./Tn.....

CSS 386 4-5 secs ahead of WWV Time

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------|---------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CE0727 | Hartmann - IN | | | | | ≈ 3 W | ≈ 30° | ThAr | 1 |
| 28 | - OUT | | | | | | | | 1 |
| 29 | Bias | | | | | | | | |
| 30 | Comp | | | | | | | ThAr | 1 |
| 31 | HD8890 | 1 22.6 | +88 46 | 20 23 51 | | | | | 150 |
| 32 | Comp | | | | | | | ThAr | 1 |
| 33 | HD8890 | 1 22.6 | +88 46 | 20 28 52 | | | | | 110 |
| 34 | Comp | | | | | | | ThAr | 1 |
| 35 | HD8890 | 1 22.6 | +88 46 | 20 32 50 | | | | | 120 |
| 36 | Comp | | | | | | | ThAr | 1 |
| 37 | Comp | | | | | | | ThAr | 1 |
| 38 | HD79210 | 9 7.8 | +53 07 | 20 43 33 | | | | | 629 |
| 39 | comp | | | | | | | ThAr | 1 |
| 40 | HD79211 | 9 7.8 | +53 07 | 20 56 14 | | 2 44 W | | | 737 |
| 41 | Comp | | | | | | | ThAr | 1 |
| 42 | HD79210 | 9 7.8 | +53 07 | 21 10 21 | | 2 58 W | | | 761 |
| 43 | Bias (A) Comp | | | | | | | ThAr | 1 |

CCD
Spectr. Temp. -100°C

Dome Temp./Hum. 713.2°C 44.2%

Transparency Conditions FINE.....

Focus changed to 12.550...

Spectr. Temp. C.G.A.M. = 9.0

Dome Temp./Hum. 712.0°C 44.2%

234

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulston | P.H. | Program | Remarks | Quality |
|-----------|--------|------|------|-------|------------------|------|----------|------|-----------|--|---------|
| | | | | 18.51 | 300/ .5683 | 69u | 6300 | | | | |
| | | | | | 300/ .5685 | 600u | 6300 | | | * Note: Neg. lit should have been 400 = 225 FOR non flats THIS page. | |
| 150 | NA | 2" 2 | FBI | | | | | | Asm/Sp KK | close to saturated MAX 9.7 K ADU | |
| 160 | 500 | | | | | | | | | MAX 14 K ADU | |
| 160 | 500 | | | | | | | | | MAX 15.352 K ADU | |
| 609 | 20 | 7.62 | MOV | | | | | 4c | Asm/Sp KK | W component peak count ~ 700 | |
| 703 | 73 | 1.2 | 7.62 | MOV | | | | 5c | Asm/Sp KK | r 2.5 | |
| | 2 | | | | | | | 3 | | MAX 12.5 K ADU | |
| | 22 | 7.62 | MOV | | | | | 4c | | 1.14 AIR mass | |
| | | | | | | | | 3 | | | |

Spectr. Temp. Dome Temp./Hum. 711.8°C $45-02\text{H}$ Transparency Conditions ... $17.02.74$ $g. c. 1.00$ Focus ... 2550

Spectr. Temp. Dome Temp./Hum.

(236)

| Exp. Mtr. | Secing | P. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|---------|-------|---------------------|------------------|---------------------------------------|----------|----------------------|-----------|--|---------|
| 21 | 1-2 | 7.72 | MOV | echelle CCO 1807 | 3001 5683 | 60u 400u height 600u | 63008 | 5c 3c 1c 2c | Asm Sp/Kt | Slit height mistakenly at 600 instead of 400 Till CE 07450 | |
| | | | | | | 60u width 600u height | | 6c | | Correct slit H now | |
| 16 | 2" | 7.62 | MOV | | | | | 4c 3c | Asm Sp/Kt | | |
| 17 | | 7.72 | MOV | | | | | 6c 3c 3c | | Eastone | |
| 267 | 2" | 4.79 | F6 IV | | | | | 4c 3c | Std Vel | | |
| 103 | | | | | | | | 4c | Std Vel | | |

Spectr. Temp. Dome Temp./Hum. $+10.9^{\circ}$ $46.8/11$ Transparency Conditions *fine*Focus *2550**incr cloud 238*Spectr. Temp. Dome Temp./Hum. *C LAMBDA*

| Exp. | Exp. Mtr. | Seeing | No. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------|----------------|--------|----------|-----------|---------------|-----------------|-----------------|----------|------|-----------|-------------------------------|---------|
| 3/1 | 250 | | 352 | F6U +A | 18.51 7111 | 300/ 5683 11 | 60 400 μ | 6300A | 5c. | Asm Sp/AA | | |
| | | | | | | | | | 3c. | | | |
| | | | | | | | | | 1c. | | | |
| | 250 | | | | | | | | 3c. | | | |
| 1/29 | 14 | 2" | 760 | M6 | | | | | 4c. | Asm Sp/AA | | |
| | | | | | | | | | 3c. | | | |
| 1/29 | 56 | 2" | 601 | G8V | | | | | 5c. | Asm Sp/AA | | |
| | | | | | | | | | 5c. | | | |
| 1/22 | 380 | | | F0 | | | | | 4c. | Asm Sp/AA | <i>S/N</i> $\approx 300/1$ | |
| 6/1 | 460 | | | F0 | | | | | 4c. | | | |
| | | | | | | | | | 3c. | | | |
| | | | | | | | | | 1c. | | | |

1944 239

Emulsion Batches:

Date 1994 MAY 8/9... Observers K.K./T.G.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|----------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|-------------|------|
| | | | | | | | | Type/Filter | Exp. |
| 007475 | Comp | | | | | | | ThAr | 1s |
| 76 | HD 175492 | 18 5032 | +22 3100 | 00 3002 | | | | | 1139 |
| 77 | Comp | | | | | | | ThAr | 1s |
| 78 | bias (4) | | | | | | | | 1s |
| 79-81 | FLATS x3 | | | | | | | | |
| 82 | FLATS x3 | | | | | | | | |
| 84 | FLATS x3 | | | | | | | | |
| 85 | Hartmann - IN | | | | | | | ThAr | 1s |
| 86 | HARTMANN - OUT | | | | | | | ThAr | 1s |

[0 0 128 1024 8 1 CCD FMT for focus]

Spectr. Temp.

Dome Temp./Hum. 10.4°C 49.5%

Transparency Conditions ... sl. hazy

Focus ... 2550

Spectr. Temp.

Dome Temp./Hum. 10.1°C 52.2% H

240

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|-------|------------------|------------------|---|----------|------|-----------|--|---------|
| | | | | 18.51 Echelle | | 60 μ 400 μ H | 6300A | 3c: | | | |
| 139 | 250 | 4.49 | G04A3 | | | | | 6c: | Asm Sp/4H | peak 4000 | |
| | | | | | | 60 μ <u>600μ height</u> | | | | for Flats. | |
| | | | | 6301 | | 700 μ height | | | | for early evening 600 μ H observations | |
| | | | | | | 400 μ height | | | | | |
| | | | | | | " | | | | | |
| | | | | | | | | | | All to work $\frac{1}{2}$ persecus | |

93F1 241 Mon/Tues

Emulsion Batches:

Date .. 1994 .. May .. 9/10 Observers .. Kok./.. To

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|---------------------|------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| cc 21793 | | | | | | | | | |
| cc 21794 | BIAS(A) | | | | | | | | |
| 94-789 | focus test | | | | | 00 30 | +40° | FeAr Clear | 60/80 |
| cc 21796 | Comp | | | | | | | n | 60sec |
| 97 | HD15963 | 2 28 54 | 57 38 08 | 20 20 22 | | 09 06 W | | | 1723 |
| 98 | Comp | | | | | | | FeAr Clear | 60sec |
| cc 21799 | Comp | | | | | | | n | n |
| 1800 | HD37202 | 05 31 42 | 21 05 00 | 20 58 20 | | 06 21 W | | | 421 |
| 1801 | Comp | | | | | | | FeAr Clear | 60sec |
| 02 | Comp | | | | | | | n | n |
| 03 | HD 44351 | 06 16 18 | 14 21 00 | 21 12 29 | | 05 44 W | | | 1218 |
| 04 | Comp | | | | | | | FeAr Clear | 60sec |
| 05 | BIAS(4) | | | | | | | | |
| 06 | Comp | | | | | | | | |
| 07 | HR 120315 | 13 43 38 | 49 49 00 | 21 47 07 | | 01 5 E | | | 128 |
| 08 | n | n | n | 21 50 17 | | n | | | 82 |

pg #2 243

Emulsion Batches:

Date 1994 May 9/10 Observers Kok / To

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|--------------------|--------------|---------------------|-------------------------|-----------------------|----------------------|------------------|---------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| cc21808 | HD Comp | | | | | | | Fair clear | 60 |
| 09 | HD 120315 | 134336 | 494907 | 215533 | | | | Fair clear | 61 |
| 810 | Comp | | | | | | | Fair clear | 60 |
| 811-5 | F12sX5 | | | | | ~ Zenith Meridian | Tel East side | Tung clear | 32 |
| 816 | bias(4) | | | | | | | | |
| 817-8 | Comp/stellar | Mathman | | | | | | Fair clear | 60/45 |
| 819 | Comp | | | | | | | Fair clear | 60 |
| 820 | HD 120315 | 134336 | 4949 | 230850 | | 00 18 W | | | |
| 821 | Comp | | | | | | | Fair clear | 60s |
| 822 | HD 120315 | 134336 | 4949 | 231436 | | | | | 73s |
| 823 | Comp | | | | | | | Fair clear | 60s |
| 824 | BIAS(4) | | | | | | | | |
| 825 | Comp | | | | | | | Fair clear | 60s |
| 826 | HD 193182 | 201348 | 391659 | 233018 | | E | | | 150s |
| 827 | Comp | | | | | | | Fair clear | 60s |

Spectr. Temp. ^{CCD} Dome Temp./Hum. ^{57.6} Transparency Conditions ^{clear}
 Focus ^{6.92 for 7340A}
 Spectr. Temp. ^{6.96 for 4101} Dome Temp./Hum. 244

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|---------|-------------|--------------------|--------------------------|----------|------|------------|----------------------|---------|
| | | | | CASS CCD | 1800 N/m G 4460 | 300 _μ FULL | 4340 | 5 | | | |
| 7630 | | 1.86 | B3V(L) | | | | | 14 | Kok std | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 15 | | | |
| | | | | | | | | 1 | | | |
| | | | | | 1800 G=4310 | 300 _μ | 4101A | | Focus test | | |
| 15 K | | 1.88 | B3V(L) | | | | | 7 | | | |
| | | | | | | | | 8c. | Kok std. | Tel still East side | |
| | | | | | | | | 9c. | | | |
| 14K | | | | | | | | 10c. | Kok std. | 12.5 K AD4 MAX 35011 | S/N |
| | | | | | | | | 12c. | | | |
| | | | | | | | | 1c. | | | |
| | | | | | | | | 13c. | | | |
| 2033 | 6" | 6.51 | B9 Mesh | | | | | 14 | Kok pgm | | |
| | | | | | | | | 15 | | | |

pg# 3 245

Emulsion Batches:

Date 1994 MAY 9/10..... Observers K.K. / T.

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|----------------|-------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| cc21828 | 39 Flats x2 x2 | | | | | | | Tung clear | 150 |
| 831 | HD 195407 | 20 26 00 | 36 39 7.7 | 00 11 01 | | | | | 1237 |
| 830 | 830 Comp Done before stellar. | | | | | | | Fene clear | 60 |
| 832 | Comp | | | | | | | 4 | 5 |
| 833 | HD 192954 | 20 12 36 | 15 33 07 | 00 54 03 | | | | | 1202 |
| 834 | Comp | | | | | | | Fene clear | 60 |
| 835 | bias (4) | | | | | | | | |
| 836 | Comp | | | | | | | Fene clear | 60s |
| 837 | HD 195325 | 20 25 30 | 10 33 39 | 01 35 47 | | -340 E | | | 1225 |
| 838 | Comp | | | | | | | Fene clear | 60s |
| 839 | Comp | | | | | | | Fene clear | 60s |
| 840 | HD 220300 | 23 17 36 | 55 49 00 | 02 05 94 | | 05 54 E | | | 1798 |
| 841 | Comp | | | | | | | Fene clear | 60s |
| 842 | bias (4) | | | | | | | | |
| 843 | Flats x3 | | | | | | | Tung clear | 245 |

Spectr. Temp. ... CCD

Dome Temp./Hum. ... 77.5 ... 66.4

Transparency Conditions ... clear ... - inc. cloud.

Focus ... 6.96

poor seeing

246

Spectr. Temp.

Dome Temp./Hum.

C L H M B M

| Exp. Mtr. | Seeing | Hg. Mag. | Sp. | Inst. | Grating/ Till | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|----------|-------|-------------|------------------------------|-------------------|----------|------|---------|----------------|--------------|
| | | | | CASS CCD | 1800 λ /mm G 431D | 300 μ FULL | 4101 A | . | | MAX 15.2 K ADU | |
| 549 | | 7.7 | Bosh | | | | | 18 | Koh pgm | | S/N 60/1 |
| | | | | | | | | 19 | | | |
| | | | | | | | | 20 | | | |
| 642 | 5" | 7.3 | B9 | | | | | 21 | Koh pgm | | |
| | | | | | | | | 22 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 5 | | | |
| 2064 | | 6.08 | A1esh | | | | | 21 | Koh pgm | | S/N 130/1 |
| | | | | | | | | 22 | | | |
| | | | | | | | | 23 | | | |
| 661 | 5-8" | 7.6 | B8 | | | | | 24 | Koh pgm | | |
| | | | | | | | | 25 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 26 | | | |

W pg# 1 249 Tues 1 wed

Emulsion Batches:

Date 1994 May 10 11 Observers Tn, Wde [BLN]

CSS 388 Time 25 secs ahead of U.W.U. Time

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------|---------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| C21847/48 | comp/stellar hatman | | | | | 0:30W | +37° | FeAr clear | 50/60 |
| 49 | bias x4 | | | | | | | | |
| 50 | comp | | | | | | | FeAr clear | 60 |
| 51 | HD 93521 | 10 42 42 | 38 06 00 | 20 31 00 | | 0:50W | | | 600 |
| 52 | HD 93521 | 10 42 42 | 38 06 00 | 20 41 02 | | 1:01W | | | 619 |
| 53 | HD 93521 | 10 42 42 | 38 06 00 | 20 51 50 | | | | | 600 |
| 54 | comp | | | | | | | FeAr clear | 60 |
| 55 | HD 93521 | 10 42 42 | 38 06 00 | 21 06 33 | | 1:26W | | | 600 |
| 56 | HD 93521 | 10 42 42 | 38 06 00 | 21 17 06 | | 1:37W | | | 600 |
| 57 | HD 93521 | 10 42 42 | 38 06 00 | 21 27 33 | | | | | 600 |
| 58 | comp | | | | | | | FeAr clear | 60s |
| 59 | BIAS (4) | | | | | | | | |
| 60 | HD 93521 | 10 42 42 | +38 06 00 | 21 42 18 | | | | | 600 |
| 61 | " | " | " | 21 52 40 | | | | | 600 |
| 62 | " | " | " | 22 03 06 | | | | | 600 |
| 63 | Comp | | | | | | | FeAr clear | 60s |

CCD T -100°C
 Spot Temp. Dome Temp./Hum. +10.5°C
 Transparency Conditions Fine! Sl. hazy
 Focus 6.8 The solar eclipse DAY (250)
 Spectr. Temp. Dome Temp./Hum. 46.9 Tel East Side of PICKS for

| Exp. Mtr. | Seeing | Ph. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Time Run | Quality |
|-----------|--------|----------|-------|-------------|--------------------|------|----------|------|---------------|--------------------|----------|---------|
| | | | | CASS CCD | 1800 G =6065 | 300μ | 6604 Å | 3/4 | focus test | | | |
| | | | | | | | | 1 | bias 4 bit | | | |
| | | | | | | | | 5 | | | | |
| 1850 | | 7.04 | 09.5V | | | | | 6 | BLNO*pgm | | | |
| 2000 | | 7.04 | 09.5V | | | | | 7 | BLNO*pgm | 170:1 | S/N | |
| 1880 | 4.2" | 7.04 | 09.5V | | | | | 8 | BLNO*pgm | | | |
| | | | | | | | | 9 | | | | |
| 2250 | | 7.04 | 09.5V | | | | | 10 | BLNO*pgm | | | |
| 2435 | | 7.04 | 09.5V | | | | | 11 | BLNO*pgm | | | |
| 2370 | | 7.04 | 09.5V | | | | | 12 | BLNO*pgm | 190:1 | S/N | |
| | | | | | | | | 13c: | | | | |
| | | | | | | | | 1c: | | | | |
| * | 1.2" | | | | | | | 11c: | | | | S/N |
| 2620 | | | | | | | | 15c: | | >2000 meter fueled | | 300/1 |
| 2310 | | | | | | | | 16c: | | | | |
| | | | | | | | | 17c: | | | | |

pg#2

(251)

Emulsion Batches:

Date 1994 MAY 10/11... Observers [Blu] ... To ... Hude.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------|-------------------------|--------------|---------------------|---------------------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| CC21864 | HD93521 | 10 42 42 | +38 06 00 | 22 16 18 | | | | | 600 |
| 65 | HD93521 | " | " | 22 26 43 | | | | | 600 |
| 66 | " | " | " | 22 37 09 | | | | | 600 |
| 67 | Comp | | | | | | | Fe Ar ckur | 60 |
| 68 | HD93521 | 10 42 42 | +38 06 00 | 22 50 06 | | | | | 613 |
| 69 | " | " | " | 23 00 50 | | | | | 792 |
| 70 | " | " | " | 23 14 35 | | 03 35 W | | | 647 |
| 71 | Comp | | | | | | | Fe Ar ckur | 60s |
| 72 | Bills (4) | | | | | | | | |
| 73 | HD93521 | 10 42 42 | +38 06 00 | 23 29 26 | | | | | 745 |
| 74 | " | " | " | 23 42 21 | | | | | 680 |
| 75 | " | " | " | 23 54 18 | | 04 15 W | | | 660 |
| 76 | Comp | | | | | | | Fe Ar ckur | 60 |
| 77 | HD87901 Comp | | | | | | | " | 60 |
| 78 | HD87901 | 10 03 03 | 12 27 22 | 00 ¹⁹¹⁹ 1936 | | 05 09 W | | | 24 |

Spectr. Temp. Dome Temp./Hum. 47.7/64 +9.1°C Transparency Conditions Mostly Clear, unscattered Haze

Focus 6.80

Spectr. Temp. Dome Temp./Hum. *C. H. H. H. H.*

252

| Exp. | Exp. Mtr. | Seeing | Mag. <input checked="" type="checkbox"/> | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------|--|--------|--|-------|---------|-------------------|--------------|------------------|----------------|--------------|----------------|---------|
| 65 | 2485 | | 7.04 | 09.5V | CAS CCD | 1800/1m G-6065 | 300μ FULL | G604A | 18ci | BlnO* psm | 1.134 Air MASS | |
| 60 | 2200 | | 7.04 | 09.5V | | | | | 19ci | " | | |
| 60 | 2370 | 1-2" | 7.04 | 09.5V | | | | | 20ci | " | | |
| 60 | | | | | | | | | 21ci | | | |
| 63 | 2320 | >1" | 7.04 | 09.5V | | | | BlnO* | 22ci | BlnO* psm | | |
| 72 | 2480 | | | | | | | | 23ci | " | | |
| 65 | 2000 | | | | | | | | 24ci | " | | |
| | | | | | | | | | 25ci | | | |
| | | | | | | | | | 1ci | | | |
| 7.5 | 2000 | | | | | | | | 26ci | BlnO* psm | 200 S/N | |
| 60 | 1720 | | | | | | | | 27ci | " | | |
| 60 | 1640 | 1-2" | | | | | | | 28ci | " | | |
| 60 | | | | | | | | | 29ci | | | |
| 60 | * Exp meter sensitivity reduced somehow before | | | | | | | | 5ci | | | |
| 24 | 2000 | | 1.36 | BTV | | | | | 6ci | Telluric std | Fe | |

Spectr. Temp. Dome Temp./Hum. ^{+85°C 48.5%RH} Transparency Conditions ... *s.l. hazy*

Focus ... *6.80*

Spectr. Temp. Dome Temp./Hum.

254

| Exp. Mtr. | Secing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|------------------|-------------|------------------|------------|----------|------|------------------------|----------------------------|---------|
| 2300 | | 1.36 | B7V | C455 CCD | 1800 G-6065 | 300 FWL | 6604P | 7c: | Telluric std | MAX 85 K HDU | |
| | | | | | | | | 9c: | | | |
| | | | 9 | | | | | 13c: | | | |
| 3000 | | 5.37 | B9V _n | | | | | 11c: | Telluric std | 8 K HDU MAX NEAR Zenith | |
| | | | | | | | | 17c: | | | |
| | | | | | | | | 1c: | | | |
| | | | | | | | | 3c: | | | |
| 680 | 2° | 7.04 | 09.5V | | | | | 4c: | Blk 0 ^c ppm | AIR MASS: 1.72 200/i | S/N |
| 505 | | | | | | | | 5c: | | 150 S/N | |
| 610 | | | | | | | | 6c: | | | |
| | | | | | | | | 7c: | | | |
| 570 | 2° | 7.04 | 09.5V | | | | | 8c: | | > 170 S/N | |
| 555 | | | | | | | | 9c: | | | |
| 434 | | | | | | | | 10c: | | 2.474 AIR MASS. | |
| | | | | | | | | 11c: | | | |

Spectr. Temp. Dome Temp./Hum. ^{+7.5%}

Focus 6.80

Spectr. Temp. Dome Temp./Hum. ^{54.7%}

Transparency Conditions S.l.a. hazy 256

no wind tonight. } For Seeing
ONLY NE FWH on Tonight } Tests.

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------|-------------|----------------|-------|----------|-----------------|--|---------------------------------------|---------|
| 379 | 3" | 7.04 | 09.SV | CASS CCD | 1800 G=6065 | 300um | 6604 Å | 12ci | BLNO* PSM | Attempting autoguiding | |
| 305 | 5" | | | | | | | 13 | | > 150 SIN | |
| | | | | | | | | 14ci | | | |
| | | | | | | | | 16ci | | | |
| | | | | | | | | 17ci | | bias 4. bat | |
| | | 6.46 | K0III | | | | | | seeing test | Tel still East side Dome ENE | |
| | | | | | | | | 18ci | | | |
| 2350 | 2" | 5.59 | B7IV | | | | | 17ci | [Looks OK for Telluric purposes, No emission | Telluric Std search 1,0005 AIRMASS | |
| | | | | | | | | 19ci | | | |
| 2100 | 2.4" | 5.77 | B8.5V | | | | | 21ci | Telluric std search | 1.0448 AM | |
| 2100 | | | | | | | | 20ci | | | |
| | | | | | | | | 22ci | | | |
| | | | | | | | | 23-24ci | | focus test. | |
| | | | | | | | | 1ci | | bias 4. bat | |

All to Perseus & worm

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. 7:13:29°C ... 72.4% H Transparency Conditions . Part cloudy
 Focus ... G.92 VERY gusty SW wind
 Spectr. Temp. 9.0°C G.A.M. Dome Temp./Hum. Telescope East Side of Piers 258

| Exp. | Exp. Mtr. | Seeing | Pg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------|-----------------------|--------|----------|------|-------------|------------------------|-------------------|----------|------|---------|-------------------|---------------|
| 5/30 | pad strength match | | | | CASS CCD | 1800 μ m G=4310 | 300 μ FULL | 4101A | 3/4 | | | |
| | | | | | | | | | * | | | |
| 5/30 | * 20 | 8" | 298 | B21p | | | | | 5 | kok pgr | | |
| 6/30 | * 50 | | 298 | | | | | | 6 | kok pgr | exp meter erratic | 5/4 7/10/1 |
| | | | | | | | | | 7 | " | | 7/10/1 |
| | | | | | | | | | 8 | | | |
| | | | | | | | | | 9 | | | |

CCD
Spectr. Temp. ... -100°C
Focus ... 6.90
Spectr. Temp. ... 90.5 GAIN.

Dome Temp./Hum. 8.5°C/44.9% Transparency Conditions Clear, some thick haze at horizons

Dome Fans ON
480 0 50 024 4 1 ccdfmt (260)

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|---------|----------|--------------------|-------|----------|------|--------------|-------------------------|---------|
| | | | | Cass CCD | 18000/mm G=5115 | 300µm | 5303 Å | S/4 | Focus Test | focus = 6.90, T = 8.5°C | |
| | | | | | | | | 1 | bsum 4. bat. | | |
| | | | | | | | | 5 | | | |
| 4000 | | 1.98 | K3 IIIa | | | | | 6 | Std. Vel. | | |
| | | | | | | | | 7 | | | |
| | | | | | | | | 8 | | | |
| 89 | | 10.5 | M0 | | | | | 9 | Vys Pgm | Vys 560 | |
| | | | | | | | | 10 | | | |
| 69 | | 10.5 | M0 | | | | | 11 | Vys Pgm | | |
| | | | | | | | | 12 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 13 | | | |
| 146 | | 9.7 | M2 | | | | | 14 | Vys Std. | | |
| | | | | | | | | 15 | | | |
| | | | | | | | | 15 | | | |

Spectr. Temp.

Dome Temp./Hum. 7.1°C/48.0%

Transparency Conditions Clear

Focus 6.90

Spectr. Temp.

Dome Temp./Hum.

262

C LAMBDA

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|-----|-------------|------------------|-------------|----------|------|----------------|--|---------|
| 704 | 2.3 | 7.5 | M2 | CHSS CCD | 1800nm | 300 FULL | 5303A | 16c | Vys Std Pgm | | |
| | | | | | | | | 17 | | | |
| | | | | | | | | 18 | | | |
| 37 | | 11.2 | MD | | | | | 19 | Vys Pgm | SNR ~ 45 | |
| | | | | | | | | 20 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 21 | | | |
| 88 * | 23 | 11.5 | MD | | | | | 22 | Vys Pgm | * Turned off exposure meter for 5 minutes, also played with "Buck" | |
| | | | | | | | | 23 | | | |
| | | | | | | | | 23 | | | |
| 127 * | | 10.7 | MD | | | | | 24 | Vys Pgm | * twiddled Buck again | |
| | | | | | | | | 25 | | | |
| | | | | | | | | 26 | | | |
| 160 | | 8.5 | M1 | | | | | 27 | Vys Std | | |
| | | | | | | | | 28 | | | |
| | | | | | | | | 1 | | | |

Spectr. Temp. Dome Temp./Hum. $+6.0^{\circ}\text{C}$ $48.4\% \text{H}$ Transparency Conditions *Fine*Focus .. 6.90 Spectr. Temp. Dome Temp./Hum. *C LAMP HILL*

264

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------|--------|------|-----|------------|--------------------|--------------|----------|------|-------------|-------------------------------------|------------|
| * 1 | 2.3 | 11.8 | M0 | CAS CCD | 1800i/mm G-5115 | 300u FULL | 5303A | 2900 | Vys pgm | * Exp meter looks Balanced too | SN 3011 |
| | | | | | | | | 30 | | MAX 15.4 K 1404 | |
| 59 | 3 | 10.8 | M0 | | | | | 31 | Vys pgm | | 40 |
| | | | | | | | | 5 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 6 | | | |
| 543 | | 6.7 | G8V | | | | | 7 | Std. Vel. | RV = $-60 \pm .3$ km/s | |
| | | | | | | | | 8 | | | |
| | | 6.7 | G8V | | | | | | Seeing Test | Done SW, no wind | |
| | | 6.7 | G8V | | | | | | Seeing Test | N. fan ON T = 5.0°C | |
| | | | | | | | | 9 | | | |
| 54 54 | | 10.5 | M0 | | | | | 10 | Vys Pgm | | 25 |
| | | | | | | | | 11 | | | |
| | | | | | | | | 12 | | | |

pg # 4 265

Emulsion Batches:

Date 1994 May 12/13 Observers Tn/Hlw {Vys}

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|---|-------------------------|-----------------------|---------------------|-------------------------|-----------------------|--------------------|-------------------|---------------------------|------|
| cc21973 | BD-12 4523 | 16 24 44 | -12 25 38 | 01 15 42 | | 0:06 W | -13° | | 903 |
| 74 | Comp | | | | | | | FeNe Clear | 20s |
| 75 | Bias x4 | | | | | | | " | " |
| 76 | Comp | | | | | | | " | " |
| 77 | AC-2 1529-17 | 17 13 09 | -01 40 36 | 01 38 55 | | 0:13 E | | | 1200 |
| 78 | Comp | | | | | | | " | 20 |
| 79 | Comp | | | | | | | " | 20 |
| 80 | BD-10 4471 | 17 13 39 | -11 00 57 | 02 06 24 | | 0:23 W | | | 1812 |
| 81 | Comp | | | | | | | " | 20 |
| 82 | Bias x4 | | | | | | | " | " |
| 83 | Comp | | | | | | | " | " |
| 84 | BD+45 2743 | 18 32 26 | +45 39 53 | 02 44 02 | | 0:36 E | | | 518 |
| 85 | Comp | | | | | | | " | 20 |
| 86 90 | FLATS x 5 | | | | | | | TUNG Ap 1/2 | 5s |
| 91 92 93 | Comp/Stellar | Hartin way | | | | 00 30 E | +45 44 | | |

Spectr. Temp. Dome Temp./Hum. $53.77/4.7^{\circ}\text{C}$ Transparency Conditions *Clear*
 Focus ... 6.90
 Spectr. Temp. Dome Temp./Hum. 3.9°C $60\% \text{RH}$ 266

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | SNR Quality |
|-----------|--------|-----------|-----|----------|--------------------------------|-------------------|----------|---------------|---------|-----------------------|-------------|
| 130 | ~4" | 10.1 | M2 | Cass CCD | 1800 μm G = 5115 | 300 μm | 5303A | 13 | Vys Pgm | | 40 |
| | | | | | | | | 14 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 15 | | | |
| 102 | | 10.6 | M0 | | | | | 16 | Vys Pgm | | |
| | | | | | | | | 17 | | | |
| | | | | | | | | 18 | | | |
| 69 | 4" | 12 | M | | | | | 19 | Vys Pgm | Fainter and NORTHWEST | 24 |
| | | | | | | | | 20 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 21 | | | |
| 113 | | 9.8 | M0 | | | | | 22 | Vys Std | | |
| | | | | | | | | 23 | | | |
| | | | | | | | | 34 | | Not written to fits. | |

B#1 269

Emulsion Batches:

Date 1994.. May. 13/14.. Observers Kok. / H.l.w.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------|--------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| cc22000-1 | Comp/stellar | Hartman | | | | | | FeNe Clear | 30/45 |
| 002 | Bias (4) | | | | | | | | |
| 003 | Comp | | | | | | | FeNe clear | 60s |
| 004 | HD 45910 | 06 25 12 | 05 56 00 | 20 40 51 | | 05 19 W | | | 1200 |
| 005 | Comp | | | | | | | FeNe Clear | 60s |
| 006 | Comp | | | | | | | FeNe Clear | " |
| 007 | HD 32630 | 4 59 30 | 41 06 00 | 21 31 21 | | 07 50 W | | | 9/7 |
| 008 | " | " | " | 21 47 57 | | | | | 530 |
| 009 | Comp | | | | | | | FeNe clear | 60s |
| 010 | Bias (4) | | | | | | | | |
| 011 | Comp | | | | | | | " | 60s |
| 012 | HD 34759 | 05 14 42 | 41 42 00 | | | | | | 1209 |
| 013 | Comp | | | | | | | FeNe clear | 60s |
| 014-16 | Flats x 3 | | | | | | | Tung clear | 40 |
| 017 | Comp | | | | | | | FeNe clear | 60 |

22015 is Comp
L

+8:20 W +42°

Spectr. Temp. ^{CCD} -100°C Dome Temp./Hum. ^{09:5} 40.9 Transparency Conditions clear

Focus 6.95 270

Spectr. Temp. ~~4111A~~ Dome Temp./Hum. 480 0 50 1024 4 1 ccd fnt

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|--------------------------------|-----|----------|------------------------|-------|----------|------|------------|--|------------------------------------|
| | | | | Cass CCD | 1800 l/min G = 4310 | 300 μ | 4101A | 3 | Selfi | Focus Test | T = 94°C, f _{oc} = 6.95 ✓ |
| | | | | | | | | 5 | | Telescope East of Piers. | |
| 580 * | 6.77 | 62 ^{II} _{PC} | | | | | | 6 | Kde pgnst. | * Note: exposure meter sounds very slow to comps and stellar exposures | |
| | | | | | | | | 7 | | | |
| | | | | | | | | 8 | | | |
| 590 | 2.99 | 63V | | | | | | 9 | Kde pgnst. | " | |
| 590 | 4.15 | " | " | | | | | 10 | " | " | |
| | | | | | | | | 11 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 12 | | | |
| 939 | 4.91 | 65V | | | | | | 13 | Kde pgnst. | | |
| | | | | | | | | 14 | | | |
| | | | | | | | | 15 | | | |
| | | | | | | | | 16 | | | |

Pg #2 271

CW

Emulsion Batches:

Date . 1994 May 13/14 Observers ... Kohler, Hlw.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|----------------|---------------------|---------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|--------------------------|---|
| | | | | | | | | Type/Filter | Exp. |
| cc22018 | HD102647 | 11 43 34 | 15 08 00 | 22 45 34 | | | | | 78 |
| 019 | " | " | " | 22 47 29 | | | | | 87 |
| 020 | Comp | | | | | | | Fene clear | 60 |
| 021 | Bas(4) | | | | | | | | |
| 022 | Comp | | | | | | | Fene clear | 60 |
| 023 | HD 97633 | 11 09 00 | 15 59 00 | 22 58 02 | | | 02 57 W | | 165 |
| 024 | " | " | " | 23 02 05 | | | | | 181 |
| 025 | Comp | | | | | | | Fene clear | 60 |
| 026-8 | Flats X3 | | | | | | | Tung clear | 40 |
| cg40155 -8 | 4 x HD144579 | 16 01 30 | +39 25 36 | 01 23 | | | | Fene clear | 1105 ⁰⁶ |
| cg40159 60 | 2 x HD144579 | 16 01 30 | +39 25 36 | | 01 28 | | | | .133 |
| 029 | Bas (4) | | | | | | | | |
| 030 | Comp | | | | | | | Fene clear | Comp |
| 031 | HD 15963 | 02 28 54 | 57 28 08 | 01 55 47 | | | | | 1800 |
| 031 | | | | | | | | | Not written |
| 031 | | | | | | | | | * Dewar topped up again, cc22029 & 30 overwritten with more |

CCD
 Spectr. Temp. -102°C Dome Temp./Hum. 7.6... 40.2 Transparency Conditions Clear
 Focus 6.95
 Spectr. Temp. Dome Temp./Hum. 272

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|-------------|---|---------|
| 15000 | | 2.14 | A3V | | | | | 17 | Koh stand | | |
| " | | ↙ | ↗ | | | | | 18 | " | | |
| | | | | | | | | 19 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 20 | | | |
| 10800 | | 331 | A2V | | | | | 21 | Koh stand | | |
| 10900 | | " | " | | | | | 22 | " | | |
| | | | | | | | | 23 | | | |
| | | | | | | | | 24 | | ↓ Backed up to WORM & Perseus. | |
| | | 6.7 | G8V | | | | | | Seeing Test | Dome SE, Tel on East | |
| | | 6.7 | G8V | | | | | | Seeing Test | Side of piers. No Wind. | |
| | | | | | | | | ↓ | | | |
| | | | | | | | | 25 | | | |
| 470 | | 7.8 | A0P | | | | | 26 | Koh pgn | Saturated due to warm-up of CCD. Not enough LN2! Chp up to 41°C | |

recent frames.

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. $+6.7^{\circ}\text{C}/44.1\%$ Transparency Conditions *Clear*
 Focus 6.95
 Spectr. Temp. Dome Temp./Hum.

274

| Exp. Mtr. | Seeing | $\sqrt{\text{Mag.}}$ | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|----------------------|-----|----------|----------------------------------|-----------|-------------------|------|------------|---------------------------|---------|
| CCD | | 7.8 | A0p | Cass CCD | 1800 μ/mm G = 4310 | 300 μ | 4101 \AA | 4 | Kok pgn | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 6 | | | |
| | | | | | | | | 7/8 | Focus Test | T = 6.1°C | |
| | | | | | | | | 1 | | | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |

All to Worm E. Per sens.

Spectr. Temp. Dome (Temp)/Hum. $+8.9^{\circ}/44.2\%$ Transparency Conditions CLEAR
 Focus 6.83 to cloudy
 Spectr. Temp. Dome Temp./Hum. 276

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | ET | Program | Remarks | Quality |
|-----------|--------|-----------|-------|----------|--------------|------|----------|-----|--------------|---|---------|
| | | | | Cass CCD | 1800/mm | 300μ | 6604A | 3/4 | FOCUS TEST | LONG tour, also CCD had to be cooled from -23°C | |
| | | | | | G=6065 | FULL | | 1 | | | |
| | | | | | | | | 5 | | Exposure meter slow !! | |
| 21 | 2-3" | 7.04 | 09.5V | | | | | 6 | B/n 0* pjm | | |
| 5 | " | " | " | | | | | 7 | B/n 0* pjm | Totally clouded in half-way through exposure | |
| | | | | | | | | 8 | | | |
| | | | | | | | | 9 | | | |
| 1900 | | 2.79 | A0In | | | | | 10 | Telluric STD | | |
| 463 | | | | | | | | 11 | Telluric | Mainly clouds | |
| | | | | | | | | 12 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 13 | | | |
| | | | | | | | | 14 | | | |

Pg #1 277

Emulsion Batches:

Date 1994 MAY 17 118 Observers [Blm] III/Hlw

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|------------|---------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| cc 22057/8 | Comp / stellar Hartman | | | | | | | FeAr clear | 60/60 |
| 59 | Bias (4) | | | 20:17:10 | | | | | |
| 60 | Comp | | | | | | | FeAr clear | 60 |
| 61 | HD93521 | 10 42 42 | +38° 6' | 20:32:01 | | 1:22 W | | | 800 |
| 62 | - " - | | | 20:45:43 | | 1:35 W | | | 800 |
| 63 | Comp | | | | | | | FeAr clear | 60 |
| 64 | HD93521 | | | 21:02:11 | | 1:50 W | | | 750 |
| 65 | " | | | 21:15:07 | | 2:06 W | | | 800 |
| 66 | Comp | | | | | | | FeAr clear | 60 |
| 67 | Bias (4) | | | 21:31:10 | | | | | |
| 68-70 | FLATS (x3) | | | | | | | Twin 1/4 ap. | 7 |
| 71 | HD93521 | | | 21:35:19 | | 2:25 W | | | 800 |
| 72 | HD93521 | 10 42 42 | +38:06 | 21:49:15 | | 2:39 W | | | 800 |
| 73 | Comp | | | 22:03:53 | | | | FeAr Clear | 60 |
| 74 | HD93521 | 10 42 42 | +38:06 | 22:06:02 | | 2:56 W | | | 803 |

Spectr. Temp. Dome Temp./Hum. $+9.2/68.4\%$ Transparency Conditions *Partly cloudy*Focus *6.83*

Dome fans off

278

Spectr. Temp. *..c.gain...90*

Dome Temp./Hum.

480050102441 ccd fnt

| Exp. Mtr. | Secing | V Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|--------|-------|-------------|---|----------------|----------|------|---------------|-------------------------|---------|
| | | | | Cass CCD | 1800 ℓ /mm ($\lambda = 6065$) | 300 μ m | 6604 A | 3/4 | Focus TEST | | |
| | | | | | | | | 1 | | 79% Humidity on catwalk | |
| | | | | | | | | 5 | | @ 2050 | +8.7 |
| 1900 | 4" | 7.04 | 09.5Z | | 180:1 | S/N | | 6 | Bln 0* pgm | some tw. light | |
| 1755 | | | | | 185:1 | S/N | | 7 | " | | |
| | | | | | | | | 8 | | | |
| 1673 | | | | | 185 | | | 9 | Bln 0* pgm | 81% humidity on catwalk | |
| 1864 | | | | | | | | 10 | " | @ 21:20 | +8.3 |
| | | | | | | | | 11 | | | |
| | | | | | | | | 12 | | | |
| 1732 | | | | | 180:1 | S/N | | 13 | Bln 0* Pgm | | |
| 1766 | 3-4" | 7.04 | 09.5Z | | 180:1 | S:N | | 14 | Bln 0* Pgm | | |
| | | | | | | | | 15 | | | |
| 1984 | | 7.04 | 09.5Z | | 180.1 | S/N | | 14 | Bln 0* Pgm | 79% humidity on catwalk | +7.9 |
| | | | | | | | | | | @ 22:08 | |

Spectr. Temp. Dome Temp./Hum. $7.6^{\circ}\text{C}/68.7\%$ Transparency Conditions *Partially Cloudy*

Focus

Spectr. Temp. Dome Temp./Hum.

280

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|-------|---------|------------------------------|-----------|----------|------|--------------|------------------------------------|---------|
| 1944 | ~3" | 7.04 | 09.5V | Cass CO | 1800 λ /mm G=6065 | 300 μ | 6604A | 16c | Bln O* pgn | | |
| | | | | | | | | 17c | | | |
| | | | | | | | | 1 | | | |
| 184B | | | | | | | | 18c | Bln O* pgn | 22:45 humidity 79% on catwalk | +7.3 |
| 1833 | | | | | | | | 19c | " | | |
| | | | | | | | | 20 | | | |
| 1580 | | | | | | | | 21c | Bln O* pgn | humidity 80% on catwalk @ 23:15 | +7.1 |
| 1759 | | 7.04 | 09.5V | | | | | 22 | Bln O* pgn | | |
| | | | | | | | | 23 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 12 | | | |
| | | | | | | | | 24 | | | +6.7 |
| 3300 | | 5.37 | B9Vn | | | | | 25c | telluric std | observing through clouds | +6.4 |
| | | | | | | | | 26c | | | |
| | | | | | | | | 1 | | | |

Spectr. Temp. Dome Temp./Hum. 6:50/70:8% Transparency Conditions Partly cloudy

Focus

Spectr. Temp. Dome Temp./Hum.

282

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------------|--------|-----------|-------|---|--------------|------------------|--------------------|------|-------------------------|----------------------------|---------|
| | | | | | | | | 27ci | | TELESCOPE NOW REVERSED | |
| 3000 | 6" | 1.35 | 137V | Cass CCD | 1800 & 1mm | 300 6=6065 um | 6604A ^o | 28ci | telluric std | ← no clouds here | |
| 5000 | | | | | 5.55 | air mass | | 29ci | telluric std | ← observing through clouds | |
| | | | | | | | | 5 | | 81% humidity recorded | |
| | | | | | | | | 6ci | | @ 00:45 | 6.3 |
| 117 | | 7.04 | 09.5V | Weak exposure - totally clouded in 1/2 way through (lots of sky background) | | | | 7ci | 13In O ⁺ pgm | Telescope Still REVERSED | |
| | | | | | | | | 8ci | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 9ci | | | 6.7 |
| | | | | | | | | 1 | | | |
| (All to WORM & Perseus) | | | | | | | | | | | |

pg#1 283 Wed/Thurs

Emulsion Batches:

Date 1994 MAY 18/19.... Observers Sgs. I. T. J. Hlev.....

CSS 386 Time Rusted Reset 2 2.secs. behind. 4.4.4.4 Time

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-------------------|-----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 22111 12 | Comp/Stellar HARTMAN posits | | | | | 00 06W | +34° | FeAr Clear | 50/50 |
| 13 | BIAS(4) | | | | | | | FeAr Clear | 60s |
| 14 | Comp | | | | | | | FeAr Clear | 60s |
| * 15 | HD 103095 | 11 47 12 | +38 26 00 | 20 36 22 | | 00 22W | | FeAr Clear | 566s |
| 16 | Comp | | | | | | | FeAr Clear | 60s |
| 17 | COMP | | | | | | | FeAr Clear | 60s |
| 18 | HD 107328 | 12 15 18 | +63 53 00 | 21 02 22 | | 00 16W | | FeAr Clear | 60s |
| 19 | COMP | | | | | | | FeAr Clear | 60s |
| 20 | COMP | | | | | | | FeAr Clear | 60s |
| 21 | HD 114762 | 13 07 30 | +18 02 00 | 21 23 47 | | | | FeAr Clear | 60s |
| 22 | Comp | | | | | | | FeAr Clear | 60s |
| 23 | Bias (4) | | | | | | | FeAr Clear | 60s |
| 24 | COMP | | | | | | | FeAr Clear | 60s |
| 25 | HD 161096 | 17 38 00 | 04 37 00 | | | | | FeAr Clear | 69s |
| 26 | COMP | | | | | | | FeAr Clear | 60s |

Spectr. Temp.

Dome Temp./Hum. $+11.4^{\circ}C$ 6302HTransparency Conditions *Mostly Clear* (254)

Focus ... 6-23

Spectr. Temp.

Dome Temp./Hum.

*MIDNIGHT wind
S-F Only NE Fun on far
Seeing Test*

| Exp. Mtr. | Seeing | Fl. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|----------|-------|-------------|------------------------------|-------------------|----------|-------|------------|--|---------|
| | | | | CASS CCD | 1800 λ /mm G=5910 | 300 μ FULL | 6400P | 3/4c. | Focus test | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 5ci | | | |
| 1920 | 3" | 6.45 | G81p | | | | | 6ci | std Vel | * Note standard Seeing Test Drip after this exposure. CG40161-63 @ 1067000s CG40164-65 @ 1335000s | |
| | | | | | | | | 7ci | | | |
| | | | | | | | | 7ci | | | |
| 2800 | | 4.96 | K05II | | | | | 8ci | std Vel | | |
| | | | | | | | | 9ci | | | |
| | | | | | | | | 10ci | | | |
| 800 | | 7.31 | DF7 | | | | | 11ci | std Vel | SNR ~ 170 | |
| | | | | | | | | 12ci | | | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 13ci | | | |
| 1950 | | 2.77 | K2II | | | | | 14ci | std Vel | SNR ~ 310 | |
| | | | | | | | | 15ci | | | |

Spectr. Temp. Dome Temp./Hum. $+10.4^{\circ}\text{C}/66\%$ Transparency Conditions CLOUDS SEFocus 6.83

286

Spectr. Temp. Dome Temp./Hum.

| Exp. Mtr. | Seeing | V. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|---------|------|--------------------------|-------------------------------------|-------------------|----------|------|---------|--|---------|
| | | | | CASS CCD | 1800 L/mm G=5110 | 300 μ FULL | 6400A | 16i | | ISK MAX A00 | |
| | | | | | | | | 17i | | | |
| | 700 | 9" | 6.15 | 601b | | | | 18i | Sgs psm | CLOUDS ROLLING IN FROM EAST! SNR ~170 | |
| | | | | | | | | 19i | | | |
| | | | | | | | | 16 | | | |
| | | | | | | | | 1 | | | |
| | | | | All to WORM & Perseus | | | | | | | |

pg #1 287
Thurs / Fri

Date 1994. MAY. 19 / 20. Observers [Ygs. / Bm]... Hlw. / Tm...

Emulsion Batches:

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

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter Exp. t |
|-------------------|--------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|--------------------------------------|
| cc22140/ 42 | Comp/Stellar Bias x 4 | Hartman | | | | | | Fene Clear 20/30 |
| 43-45 | 3 x Flats | | | | | | | Tung 1/4 A Fene Clear 5 sec |
| 46 | Comp | | | | | | | Fene Clear 20 |
| 47 | BD-02 3000 | 09 48 10 | -03 13 04 | 20 27 39 | | 2:19 W | -3°:40' | 707 |
| 48 | Comp | | | | | | | " 20 |
| 49 | BD-02 3000 | 09 48 10 | -03 13 04 | 20 42 45 | | 2:45 W | -4° | 1400 |
| 50 | Comp | | | | | | | " 20 |
| 51 | Comp | | | | | | | Fene Clear 20 |
| 52 | BD+01 2447 | 10 23 49 | +01 21 36 | 21 11 27 | | 2:32 W | | 1000 |
| 53 | Comp | | | | | | | Fene Clear 20 |
| 54 | Comp | | | | | | | " 20 |
| 55 | HD 95735 | 10 57 54 | +36 38 00 | 21 33 15 | | 2:12 W | +36° | 600 |
| 56 | Comp | | | | | | | Fene Clear 20 |
| 57 | Bias x 4 | | | | | | | |

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. $+13.0^{\circ}\text{C} \dots 65.3\%$ Transparency Conditions \dots Mostly clear
 Focus 6.83
 Spectr. Temp. 90 Dome Temp./Hum.

288

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Cent. Filter | Slit | Central Emission wavelength | P.H. | Program | Remarks | Quality |
|-----------|--------|------|----------|----------|--------------------------|-------------------|-----------------------------------|------|--------------|-------------------------------|---------|
| | | | | Cass CCD | 1800 μm | 300 μm | 5303 \AA | 3/4 | Focus Test. | $T = 12.6, \text{foc} = 6.83$ | |
| | | | | | G=5115 | | | 1 | bsum 4. bat. | | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 6 | | | |
| 217 | | | 10.54 M0 | | | | | 7 | Vys Pgm | Still Twilight. | |
| | | | | | | | | 8 | | | |
| 190 | 3" | | 10.54 M0 | | | | | 9c | Vys Pgm | Some Moonlight. | |
| | | | | | | | | 10 | | | |
| | | | | | | | | 11 | | | |
| 240 | 3" | | 9.7 M2 | | | | | 12c | Vys std | | |
| | | | 7 | | | | | 13 | | | |
| | | | | | | | | 14 | | | |
| 1116 | | | 748 M2 | | | | | 15 | Vys Std. | | |
| | | | | | | | | 16 | | | |
| | | | | | | | | 1 | bsum 4. bat. | | |

Spectr. Temp. Dome Temp./Hum. 11.4°C/67.7% Transparency Conditions Clear, some cirrus
 Focus 6.83
 Spectr. Temp. Dome Temp./Hum. 290

| Exp | Exp. Mtr. | Seeing | $\sqrt{\frac{F}{\text{Mag.}}}$ | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----|-----------|--------|--------------------------------|---------------------|-------------|--------------------------------|-----------|----------|------|---------|--------------------------------------|---------|
| 20 | | | | | Cass CLD | 1800 λ /mm G = 5115 | 300 μ | 5303A | 17 | | | |
| 20 | 102 | | 11.6 | M0 | | | | | 18 | Vys Pgm | | |
| | | | | | | | | | 19 | | | |
| | | | | | | | | | 20 | | | |
| 20 | 105 | | 11.5 | M0 | | | | | 21 | Vys Pgm | | |
| 20 | | | | | | | | | 22 | | | |
| | | | | | | | | | 1 | | | |
| 20 | | | | | | | | | 23 | | | |
| 20 | 0 | | 13 12.0 | K? M0 | | | | | 24 | Vys Pgm | Spectrum looks wrong. wrong star. | |
| 20 | | | | | | | | | 25 | | | |
| 20 | 33 | | 12.0 | M0 | | | | | 26 | Vys Pgm | okay | |
| 20 | | | | | | | | | 27 | | | |
| | | | | | | | | | 1 | | | |
| | | | | | | | | | 52A | | | |
| 20 | 530 | | 8.5 | M1 | | | | | 6 | Vys Std | | |

pg#3 291

Emulsion Batches:

Date 1994.MAY.19/20.. Observers [Rm. Vgs].... H. Lew. / J. N.

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-------------------|-----------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| CC2217A | Comp | | | | | | | Fine Clear | 20 |
| 175 | HD 144 579 | 16 0130 | +39 2536 | 00 0748 | | E | | | 328 |
| 176 | Comp | | | | | | | " | 20 |
| CG40167 -70 | 4x HD144 579 | 16 01 30 | +39 2536 | 00:19 | | | | | .067 |
| CG40171/2 | 2x " | " | " | | 00:20 | | | | -133 |
| 177-82 | 6x Flats | | | | | | | Tung 1/2 Ap | 5s |
| 83 | Bias x 4 | | | | | | | | |
| CC2218A 185 | Comp/Stellar | HARTMAN | | | | 00 00 | +39° | FeAr Clear | 60/60 |
| 86 | Bias (4) | | | | | | | | |
| 87 | Comp | | | | | | | FeAr Clear | 60s |
| 88 | HD144 579 | 16 01 30 | +39 2536 | 00 3943 | | 00 19 W | | | 645 |
| 89 | Comp | | | | | | | FeAr Clear | 60s |
| 90 | Comp | | | | | | | " | " |
| 91 | HD180583 | 19 1200 | +2745 00 | 00 5907 | | 02 35 E | | | 563 |
| 92 | Comp | | | | | | | FeAr Clear | 60s |
| 93 | BIASCA | | | | | | | | |

Spectr.

Focus

Spectr.

Exp. Mtr.

905

T=10

2100

1950

Spectr. Temp. Dome Temp./Hum. 711°C 67.3%H Transparency Conditions .. Sl. Hazy ..
 Focus 6.83
 Spectr. Temp. Dome Temp./Hum.

292

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|----------|------|-------------|----------|--------------------|-------------|----------|------|-------------|------------------------------|---------------|
| | | | | Cass CCD | 1800g/mm G=5115 | 300μ | 5303A | 7. | std vel | | |
| 905 | 4" | 666 | G8V | | | | | 8 | std vel | | |
| | | | | | | | | 9 | | | |
| | | 666 | G8V | | | | | | Seeing Test | Light west wind | |
| | | 666 | G8V | | | | | | Seeing Test | Dome west | |
| | | | | | | | | 9 | | | |
| | | | | | | | | 1 | | Sum of 4. | |
| | T=10.8°C | Set= | <u>6.83</u> | | 1600g/mm G=5410 | 300 Full | 6400A | 3/4 | Focus Test | | |
| | | | | | | | | 1 | | Average of 4. | |
| | | | | | | | | 5 | | | |
| 7100 | 2.3" | 666 | G8V | | | | | 6 | std vel | | S/N 7300/1 |
| | | | | | | | | 7 | | | |
| | | | | | | | | 8 | | | |
| 1950 | 3.4" | 619 | F6I-IIb | | | | | 9c. | Rm pgm | P=1.49 days High priority | |
| | | | | | | | | 1. | | | |
| | | | | | | | | 1 | | | |

py #4 293

TK113 / Fr1

Date 1994 May 19/20

Observers [Rm.] / J. T. J. H. L.

Emulsion Batches:

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|-----------|-----------|-----------|------------------|----------------------|--------------------|----------------|-------------|------------------------|------|
| CC 22194 | Comp | | | | | | | FeAr clear | 60s |
| 195 | HD 162714 | 17 4717 | -060712 | 01 2011 | | 0:46 E | | | 630 |
| 96 | Comp | | | | | | | " | 60 |
| 97 | Comp | | | | | | | " | " |
| 98 | HD 198726 | 20 4713 | +275230 | 01 3714 | | | | | 587 |
| 99 | Comp | | | | | | | FeAr clear | 60s |
| 22200 | Comp | | | | | | | " | " |
| 201 | HD 214975 | 22 3655 | +5618 24 | 01 57 22 | | 4:50 E | | | 1202 |
| 202 | Comp | | | | | | | " | 60 |
| 203 | Bias (4) | | | | | | | " | 60 |
| 204 | Comp | | | | | | | " | 60 |
| 205 | HD 173297 | 18 3920 | -20 4500 | 02 3017 | | 0016 E | | | 1499 |
| 206 | Comp | | | | | | | " | 60 |
| 207 | Comp | | | | | | | " | " |
| 208 | HD 171391 | 18 2930 | -11 03 00 | 03 01 02 | | | W | | 279 |
| 209 | Comp | | | | | | | " | 60s |

Spectr
 Focus
 Spectr
 Exp. M

1950

1890

314

855

1770

Spectr. Temp.
 Focus ... 6:83
 Spectr. Temp.

Dome Temp./Hum. +10.2°C 71.6%
 WARM Room +27°C
 Dome Temp./Hum.

Transparency Conditions ... 51 hazy

Nice BRT Fireball, Betelgeuse?
 Moving South S West Through Cygnus
 AT 01:10 EST

294

| Exp. Mtr. | Seeing | F. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|---------|------|----------|-------------------|--------------|----------|------|------------------|---------|---------|
| | | | | CASS CCD | 1800W/n G-5910 | 300μ FULL | 6400A | 10c. | | | |
| 1950 | 3" | 6.15 | G0J6 | | | | | 11c. | Run pgr | | |
| | | | | | | | | 12 | | | |
| 1890 | 3" | 5.75 | G0J6 | | | | | 14c. | Run pgr | | |
| | | | | | | | | 16c. | | | |
| 314 | | 8.40 | G0J6 | | | | | 17c. | Run pgr / Sgs ?? | | |
| | | | | | | | | 18, | | | |
| 855 | 5" | 7.48 | G0J6 | | | | | 20c. | Run pgr | | |
| | | | | | | | | | | | |
| 1770 | 4" | 5.14 | G8IV | | | | | 23 | std vel | | |

Spectr. Temp. Dome Temp./Hum. $+98^{\circ}\text{C}$ 71.984 Transparency Conditions ... *sl. hazy*
 Focus ... 6.83
 Spectr. Temp. Dome Temp./Hum. $+96^{\circ}\text{C}$ 72.974 296

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-------------|---------|--------------|------------------|------|----------|------|---------|--|---------|
| | | | | C455 = CD | 1800 | 300 | 6400A | | | | |
| 22K | 5" | 6.8 -5.9 | F2 | | | | | | | 26c. Pin paper | |
| | | | | | | | | | | 1c. 27c. | |
| 1700 | | 619 | FGI-IIb | | | | | | | 28c. Pin paper Repeat of High PRIORITY | |
| | | | | | | | | | | 29c. | |
| 3100 | 5" | 2.9 | 60JB | | | | | | | 30c. Stacked | |
| | | | | | | | | | | 31 | |
| | | | | | | | | | | 32c. | |
| | | | | | | | | | | 1 | |
| | | | | | | | | | | -101.4°C MAX 14K MAX | |

Spectr. Temp. Dome Temp./Hum. +17.2°C 40% H Transparency Conditions FINE

Focus ... 6:75

Spectr. Temp. Dome Temp./Hum.

298

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|---------------|--------------|------------------|--------------|----------|------|---------------|--|------------|
| | | | | CASS CC17 | 1800nm G 6065 | 300μ FULL | 6600A | 3/4c | Focus | | |
| | | | | | | | | 1c | | | |
| | | | | | | | | 5c | | | |
| | 5000 | | | | | | | 6c | | 5011x 13K 4D4 | |
| | | | | | | | | 7c | | | |
| | | | | | | | | 8 | | | |
| | 78 | 3" | 10.4 -10.8 | | | | | 9 | CV emission | (H ₂ & He Em ₊ seen) | < 30/1 S/H |
| | 71 | | | | | | | 10 | | | |
| | 79 | | | | | | | 11 | | | |
| | | | | | | | | 12 | | | |
| | | | | | | | | 13 | | | |
| | 8000 | | | 136 BOVI | | | | 14 | Telluric Std. | | |
| | | | | | | | | 15 | | | |
| | | | | | | | | 16 | | | |

Pg #2 (209)

Emulsion Batches:

Date 1994 MAY 20/21 Observers J.R. / T_n.....

.....

| Plate No. | Object | R.A. | Declination | Starting Time | Ending Time | Hour Angle | Declination | Comparison | |
|-----------|----------------------|--------------|-------------|---------------|-------------|------------|-------------|---------------|-------|
| | | 1900 1950 | 1900 | E.S.T. | E.S.T. | End | | Type/Filter | Exp. |
| CC22246 | T Cr B | 15 57 25 | +26 03 36 | 22 03 49 | | 02 04 E | | | 901 |
| 47 | T Cr B | " | " | 22 19 09 | | | | | 906 |
| 48 | Comp | | | | | | | FeAr Clear | 60s |
| 49 | T Cr B | 15 57 25 | +26 03 36 | 22 37 55 | | | | | 911 |
| 50 | " | " | " | 22 53 38 | | 01 14 E | | | 905 |
| 51 | Comp | | | | | | | FeAr Clear | 60s |
| 52 | | | | | | | | TUNG Ap/4 | 8sa |
| -56 | FLATS x 5 | | | | | | | | |
| 57 | BIAS(4) | | | | | | | | |
| 58 | | | | | | | | FeAr Clear | 40/55 |
| 59 | Comp/stellar HARTMAN | | | | | | | " | 60s |
| 60 | Comp | | | | | | | | |
| 61 | T Cr B | 15 57 25 | +26 03 36 | 23 32 53 | | | | | 918 |
| 62 | " | " | " | 23 50 54 | | | | | 802 |
| 63 | Comp | | | | | | | FeAr Clear | 60s |
| → 64 | | | | | | | | TUNG Clear | 5sa |
| 66 | FLATS x 3 | | | | | | | | |
| 67 | BIAS(4) | | | | | | | | |

Spectr.
 Focus.
 Spectr.

Exp. Mtr

200

220

237

220

T

2360

100

Spectr. Temp.

Dome Temp./Hum. $+15.3^{\circ}C$ 49% Transparency Conditions *S1. Hazy*Focus *6.75*

Spectr. Temp.

Dome Temp./Hum.
21/11/04

300

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------------------|--------|-----------|-----|---------|---------------------|--------------|------------------|------|---------|----------------------------|------------------------|
| 200 | | | | CAS CCD | 1500nm/mm G-6065 | 300x Full | 660 0 | 17c | | Full emission max 2KAD4 | continuum 100/1 SIN |
| 228 | 1.2" | | | | | | | 18c | | | |
| | | | | | | | | 19c | | | |
| 237 | | | | | | | | 20c | | | |
| 220 | | | | | | | | 21c | | | |
| | | | | | | | | 22c | | | |
| | | | | | | | | 23c | | | |
| | | | | | | | | 1c | | | |
| T = $14.4^{\circ}C$ Set 6.85 | | | | | 1500nm/mm G-4820 | | 4860A | 3/4 | | | |
| | | | | | | | | 5c | | | |
| 260 | | | | | | | | 24c | | | |
| 160 | | | | | | | | 25c | | some cloud | |
| | | | | | | | | 26 | | | |
| | | | | | | | | 27 | | 12 K AD4 max | |
| | | | | | | | | 1c | | | |

Spectr. Temp. Dome Temp./Hum. 11.4° 54% Transparency Conditions ... *clouding in*

Focus ... *6.85*

Spectr. Temp. Dome Temp./Hum.

302

| Exp. Mtr. | Seeing | H/Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------|------------|-------------|-----------------------|-------------|------------------|-------------|----------|------------|---------------------|-----------------------------------|---------|
| | | | | CASS CCD | 1800nm G 4820 | 300 FULL | 4860Å | 28. | | | |
| <i>170</i> | | <i>3.74</i> | <i>A0V</i> | | | | | <i>29.</i> | <i>Sp phot Std.</i> | <i>cloudy</i> | |
| <i>480</i> | | | | | | | | <i>30.</i> | | <i>"</i> | |
| <i>738</i> | | | | | | | | <i>6.</i> | | | |
| | | | | | | | | <i>7.</i> | | | |
| | <i>1.2</i> | <i>7.56</i> | <i>G5IV</i> | | | | | | <i>Seeing test</i> | <i>cloudy</i> <i>Dome west</i> | |
| | | | | | | | | | <i>" "</i> | <i>Light NNE wind</i> | |
| | | | | | | | | <i>2.</i> | | <i>12.2k ADU max</i> | |
| | | | | | | | | <i>12.</i> | | | |
| <i>1820</i> | <i>1.2</i> | <i>5.78</i> | <i>A0V</i> | | | | | <i>13.</i> | <i>New Bc's</i> | | |
| | | | <i>B3V</i> | | | | | <i>15</i> | | | |
| <i>1750</i> | | <i>4.78</i> | <i>B3V</i> | | | | | <i>16</i> | | | |
| <i>1750</i> | | | | | | | | <i>17</i> | | | |
| | | | | | | | | <i>15</i> | | | |
| | | | | | | | | <i>1</i> | | | |

Spectr. Temp. Dome Temp./Hum. $+13.9$... 53.7% Transparency Conditions Clouds 304
 Focus 6.85
 Spectr. Temp. Dome Temp./Hum. $+13.8^{\circ}\text{C}$... 56.8% mucko cloud now

| Exp. | Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------|----------------|--------|------|-----|-------------|-------------------|-------------|----------|------|----------|------------------------------------|---------|
| 60s | 400 | | | | CASS CCD | 1800/w/mm 6600 | 300 FULL | 6600A | 15ci | New Be's | | |
| 49s | 400 | | 4.78 | BJV | | | | | 18ci | | | |
| 26s | 700 | | | | | | | | 19ci | | | |
| 36s | 1730 | | | | | | | | 20ci | | H α emission W/AX SK HDU | |
| 25 | | | | | | | | | 22ci | | | |
| 8 | | | | | | | | | | | | |
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Air to worms & PERSEUS

CCD Spectr. Temp. -100°C Dome Temp./Hum. $+18.7^{\circ}\text{C}$ 57% Transparency Conditions *Fine*
 Focus *6.90*
 Spectr. Temp. *90.0 gain* Dome Temp./Hum. 306

C. Lankford

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------------------|-------------|-----------------|--------------|----------|------|--------------|-----------|---------|
| | | | | CASS CCD | 600nm G 2740 | 300μ FULL | 4800A | 4/5 | New Bis | | |
| | | 5.23 | AOV _n | | | | | 6c. | | | |
| 960 | | 5.23 | AOV _n | | | | | 7c. | | | |
| | | | | | | | | 8 | | | |
| | | | | | | | | 9 | | 15.8 KADU | |
| | | | | CASS | 600nm G 3100 | | 6563A | 11 | | | |
| 900 | 1.2" | 5.23 | AOV _n | | | | | 12. | | | |
| 900 | | | | | | | | 13 | | | |
| 800 | | 5.23 | AOV _n | | | | | 14 | | | |
| | | | | | | | | 15 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 15 | | | |
| | 2" | 4.3 | B3V | | | | | 16 | Spectra Std. | | |
| | | | | | | | | 17 | | | |
| | | | | | | | | 18 | | | |

Page #2 307

Date ... 1994 ... May 21/22 Observers ... Tlr / Tn

Emulsion Batches:

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|------|
| | | | | | | | | Type/Filter | Exp. |
| 311 | Comp | | (1950.0) | | | | | Fe Ar Clear | 20s |
| 312 | T Cr B | 15 57 25 | +26 03 36 | 21 49 17 | | | | | 916s |
| 313 | " | | | 22 05 33 | | | | | 943s |
| 314 | " | | | 22 23 04 | | | | | 949s |
| 315 | Comp | | | | | | | Fe Ar Clear | 20s |
| 316-318 | FLATS x 3 | | | | | | | JUNG Ap/18 | 7s |
| 319 | Bias (4) | | | | | | | | |
| 320 | Comp | | | | | | | Fe Ar Clear | 20s |
| 321 | T Cr B | 15 57 25 | +26 03 36 | 22 49 51 | | | | | 946s |
| 322 | " | | | 23 06 47 | | | | | 959s |
| 323 | " | | | 23 23 09 | | | | | 924s |
| 324 | Comp | | | | | -0h 37' | +25° 54' | Fe Ar Clear | 20s |
| 325-327 | Flat x 3 | | | | | | | JUNG A=1/4 | 7s |
| 328 | Comp | | | | | | | Fe Ar Clear | 20s |
| 329 | HD 172 167 | 18 33 33 | +38 41 00 | 23 51 49 | | | | | 25* |

Spectr. Temp. Dome Temp./Hum. +18.6°C...57%. Transparency Conditions .. Fine... v v s / hazy.....
 Focus ... 6.90
 Spectr. Temp. Dome Temp./Hum.
 308

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality | |
|-----------|--------|-----------|-------|-------------|---------------------|------|----------|------|-------------|--|-----------------------------------|--|
| 205 | | | | CASS CCD | 600 l/n/mm G3100 | 300 | 6563 Å | 4c | | | | |
| 985 | 200 | 1-2 | <10.8 | Me? | | | } | 20c | CV emission | | | |
| 995 | 214 | | | | | | | 21c | | | | |
| 995 | 208 | | | | | | | 22c | | | ~ 4.6 K/ADU @ H α emission | |
| 995 | | | | | | | | 4 | | | 13.5 K/ADU max | |
| 995 | | | | | | | | 5 | | | 13.5 k ADU max | |
| | | | | | | | | 1c | | | | |
| | | | | | 600 l/n/mm G3740 | 300 | 7800 Å | 4 | | | | |
| 985 | 185 | 2 | | | | | | 23c | | | | |
| 985 | 185 | | | | | | | 24c | | SIN ~ 60/l @ H α | | |
| 985 | 209 | | | | | | | 26c | | | | |
| | | | | | | | | 4c | | | | |
| | | | | | | | | 5c | | apparent ghosting of bottom columns in red (same as in comparison) | | |
| | | | | | | | | 4c | | | | |
| 1700 | | | | | | | | 27 | Std. | * star dragged across slit | | |

Date 1994 May 21/22 Observers Tlr/Tn

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| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|---------------------------|--|--------------|---------------------|-------------------------|-----------------------|-------------------|--------------------------|--|-------------------|
| | | | | | | | | Type/Filter | Exp. |
| 330 | HD 172 167 | 18 33 33 | +38 41 00 | 23 58 13 | | | | F₀Ar Clear | 25 |
| 331 | Comp. (cd cl pl etc) | | | | | | | F ₀ Ar Clear | 20s |
| 332 | Comp. | | | | | | | F ₀ Nc Clear | 20s |
| 333 | HD 172 167 | 18 33 33 | +38 41 00 | 00 15 17 | | | | | 11s ⁺ |
| 334 | " | | | | | | | | 10s [*] |
| 335 | Comp | | | | | | | F ₀ Nc Clear | 20s |
| ³³⁶ 338 | FLATS x 3 | | | | | | 2 35E + 39 ^o | TUNG Ap 1/2 | 13s |
| 339 | BINS(4) | | | | | | | | |
| 340 | Comp | | | | | | | F ₀ Nc Clear | 20s |
| 341 | TC B | 15 57 25 | +26 03 36 | 00 27 42 | | | | | 1264s |
| 342 | " | | | 00 49 15 | | | | | 1264s |
| 343 | Comp | | | | | | | F ₀ Nc Clear | 20s |
| CG ^{40/79} 82 | HD 1533 99 | 16 54 18 | +43 50 | 2 01 20 | | | 00 03W + 44 ^o | 4 x | 167 _{sc} |
| CG ⁸³ 84 | " | | | | | | | 2 x | 133 _{sc} |
| CG 22344 | Comp | | | | | | | F ₀ Nc Clear | 20s |

Spectr. T

Focus .

Spectr. I

Exp. Mtr.

1700

333

311

Spectr. Temp. Dome Temp./Hum. $+17.4^{\circ}\text{C}$ 537% Transparency Conditions *Sl. hazy*

Focus *6.90*

Spectr. Temp. Dome Temp./Hum.

310

| Exp. Mtr. | Seeing | Pig. No. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|------------------|----------|-----|-------------|---------------------------------------|-----------|----------|------|---------|------------------------------------|---------|
| 1700 | | | | CASS CCD | 600 $\mu\text{m}/\text{mm}$ G 2740 | 300 μ | 4800A | 27ci | Std | star dragged across slit | |
| | | | | | | | | 28ci | | | |
| | | | | | 600 $\mu\text{m}/\text{mm}$ G 2605 | | 4100A | 29ci | | | |
| | | | | | | | | 30ci | Std | * star dragged across slit | |
| | | | | | | | | 31ci | | * " | |
| | | | | | | | | 29ci | | | |
| | | | | | | | | 2ci | | min 3.4 K AD4 1.7A * 15.2 K AD4 | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 29ci | | | |
| 333 | 1.2" ≤ 10.8 | | | Me? | | | | 6ci | | | |
| 311 | | | | | | | | 7ci | | | |
| | | | | | | | | 29ci | | | |
| | | | | | | | | | Seeing | v light NW wind | |
| | | | | | | | | | " | no fans | |
| | | | | | | | | 29ci | | | |

Spectr. Temp. Dome Temp./Hum. $+16.5^{\circ}\text{C}$... 54.7% Transparency Conditions ... *sl. haz. eg.*Focus ... *6.80*Spectr. Temp. Dome Temp./Hum. $+16.3^{\circ}\text{C}$... 55.5%CCDT - 100°C still

312

| Exp. Mtr. | Seeing | Pig. Mgr. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------|------------|-------------|-------------|--------------|---------------------------|----------------------|--------------|------------|--------------------|---|---------|
| <i>14</i> | <i>0</i> | <i>14?</i> | | | <i>600l/mm G 2603</i> | <i>300μ F446</i> | <i>4100A</i> | <i>9c</i> | <i>CV emission</i> | <i>something actually * star directly north of Vsgc</i> | |
| | | | | | | | | <i>2c</i> | | | |
| | | | | | | | | <i>2c</i> | | | |
| | | | | | | | | <i>1c</i> | | | |
| | | | | | <i>600l/mm G 310D</i> | <i>300μ</i> | <i>6563A</i> | <i>3</i> | | <i>* star directly north of Vsgc</i> | |
| <i>14</i> | <i>sky</i> | <i>1.2"</i> | <i>14?</i> | | | | | <i>4</i> | | <i>40/1 SN in continuum</i> | |
| | | | | | | | | <i>5</i> | | | |
| <i>7.5</i> | <i>22</i> | <i>1.2"</i> | <i>12?</i> | | | | | <i>9c</i> | | | |
| | <i>27</i> | <i>"</i> | | | | | | <i>9c</i> | | | |
| <i>8.6</i> | <i>35</i> | <i>1"</i> | | | | | | <i>9c</i> | | | |
| | | | | | | | | <i>10c</i> | | | |
| | | | | | | | | <i>10c</i> | | | |
| <i>1.38</i> | <i>969</i> | | <i>5.53</i> | <i>A0III</i> | | | | <i>11c</i> | <i>Std</i> | <i>8k ADU Max</i> | |
| | | | | | | | | <i>10c</i> | | | |
| | | | | | | | | <i>13c</i> | | | |
| | | | | | | | | <i>1c</i> | | | |
| | | | | | | | | | | <i>* CCDT noted at -75 @ 04 EST</i> | |

Yes, good H α emission

Ant
 Note comparison also
 on slit
 at higher column #

pg#1

sun/mon 313

Emulsion Batches:

Date . 1994 MAY 22/23. Observers ..T.Lr. /T.n.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|---------------------|------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-----------|
| CC 22368 69 | Comp / Stellar HURTMAN | | | | | 00 17 E | +39° | FeAr Clear | 60/90 |
| 70 | Bias (4) | | | | | | | FeAr Clear | 60s |
| 71 | Comp | | | | | | | FeAr Clear | 60s |
| 72 | HD 130109 | 14 41 11 | +02 18 51 | 20 47 52 | | 02 11 E | | | 122s |
| 73 | " | | | 20 58 35 | | | | | 90s |
| 74 | " | | | 20 00 18 | | | | | 90s |
| CC 22375 - 374 | " | | | 20 03 21 | 20 37 52 | 01 24 E | | | 90s/clear |
| 395 | Comp | | | | | | | FeAr Clear | 60s |
| 396 401 | FLATS x 6 | | | | | 01 20 E | -1 22 | TUNG Clear | 5 5 |
| 402 | BIASCA) | | | | | | | FeAr Clear | 60s |
| 403 404 → 423 | Comp HD 142983 | 15 52 36 | -13 59 00 | 21 50 38 | 22 24 24 | 01 48 E | | | 90s/clear |
| 424 | Comp | | | | | | | FeAr Clear | 60s |
| 425 | Comp | | | | | | | FeAr Clear | 60s |
| 426 | HD 142983 | 15 52 36 | -13 59 00 | 22 31 14 | 22 31 14 | | | | 90s |

CCO
Spectr.
Focus.
Spectr.

Exp. Mtr.

4278

3800

3600

685

CCO
Spectr. Temp. -100°C

Dome Temp./Hum. +22.1°C 53%

Transparency Conditions . P.G.A.T. Cloudy

Focus 6.75

Spectr. Temp. 90.5.6.4.in

Dome Temp./Hum.

C LAMBDA

314

| Exp. Mtr. | Seeing | Ptg. No. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|----------|-----|-------------|--------------------|--------------|----------|------|----------------|--|---------|
| | | | | CASS CCD | 18004/mm G 4520 | 300μ FULL | 4860Å | 3/A | focus test | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 5c. | | | |
| 4278 | 2.3" | 3.74 | ADV | | | | | 6c. | Std | | |
| 3800 | | | | | | | | 7c: | | STAR 90s. BAT using 90 OBS batch | |
| 3600 | | | | | | | | " | | | |
| | | | | | | | | 8c: | | 20x90s exposures taken automatically w. STAR 90s. bat | |
| | | | | | | | | 9c: | | | |
| | | | | | | | | 10c: | | MAX 12.2KADU | |
| | | | | | | | | 1c. | | | |
| | | | | | | | | 11c: | | | |
| | 3" | 4.86 | Bpc | | | | | 12c: | Be variability | Batch of 20x90secs | |
| | | | | | | | | 13c: | | | |
| | | | | | 18004/mm G6065 | 300μ | 6500Å | 13c: | | | |
| 685 | | | | | | | | 14c: | | Max 6K | |

pg # 2 315

Emulsion Batches:

Date ... 19.94. May. 22/23 Observers ... Tlr./Tn.

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|----------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|--------|
| | | | | | | | | Type/Filter | Exp. |
| CC22429 | HD 142983 | 15 52 36 | -13 59 00 | 22 34 34 | | 01 05 E | | | 90s/ea |
| 46 | | | | | | | | | |
| 47 | Comp | | | | | | | Fe Ar Clear | 60sec |
| 48 | BIAS (4) | | | | | | | | |
| 49 | Comp | | | | | | | Fe Ar Clear | 60 |
| 50 | HD 130109 | 14 41 11 | +02 18 51 | 23 15 32 | | 0 18 W | | | 90s |
| 51-60 | " | " | " | 23 18 57-23 35 44 | | 00 35 W | | | 90s/ea |
| 61 | Comp | | | | | | | Fe Ar Clear | 60s |
| 62 | | | | | | | | | |
| → 67 | FLATS x 6 | | | | | 00 40 W | +2° | TUNG Ap 1/4 | 8sec |
| CG40185 | HD 144579 | 16 01 30 | +39 25 36 | | | | | 4 x | 0.06Fs |
| -89 | | | | | | | | | |
| CG40190 | " | | | | 20 07 | 00 | +39° | 2x | 113s |
| 91 | | | | | | | | | |
| CC22468 | Comp | | | | | | | Fe Ar Clear | 60s |
| 469 | HD 192685 | 20 11 02 | +25 17 00 | 00 16 35 | 00 33 22 | 3 57 E | | | 90s/ea |
| -78 | | | | | | | | | |
| 79 | Comp | | | | | | | Fe Ar Clear | 60s |
| 80 | BIAS (4) | | | | | | | | |
| 81 | | | | | | | | | |
| -82 | Comp / Stellar | | | | | 0 0 | +11 | Fe Ar Clear | 60/60 |

Spectr. Temp. Dome Temp./Hum. $+20.8^{\circ}\text{C}$ 54.5% Transparency Conditions *S/L hazy*

Focus *6.75*

Spectr. Temp. Dome Temp./Hum. *20.0* *55.58H* \rightarrow *cloudy* *316*

CAMBDA

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------------------|----------------------------|-------------|-------------|-----------------|----------------------------|------------------------------------|--------------|-------------|----------------------------------|-----------------------------|---------|
| | <i>3"</i> | <i>486</i> | <i>B pe</i> | <i>CASS CCD</i> | <i>1800 l/mm G6065</i> | <i>300μ F44</i> | <i>6600A</i> | <i>15c1</i> | | <i>Batch of 20 x 90secs</i> | |
| | | | | | | | | <i>16c1</i> | | | |
| | | | | | | | | <i>1c1</i> | | | |
| | | | | | | | | <i>17c1</i> | | | |
| <i>1274</i> | | <i>3.71</i> | <i>A0V</i> | | | | | <i>18c1</i> | <i>Tell. Std.</i> | <i>Batch of 10 x 90secs</i> | |
| | | | | | | | | <i>19c1</i> | | | |
| | | | | | | | | <i>20</i> | | | |
| | | | | | | | | <i>21</i> | | <i>MAX 15K ADU</i> | |
| | <i>note 1st Blank one,</i> | <i>666</i> | <i>68V</i> | | <i>Above 3000 slit</i> | <i>4 good ones through</i> | | | <i>Seeing Test Done west</i> | <i>v light WNW</i> | |
| | | | | | | | | | <i>n</i> | | |
| <i>790</i> | | <i>4.78</i> | <i>B3V</i> | | | | | <i>23c1</i> | <i>B_c variability</i> | <i>Batch of 10 x 90secs</i> | |
| | | | | | | | | <i>24c1</i> | | <i>Cloud at end.</i> | |
| <i>2000\circ</i> | <i>6.75</i> | <i>set</i> | | | | | <i>6600A</i> | <i>3/4c</i> | | | |

Spectr. Temp. -100°C ^{cooled from ambient} Dome Temp./Hum. $14.6^{\circ}\text{C}/56.8\%$ Transparency Conditions Some scattered clouds
 Focus $b: 7.8$ Fans OFF
 Spectr. Temp. 90.1°C Dome Temp./Hum. $480\ 0\ 50\ 1024\ 41\ \text{ccdfmt}$ 318

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. <small>Scale</small> | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------------|----------------------|------|----------|---------------------------|--------------------------------------|-----------------------------|-------------|
| | | | | Cass CCD | 1800/mm G = 5.115 | 300 | 5303 A | 3/4 | Focus Test bsum 4. bit | <u>Full Moon</u> | good |
| | | | | | | | | 1 | bsum 4. bit | Some Victor a Day | |
| | | | | | | | | 5 | | Fireworks going on outside. | |
| 130 | | 10.5 | M0 | | SNR ~ 20 | | | 6 | Nys Pgm | Still some twilight. | |
| | | | | | | | | 7 | | + some light clouds | |
| | | | | | | | | 8 | Nys Pgm | drifting by | |
| 83 | | 10.5 | M0 | | | | | 8 | Nys Pgm | Again, clouds. | |
| | | | | | | | | 9 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 10 | | | |
| 326 | | 7.5 | M2 | | | | | 11 | Nys Std. | Encoders messing up in Dec. | |
| | | | | | | | | 12 | | | |
| | | | | | | | | 13 | | | |
| 135 | 4" | 10.7 | M0 | | | | | 14 | Nys Pgm | | S/N 50/1 |
| | | | | | | | | 15c | | | |
| | | | | | | | | 1c | | | |

P4#2 319

Emulsion Batches:

Date .MAY.23/24..94. Observers ...Hlw/Tn...{Vgs}...

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| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-------------------|-----------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|----------|
| | | | | | | | | Type/Filter | Exp. |
| CC22499 | Comp | | | | | | | FelNe Clear | 20s |
| CC22500 | HD119850 | 13 4036 | +15 2700 | 22 21 11 | | 00 40.5W | +15° | | 985 |
| 501 | Comp | | | | | | | FelNe Clear | 20s |
| 502 | Comp | | | | | | | " | " |
| 503 | BD+31 2500 | 13 2723 | +31 3859 | 22 4821 | | 1:26 W | +31° | | 1281 |
| 504 | Comp | | | | | | | FelNe Clear | 20s |
| 505 | Bias x 4 | | | | | | | | |
| 506 | Comp | | | | | | | FelNe Clear | 20sec |
| 507 | BD+21 2763 | 15 17 55 | +21 20 06 | 23 3621 | | 0:25W | | | 1301 |
| 508 | Comp | | | | | | | " | 20 |
| 509 | Comp | | | | | | | " | " |
| 510 | BM AC+26° 37030 | 15 23 45 | +26 08 16 | 00 07 43 | | 0:51W | | | 1337 |
| 511 | Comp | | | | | | | " | 20 |
| CG 40192 195 | HD144579 | 16 0130 | +39 2536 | 00 38 | | 00 25W | | | 4 x 67ms |
| 196 197 | " | " | " | | | | | | 2 x 133m |

Spectr. Temp. Dome Temp./Hum. ^{+13.6°C} ^{57.1%RH} Transparency Conditions *Part. Cloudy*Focus *6.78*Spectr. Temp. Dome Temp./Hum. *e Lumbale* 320

| Exp. Mtr. | Seeing | PV Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|----------------|-----------------|---------------|------------|-------------------|-------------|----------|------|------------|-----------------------|---------|
| | 3.5 | 8.48 | M1 | C455 50 | 1800b/mm 6 515 | 300 FULL | 53038 | 16c | | | |
| 465 | 3.5 | 8.48 | M1 | | | | | 17c | Money Std | | |
| | | | | | | | | 18 | | | |
| | | | | | | | | 19 | | | |
| 192 | 4 | 10.5 | MD | | | | | 20 | Vys Pgm | | |
| | | | | | | | | 21 | | | |
| | | | | | | | | 1 | bsum 4 bat | | |
| | | | | | | | | 22 | | | |
| 179 | | 10.1 | MOe | | | | | 23 | Vys Pgm | Vys 740 | |
| | | | | | | | | 24 | | | |
| | | | | | | | | 25 | | | |
| 83 | | 11.1 | MO | | | | | 26 | Vys Pgm | | |
| | | | | | | | | 27 | | | |
| | para 666 | | G8V | | | | | | | Seeing test Dome West | |
| | | | | | | | | | | " " No Fung | |

Pg #3 321

Date 1944 May 23/24 Observers Tn/Hlw {Vys} [Rm]

Emulsion Batches:

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| File Plate No. | Object | R.A. | | Declination | | Starting Time | | Ending Time | | Hour Angle | | Comparison | |
|-------------------|--------------|----------|-----------|-------------|------|---------------|--------|-------------|-------------|-------------|------|----------------|-------|
| | | 1900 | 1900 | 1900 | 1900 | E.S.T. | E.S.T. | End | Declination | Type/Filter | Exp. | | |
| CC22512 | HD Comp | | | | | 00 4 | | | | | | Felt Clear | 20 |
| 13 | HD 144579 | 16 0130 | +39 25 36 | | | 00 44 14 | | 0:38 W | +39° | | | | 635 |
| 14 | Comp | | | | | | | | | | | " | 20 |
| 15 | Bias x 4 | | | | | | | | | | | " | " |
| 16 | Comp | | | | | | | | | | | " | " |
| 17 | BD+45 2743 | 18 32 26 | +45 39 53 | | | 01 06 29 | | 1:26 E | +45° | | | | 816 |
| 18 | Comp | | | | | | | | | | | " | 20 |
| 19-24 | 6 x Flats | | | | | | | 1:20 E | +45° | | | Tung 1/2 Ap | 5s |
| 25 | Bias x 4 | | | | | | | | | | | | |
| CC22526/7 | Comp/Stellar | Hartman | Mask | Test | | | | 200 | +30° | | | Felt- Clear | 60/65 |
| CC22528 | Comp Comp | | | | | | | | | | | Felt Clear | 60s |
| 529 | HD 162714 | 17 47 17 | -06 07 | | | 01 48 24 | | 00:07 E | | | | | 473 |
| 530 | Comp | | | | | | | | | | | Felt Clear | 60s |
| 531 | Comp | | | | | | | | | | | Felt Clear | 60s |
| 532 | HD 173297 | 18 39 20 | -20 45 00 | | | 02 02 38 | | 00:29 E | | | | | 1461 |
| 533 | comp | | | | | | | | | | | Felt Clear | 60s |

medi f

Spectr.

Focus.

Spectr.

Exp. Mtr.

134

121

1450

1250

Spectr. Temp. Dome Temp./Hum. $12.5^{\circ}\text{C}/61.4\%$ Transparency Conditions *Partial Clouds*

Focus *6.78*

Spectr. Temp. Dome Temp./Hum.

322
CCDT still -101.5°C

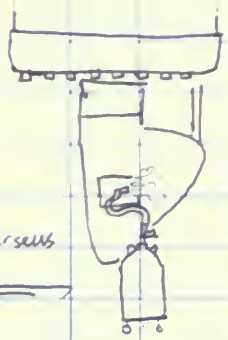
| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---------------------------|--------|------|------|----------|-----------------------------|-------------------|----------|------|------------|--|---------|
| | | | | Cass CCD | 1800 ℓ /mm G = 5115 | 300 μ Full | 5303A | 28i | | | |
| 1340 | 6.66 | 68V | | | | | | 29 | Std. Vel. | | |
| | | | | | | | | 30 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 5 | | | |
| 121 | 9.83 | M0 | | | | | | 6 | Vys Std. | | |
| | | | | | | | | 7 | | | |
| | | | | | | | | 7 | | | |
| | | | | | | | | 1 | | | |
| Still set 6.78 = still OK | | | | | | | | 3/4 | Focus test | Partial Top-up of dewar done here at 0136 | |
| | | | | | | | | 6c: | | | |
| 1850 | 4.5 | 615 | GO16 | | | | | 6c: | Rm pgm | SIN > 300/1 | |
| | | | | | | | | 7c: | | | |
| | | | | | | | | 7c: | | | |
| 1250 | 6" | 7.48 | GO16 | | | | | 8c: | Rm pgm | wait into 6c SIN > 200/1 | |
| | | | | | | | | 9c: | | | |

Spectr. Temp. Dome Temp./Hum. 11.9°C 66.9% Transparency Conditions *Fine*

Focus *G:78*

Spectr. Temp. Dome Temp./Hum. 11.9°C 66% 324

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|--------|-------------|--------------------|-------------|----------|---------------|---------|--------------------|---------|
| | | | | CHSS CCD | 1800/6hr G-5910 | 300 Full | 6400A | 7 | | | |
| 1870 | 4" | 619 | F6F-J6 | | | | | 10 | Kmpygn | Period 1.49 days | |
| | | | | | | | | 12 | | | |
| | | | | | | | | 12 | | | |
| 361 | | 8.4 | GOIb | | | | | 14 | Kmpygn | | |
| | | | | | | | | 15 | | | |
| | | | | | | | | 16 | | | |
| | | | | | | | | 16 | | | |
| 650 | | 2.91 | GOIb | | | | | 17c | std vel | in cloud | |
| | | | | | | | | 18 | | Totally cloudy now | |
| | | | | | | | | 1 | | and Mr. Sun is | |
| | | | | | | | | | | approaching. | |
| | | | | | | | | 1c | | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 4 | | | |



All to WORM & Perseus

Set G:78 13.9°C

Pg#1 (325 Fri/Sat

Emulsion Batches:

Date 1994 May 27/28 Observers Tn/Hlw Σ Vys 3CSS 386 Time is .8 secs. ~~sh. and af. WUV~~ Time

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|----------------|--------------|--------------|------------------|----------------------|--------------------|----------------|-------------|-------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| cc22557/8 | Comp/Stellar | Hartman Mask | | | | | | FeNe Clear | 20/30 |
| 59 | Bias x 4 | | | | | | | | |
| 60 | Comp | | | | | | | Fine Clear | 20 |
| 61 | BD-02 3000 | 09 48 10 | -03 13 04 | 20 49 18 | | 0321 W | -4° | | 1202 |
| 62 | Comp | | | | | | | FeNe Clear | 20 |
| 63 | BD-02 3000 | 09 48 10 | -03 13 04 | 21 13 31 | | 3:40 W | -4° | | 900 |
| 64 | Comp | | | | | | | FeNe Clear | 20 |
| 65 | Comp | | | | | | | " | " |
| 66 | BD+01 2447 | 10 23 49 | 01 21 36 | 21 34 07 | | 3:22 W | +1° | | 730 |
| 67 | Comp | | | | | | | | |
| 68 | Bias x 4 | | | | | | | | |
| 69-71 | 3 x Flats | | | | | 3 30 W | +1° | Jung A 1/2 | 7s |
| 72 | Comp | | | | | | | FeNe Clear | 20s |
| 73 | HD 119850 | 13 40 36 | +15 27 00 | 22 01 11 | | 00:27 W | | | |
| 74 | Comp | | | | | | | FeNe Clear | 20 |

CCD Spectr. Temp. -100.0°C

Dome Temp./Hum. +10.4°C / 50.6% Transparency Conditions Clear

Focus 6.87

Fans OFF

(326)

Spectr. Temp. cyan = 10

Dome Temp./Hum. 480 0 50 1024 4 1 ccdfmt

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------|-----|-----------------------|----------------------|------|----------|------|------------|-----------------------------|---------|
| | | | | Cass CCD | 1800L/mm G = 5115 | 300μ | 5303Å | 3/4 | Focus Test | | |
| | | | | | | | | 1 | | Telescope Reversed | |
| | | | | | | | | 5 | | Max ADJ = 14959 | |
| 167 | 1-2" | 10.5 | M0 | | | | | 6 | Vys Pgm | deltas -0 0 20 -0 0 54 | |
| | | | | | | | | 7 | | → still some tw. light. | |
| 85 | | 10.5 | M0 | | | | | 8 | Vys Pgm | | |
| | | | | | | | | 9 | | | |
| | | | | | | | | 10 | | | |
| ~100 | | 9.7 | M2 | | | | | 11 | Vys Std | | |
| | | | | | | | | 12 | | | |
| | | | | | | | | 13 | | 12.5 K ADJ. | |
| | | | | | | | | 14 | | Telescope on west side now. | |
| 267 | | | | All to WORM & Perseus | | | | 15 | Marcy Std | | |
| | | | | | | | | 16 | | | |

py#2 327

Emulsion Batches:

Date 1994 May 27/28... Observers H/w./Jn. {Vgs}.....

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-------------------|-------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| cc 22575 | Comp | | | | | | | Fene Clear | 203 |
| 76 | AC+794347 | 13 54 15 | +79 20 23 | 22 18 19 | | 0:44 W | +79° | | 900 |
| 77 | Comp | | | | | | | Fene Clear | 203 |
| 78 | Comp | | | | | | | " | 7 |
| 79 | BD+81 465 | 14 10 24 | +81 04 30 | 22 49 24 | | 0:52 W | +81° | | 745 |
| 80 | Comp | | | | | | | Fene Clear | 203 |
| 81 | Bias x 4 | | | | | | | " | " |
| 82 | Comp | | | | | | | " | " |
| 83 | AC+66 4437 | 14 40 33 | +66 28 51 | 23 03 23 | | 0:40 W | +66° | | 915 |
| 84 | Comp | | | | | | | " | 20 |
| 85 | Comp | | | | | | | " | " |
| 86 | AC+38 34548 | 15 30 11 | +38 15 00 | 23 25 34 | | 0:20 W | +38° | | 1360 |
| 87 | Comp | | | | | | | | |
| 88 | Bias x 4 | | | | | | | | |
| cg 40198 -201 | 4x HD144579 | 16 01 30 | +39 25 36 | 23 56 00 | | 0:01 E | +39° | | .067 |
| cg 40202-3 | 2x HD144579 | 16 01 30 | +39 25 36 | | 23 57 | | | | .133 |

Spectr. Temp. Dome Temp./Hum. $\pm 9.0^{\circ}\text{C} \dots 52.4\%$ Transparency Conditions .. *Fine*Focus ... *6:87*

328

Spectr. Temp. Dome Temp./Hum.

C. Kumbia

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|----------------------------|------|------|-------------|--------------------------|-------------------|----------|------|-------------|---------------------|---------|
| | | | | C455 CCD | 1800 μ /mm G-5115 | 300 μ FULL | 5303 | 17c | | | |
| 71 | 2 $^{\circ}$ -3 $^{\circ}$ | 10.6 | M0 | | | | | 18c | Vys Pgm | | |
| | | | | | | | | 19 | | | |
| | | | | | | | | 20 | | | |
| 70 | 2 $^{\circ}$ -3 $^{\circ}$ | 10.4 | M0 | | | | | 21 | Vys Pgm | | |
| | | | | | | | | 22 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 23 | | | |
| 64 | | 10.8 | M0 | | | | | 24 | Vys Pgm | | |
| | | | | | | | | 25 | | | |
| | | | | | | | | 26 | | | |
| 70 | | 11.3 | M0 | | | | | 27 | Vys Pgm | | |
| | | | | | | | | 28 | | | |
| | | | | | | | | 1 | | | |
| | | 6.66 | G8I | | | | | | Seeing Test | Dome WSW | |
| | | 6.66 | G8II | | | | | | Seeing Test | very light NNW wind | |

pg#3 329

Emulsion Batches:

Date 1994 May 27/28 Observers T_n/Hlw {Nys}

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|----------------|------------|-----------|------------------|----------------------|--------------------|----------------|-------------|------------------------|------|
| cc22589 | Comp | | | | | | | FeNe Clear | 20 |
| 90 | HD144579 | 16 01 30 | +39 25 36 | 00 00 36 | | 0:04 W | +39° | | 234 |
| 91 | Comp | | | | | | | " | 20 |
| 92 | Comp | | | | | | | " | " |
| 93 | BD-07 4156 | 15 54 29 | -07 58 11 | 00 12 41 | | 0:29 W | -8° | | 730 |
| 94 | Comp | | | | | | | " | 20 |
| 95 | Comp | | | | | | | " | " |
| 96 | BD-12 4523 | 16 24 44 | -12 25 39 | 00 34 19 | | 0:18 W | -13° | | 600 |
| 97 | Comp | | | | | | | " | 20 |
| 98 | Comp | | | | | | | " | " |
| 99 | BD-08 4352 | 16 50 05 | -08 09 47 | 00 51 54 | | 0:08 W | -8° | | 423 |
| cc22600 | Comp | | | | | | | " | 20 |
| 601-603 | 3 × Flats | | | | | 0:11 W | -8° | Tung 1/2 AP | 7 s |
| 604 | Bias × 4 | | | | | | | | |
| 605 | Comp | | | | | | | FeNe Clear | 20 |

Spectr. Temp.

Dome Temp./Hum. $+7.7^{\circ}C/56.8\%$ Transparency ConditionsSome very light
scattered clouds.

Focus 6.87

Spectr. Temp.

Dome Temp./Hum.

330

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | F.H. ci | Program | Remarks | Quality |
|-----------|--------|-----------|-----|----------|-----------------------|-----------|----------|---------|-----------|------------------|---------|
| | | | | Cass CCD | 1800 l/mm G = 5115 | 300 μ | 5303 A | 29 | | | |
| 470 | | 6.66 | 68V | | | | | 30 | Std. Vel. | | |
| | | | | | | | | 31 | | | |
| | | | | | | | | 5 | | | |
| 76 | | 10.5 | M0 | | | | | 6 | Vys Pgm | | |
| | | | | | | | | 7 | | | |
| | | | | | | | | 9 | | | |
| 96 | | 10.1 | M2 | | | | | 11 | Vys Pgm | | |
| | | | | | | | | 12 | | | |
| | | | | | | | | 14 | | | |
| 144 | 4* | 9.0 | M5e | | | | | 15 | Vys Pgm | (S/N 50/1) | |
| | | | | | | | | 16 | | | |
| | | | | | | | | 13 | | Max ADU = 15.8 K | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 17 | | | |

Py #4 331

Emulsion Batches:

Date .. 1994 MAY 27/28 Observers . H. Cu. / T. ... { V. G. S. } ...

.....

| File Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|----------------|-------------|-----------|------------------|----------------------|--------------------|----------------|-------------|-------------|-------------|
| | | | | | | | | Type/Filter | Exp. |
| CC22606 | HC-21529-17 | 17 13 09 | -01 40 36 | 01 07 18 | | 00:16 W | -2° | | 133l |
| 07 | Comp | | | | | | | FelNe Clear | 20s |
| 08 | Comp | | | | | | | " | " |
| 09 | BD+05 3409 | 17 25 28 | +05 37 49 | 01 34 50 | | 00:18 W | +6° | | 529 |
| 10 | Comp | | | | | | | FelNe Clear | 20s |
| 11 | Comp | | | | | | | " | " |
| 12 | BD+68 946 | 17 36 56 | +68 24 47 | 01 49 49 | | 00:22 W | +68° | | 292 |
| 13 | Comp | | | | | | | " | 20 |
| 14 | Comp | | | | | | | " | " |
| 15 | BD+45 2743 | 18 32 26 | +45 39 53 | 01 58 51 | | | | | 984 |
| 16 | Comp | | | | | | | " | 20 |
| 17 | Bias x 4 | | | | | | | " | " |
| 18 | Comp | | | | | | | " | " |
| 19 | HD186791 | 19 41 30 | 10 10 00 | 02 23 38 | | 1:16 E | +11° | | 88 |
| 20 | Comp | | | | | | | " | " |
| 621-623 | 3x Flats | | | | | | | | Tung 1/2 6s |

Spectr.
 Focus .
 Spectr.
 Exp. Mtr.

136

150

73

76

670

Spectr. Temp.

Dome Temp./Hum. $+7.5^{\circ}\text{C}$ 59.1% HTransparency Conditions ... *Some cloud*Focus *6:87*to lots of cloud.

Spectr. Temp.

Dome Temp./Hum. *C L.A. 8/11*

332

| Exp. Mtr. | Seeing | Fl. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|----------|-------|-------------|--------------------------|-------------------|----------|------|-----------|------------------------------------|---------|
| 136 | 5" | 10.59 | M0 | CHSS CCO | 1800 μ /mm G=5715 | 300 μ Full | 5303A | 18 | Vys pgn | | |
| | | | | | | | | 19 | | | |
| | | | | | | | | 20 | | | |
| 150 | 4" | 9.3 | M1 | | | | | 21 | Vys pgn | | |
| | | | | | | | | 22 | | | |
| | | | | | | | | 23 | | | |
| 73 | | 9.2 | M5 | | | | | 24 | Vys Pgm | | |
| | | | | | | | | 25 | | | |
| | | | | | | | | 26 | | | |
| 76 | | 9.8 | M0 | | <u>Weak</u> | | | 27 | Vys Std | In-to some pretty thick clouds now | |
| | | | | | | | | 28 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 29 | | | |
| 670 | | 2.72 | K3 II | | | | | 30 | Std. Vel. | Through thick clouds | |
| | | | | | | | | 5 | | | |
| | | | | | | | | 13 | | | |

CCD
Spectr. Temp. ... -100°C
Focus ... 6.82
Spectr. Temp. ... 90.5 GAIN

Dome Temp./Hum. +11.9°C / 78.3%
Dome Temp./Hum. +11.8°C ... 80% RH

Transparency Conditions ... Partially Cloudy
2 LARGE SAT TOURS
Looked at Jupiter's m3
- incr clouds & Rain

(334)

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | #F | Program | Remarks | Quality |
|-------------------------|--------|------|---------|----------|----------------------|-----------------|----------|-----|--|-------------------|---------|
| +12°C | set | 6.82 | | Cass CCD | 1800λ/mm (g=5910) | 300μ | 6400A | 3/4 | Focus Test | | good |
| | | | | | | | | 1 | | | |
| | | | | | | | | 5 | | | |
| 1500 | 4" | 6.49 | F6I-IIb | | | | | 6c. | Rm pgn | | |
| | | | | | | | | 7 | j Note 2 Large TOURS EARLIER | | |
| | | 6.66 | G8V | | | ABOVE 300μ slit | | | Seeing Test | Dome West no wind | |
| | | 6.66 | G8V | | | | | | Seeing Test | some clouds. | |
| | | | | | | | | 8 | | | |
| 1200 | 2.3" | 6.66 | G8V | | | | | 9 | Std vel | some cloud | |
| | | | | | | | | 10 | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 13c | | | |
| | | | | | | | | 1c | | | |
| | | | | | | | | | *Note CCD Temp was TURNED DOWN Before These FLATS. But CCD Temp Returned to -100 in ORDER TO DO same FLATS. | | |
| all to Worm and Perseus | | | | | | | | | | | |

py #1 Sun mon (335) CSS 13^s ahead of WWV time.

Date 1994 May 29/30 Observers Tn/Wde, [BLN]

Emulsion Batches:

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|--------------|----------------------------|--------------|---------------------|-------------------------|-----------------------|--------------------------------|-------------|---------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| CC22640 | BIAS x4 | | | | | | | | |
| CC22641/42 | comp 15 stellar Hartman | | | | | 0 ^h 24 ^m | 40°51' | FeAr clear | 40/70 |
| 643 | comp | | | | | | | FeAr clear | 60 |
| 644 | HD 118232 | 13 30 22 | 49 32 38 | 23 52 44 | | | | | 300 |
| 645 | " | | | 23 57 00 | | | | | 646 |
| 646 | comp | | | | | | | FeAr clear | 60 |
| 647 | comp | | | | | | | FeAr clear | 60 |
| 648 | HD 138629 | 15 28 12 | 41 14 19 | 00 17 07 | 01 | 01 19 W | | | 1283 |
| 649 | " | " | " | 00 38 42 | | 01 30 W | | | 647 |
| 650 | comp | | | | | | | FeAr clear | 60s |
| → 651 655 | FLATS x5 | | | | | 01 38 W | +41° | Fe | 15s |
| 656 | BIAS x4 | | | | | | | | |
| 657 | comp | | | | | | | FeAr clear | 60 |
| 658 | HD 148287 | 16 21 50 | 37 37 18 | 01 03 14 | | 01 22 W | | | 1880 |
| 659 | comp | | | | | | | FeAr clear | 60 |

Spectr. Temp. -100°C Dome Temp./Hum. 16.6°C 59.98H Transparency Conditions part cloudy Focus 6.85 Spectr. Temp. 90.5gain Dome Temp./Hum. 59.9 15.3°C 62.06H \rightarrow increasing cloud. (336)

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-------------------------|-----|-------------|---------------------|-------------|-------------|------|------------------|----------------------------|--------------|
| | | | | CASS CCD | 18002/mon G=4565 | 300 Full | 67 4490A | 1 | | BSUM4.BAT | |
| | | | | | | | | 3/4 | FOCUS TEST | | |
| | | | | | | | | 5 | | | |
| 2700 | | 4.82 | ASV | | | | | 6 | BLN A-shell * | S/N = 190 : 1 | |
| 2600 | 23" | | | | | | | 7 | | | |
| | | | | | | | | 8 | | | |
| | | | | | | | | 9 | | | |
| 2600 | 3" | 5.09 4.95 | ASV | | | | | 10 | BLN A-shell * | | S/N 165/1 |
| 2600 | | | | | | | | 11 | | | |
| | | | | | | | | 13 | | MAX 12.9 KADY BSUM4.BAT | |
| | | | | | | | | 14 | | | |
| 840 | 3.4" | 5.6 | ASV | | | | | 15 | BLN A-shell * | cloud again | S/N 110/1 |
| | | | | | | | | 16 | | | |

P4#2 (337)

Emulsion Batches:

Date 1994 MAY 29/30 Observers [Bl.] Wdo/Tn.....

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------------------|-----------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| CC22660 | H0148 283 | 16 2150 | +37 3718 | 01 3714 <i>el: +</i> | | 01 45W | | | 1013 |
| 61 | Comp | | | | | | | FeAr Clear | 60s |
| → 62 | | | | | | | | TUVG Clear | 15s |
| → 66 | FL4TS x 5 | | | | | 01 45W | +38° | | |
| → 68 69 | Comp/stellar Hartmann | | | | | 0 0 | +29 | FeAr Clear | 40/65 |
| 67 | BIAS x 4 | | | | | | | | |

Spectr.
 Focus.
 Spectr.
 Exp. Mtr.

300

Spectr. Temp. Dome Temp./Hum. Transparency Conditions *cloudy*Focus *6.85*Spectr. Temp. Dome Temp./Hum. *+15.2° 81% H*338

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------|--------|-------------|------------|---------------------|----------------------------|------------|--------------|------------|-------------------|-------------------------------|---------|
| <i>300</i> | | <i>5.66</i> | <i>A5V</i> | <i>CASS CCD</i> | <i>1800 l/m G-4565</i> | <i>300</i> | <i>44908</i> | <i>17c</i> | | <i>VERY poor (Too cloudy)</i> | |
| | | | | | | | | <i>18c</i> | | | |
| | | | | | | | | <i>19c</i> | | <i>MAX = 12.6 KADP</i> | |
| | | | | | | | | <i>3/4</i> | <i>Focus Test</i> | | |
| | | | | | | | | | | <i>Bsum 4. BAT</i> | |

pg #1 (339) Mon/Tues

~~ESS 13s AHEAD OF WWV TIME~~
 CSS RESET TO WITHIN 1s OF WWV BEFORE
 Observers S.G.S. J.T.H. OBSERVING

Date 1994 MAY 30/31..

Emulsion Batches:

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | | |
|--------------|--------------|---|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|---------------|-----|
| | | | | | | | | Type/Filter | Exp. | |
| cc 22670 | Comp/stellar | HARTMIGER | | | | 00 01 E | +41 23 | Fetr Clear | 60/65 | |
| 71 | BIAS(A) | | | | | | | | | |
| 72 | BIAS(A) | | | | | | | | | |
| 73 } 74 } | COMP | cc 22673 is slightly earlier comp, at same position as star. use cc 22674 for 1st comparison | | | | | | 2x | Fetr Clear | 60s |
| 75 | HD 145001 | 16 03 ³⁶ | 17 19 00 | 21 01 07 | | 02:48E | | | 163s | |
| 76 | COMP | | | | | | | Fetr Clear | 60s | |
| 77 | COMP | | | | | | | Fetr Clear | 60s | |
| 78 | HD 180583 | 19 12 00 | 27 45 00 | 21 12 42 | | 05:29E | | | 1045s | |
| 79 | COMP | | | | | | | Fetr Clear | 60s | |
| 80 | BIAS(A) | | | | | | | | | |
| 81 | Comp | | | | | | | Fetr Clear | 60s | |
| 82 | HD 198726 | 20 47 13 | +27 52 30 | 21 42 24 | | 06 26 E | | | 1616 | |
| 83 | Comp | | | | | | | Fetr Clear | 60s | |
| 84 | COMP | | | | | | | Fetr Clear | 60s | |
| 85 | HD 177724 | 19 00 49 | +13 42 53 | 22 20 44 | | 04 24 E | | | 92s | |
| 86 | COMP | | | | | | | Fetr Clear | 60s | |

Spectr. Temp. Dome Temp./Hum. 22.0°C 54.8°C Transparency Conditions .. Sl. hazy... some cloud

Focus .. 6.72

Spectr. Temp. Dome Temp./Hum.

C LAMBDA

(340)

| Exp. Mtr. | Seeing | V. Mag. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|----------|--------------|------|-------------|----------------------|-------------|----------|-------|------------|---|---------|
| | Set 6.72 | | | CASS CCD | 1800/1/min G-5410 | 3mm Fall | 6400R | 3/4c. | focus test | | |
| | | | | | | | | 1c. | | | |
| | | | | | | | | 5c. | | | |
| | 1850 | 1.2' | 5.00 | G5II | | | | 6c. | Std. Vol. | BRIGHTEST OF DOUBLE STAR. SNR ~ 300 | |
| | | | | | | | | 7c. | | | |
| | | | | | | | | 8c. | | | |
| | 1352 | 2" | 6.19 | F6I-IIb | | | | 9c. | Sgs pgm | V473 Lyr | |
| | | | | | | | | 10c. | | | |
| | | | | | | | | 11c. | | | |
| | | | | | | | | 12c. | Sgs pgm | T Vol AIR MASS 5.67 CAMS BINNED towards end of exposure. (Too hazy here) signal stronger during last part of exposure. | |
| | 1050 | 4" | 5.75 | G0Ib | | | | 13c. | Sys pgm | | |
| | | | | | | | | 14c. | | | |
| | | | | | | | | 15c. | | | |
| | 2400 | | 2.99 | A0II | | | | 14c. | TELLURIC | AIR MASS 2.24 | |
| | | | | | | | | 15c. | | | |

pg #2 (341) Mon/Tue

Emulsion Batches:

Date 1994 MAY 30/31 Observers Sgs./Tn.....

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | | Exp. Mtr. |
|-----------------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|---------|-----------|
| | | | | | | | | Type/Filter | Exp. | |
| CG 2687-89 | FLATS X3 | | | | | 04:15 E | +13° | Tung 1/4 | 8s | |
| 90 | Comp | | | | | | | FeAr Clear | 60s | |
| 91 | HD 162714 | 17 4717 | -060712 | 22 4339 | | 02:39 E | | | 816s | 1500 |
| 92 | Comp | | | | | | | FeAr Clear | 60s | |
| 93 | COMP | | | | | | | FeAr Clear | 60s | |
| 94 | HD 144579 | 16 0130 | +39 24 00 | 23 08 19 | | | | | 619 | 1430 |
| 95 | Comp | | | | | | | FeAr Clear | 60s | |
| 96 | BIAS(4) | | | | | | | | | |
| CG 40209 -12 | HD 144579 | 16 0130 | +39 2400 | | | | | 4x | 0.067ms | |
| CG 40213,14 | " " | " | " | | | 00 25 E | | 2x | 1.133ms | |
| CG 2697 | Comp | | | | | | | FeAr Clear | 60s | |
| 98 | HD 214975 | 22 3655 | +56 1824 | 23 4409 | | 05 55 E | | | 2700s | 800 |
| 99 | Comp | | | | | | | FeAr Clear | 60s | |
| 700 | Comp | | | | | | | FeAr Clear | 60s | |
| 701 | HD 215159 | 22 38 15 | +53 23 00 | 00 36 15 | | 05 42 E | | | 448s | 1500 |

Spectr. Temp. Dome Temp./Hum. ... 20.3°C / 57.6% Transparency Conditions ... Hazy, Pt.: Cloudy

Focus 6.72

342

Spectr. Temp. Dome Temp./Hum. ONLY NEFAH on now

| Exp. Mtr. | Seeing | V.Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-------------|------|-------------|-------------------------|---------------|----------|------|-------------|----------------------------------|---------|
| | | | | CASS CCD | 1800 lines/mm G=5110 | 300µm FULL | 6400A | 16c: | | TAKEN AT POSITION OF HD127284 | |
| | | | | | | | | 17 | | | |
| 1500 | 3.5" | 6.15 | G0Ib | | | | | 18 | Sgs pgm | Y oph Hazy | |
| | | | | | | | | 19 | | | |
| | | | | | | | | 20 | | | |
| 1430 | 3" | 6.66 | G8 | | | | | 21 | RV SET | | |
| | | | | | | | | 22 | | | |
| | | | | | | | | 1c: | | | |
| | | 6.66 | G8 | | (ABOVE 300µm SLIT) | | | | Seeing Test | Dome S.W., no wind. | |
| | | " | " | | | | | | " " | | |
| | | | | | | | | 23c: | | | |
| 800 | 4" | 8.40 | G0Ib | | | | | 24c | Sgs pgm | Z. Lac in & out of cloud | |
| | | | | | | | | 25c: | | | |
| | | | | | | | | 25c: | | | |
| 1500 | 4" | 6.19 | K2 | | | | | 26c: | Sgs pgm | (FOR velocity check) | |

Pg#3 (343) MON/TUE

Date 1994 MAY 30/31 Observers Sgs/Tn

Emulsion Batches:

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

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|------------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|-------|
| | | | | | | | | Type/Filter | Exp. |
| CC22702 | COMP | | | | | | | FeAr Clear | 60s |
| 03 | BIAS(4) | | | | | | | | |
| 04 | Comp | | | | | | | FeAr Clear | 60s |
| 05 | HD203156 | 21 1523 | +37 49 | 00 50 59 | | 04 00 E | | | 60s |
| 06 | Comp | | | | | | | FeAr Clear | 60s |
| 07 | COMP | | | | | | | FeAr Clear | 60s |
| 08 | HD 173297 | 18 39 20 | -20 45 | 01 09 48 | | 00 32 E | | | 270s |
| 09 | Comp | | | | | | | FeAr Clear | 60s |
| 10-12 | FLATS X3 | | | | | | | Tung 1/4 | 8 sec |
| 13 | Comp | | | | | | | FeAr Clear | 60s |
| 14 | HD 180583 | 19 12 00 | +27 45 | 02 07 12 | | | | * | 428 |
| 15 | BIAS(4) | | | | | | | | |
| 16 | COMP | | | | | | | FeAr Clear | 60s |
| 17 → 19 | FLATS X3 | | | | | | | TUNG AP 1/4 | 7 sec |

Spectr. 1

Focus . . .

Spectr. 1

Exp. Mir.

1440

832

?

Spectr. Temp. Dome Temp./Hum. ... $+19.4^{\circ}\text{C}/59.4\%$ Transparency Conditions ... Partly cloudy, ... Hazy

Focus 6.72

Spectr. Temp. Dome Temp./Hum. λ LAMBDA ONLY NE FAN ON 344

| Exp. Mtr. | Seeing | V ⁴ Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|---------------------|--------|-------------|------------------------------|---------------------|----------|------|---------------------------|--|---------|
| | | | | CASS CCD | 1800 λ /mm G=59.0 | 300 μ m FULL | 6400A | 27ci | | | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 28ci | | | |
| 1440 | 3-4" | 5.8- 5.9 | F2 | | | | | 29ci | Sgs pgm | V1334 Cyg Through clouds | |
| | | | | | | | | 30ci | | | |
| | | | | | | | | 5ci | | | |
| 832 | 4" | 7.48 | G0Ib | | | | | 6ci | Sgs pgm | BOTH FANS NOW OFF V350 Sgr 2.5A AIRMASS BRIGHT SKY LINE @ PX 50° | |
| | | | | | | | | 7ci | | | |
| | | | | | | | | 8ci | | TAKEN AT V350 Sgr POSITION MAX 12.1 K ADU | |
| | | | | | | | | 10ci | | | |
| ? * | 4" | 6.19 | F6I-1b | | | | | 11ci | Sgs pgm | * POWER FAILURE DURING EXPOSURE LAST TWO MINUTES OF EXPOSURE WITH NO POWER SPECTROGRAPH CONTROLLER FAILED BECAUSE OF POWER FAILURE POWER FAILURE | |
| | | | | | | | | 5ci | THIS COMP FOR K0180583 | | |
| | | | | | | | | 13ci | | MAX 12.1 K ADU TAKEN AT V453 Cyg POSITION | |

Pg# 1 (345) TUE/WED

Emulsion Batches:

Date 1994... MAY 31 / JUN 1 Observers ... Sgs./..Tn.....

.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|----------------|----------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| CC 22720 21 | Comp / Stellar | HARTMANN | | | | 00 14W | 390 | FeAr Clear | 60/65 |
| 22 | BIAS(4) | | | | | | | | |
| 23 | Comp | | | | | | | FeAr Clear | 60s |
| 24 | HO 145001 | 16 03 36 | 17 19 00 | 20 39 25 | | 03 03E | | | 263s |
| 25 | Comp | | | | | | | FeAr Clear | 60s |
| 26-28 | FLATS X3 | | | | | 03 00E | | Tung YA | 8s |
| 29 | Comp | | | | | | | FeAr Clear | 60s |
| 30 | HD 180583 | 19 12 00 | +27 45 00 | 21 02 39 | | 05 32 E | | | 1013s |
| 31 | Comp | | | | | | | FeAr Clear | 60s |
| 32 | BIAS(4) | | | | | | | | |
| 33 | Comp | | | | | | | FeAr Clear | 60s |
| 34 | HD 182572 | 19 20 12 | +11 44 00 | 21 38 48 | | 05 16 E | | | 610s |
| 35 | Comp | | | | | | | FeAr Clear | 60s |
| 36 | Comp | | | | | | | FeAr Clear | 60s |
| 37 | HD 215159 | 22 38 15 | 53 03 00 | 21 56 10 | | 08 13 E | | | 729s |
| 38 | | | | | | | | | |

CCD
Spectr.
Focus.
Spectr.
Exp. Mtr

1850

1383

1509

860

CCD
 Spectr. Temp. -100°C Dome Temp./Hum. 13.7/48.1.27 Transparency Conditions S1 Hazy
 Focus 6.75
 Spectr. Temp. 70.5 g.s.m Dome Temp./Hum.
 C LAMPDA

346

| Exp. Mtr. | Seeing | V ₄₇₅ Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|----------|-----------------------|--------|-------------|----------------------|---------------|----------|-------|---------|--|---------|
| Set 6.75 | T=17.7°C | | | CASS CCD | 1800 ln/mm G=5A10 | 300μm FULL | 6400A | 3/4ci | | | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 5ci | | | |
| 1850 | 3"-5" | 5.00 | G5 III | | | | | 6ci | RV Std | STILL DUSK | |
| | | | | | | | | 7ci | | | |
| | | | | | | | | 8ci | | SAME POSITION AS HOMSD01 | |
| | | | | | | | | 9ci | | 13.2K MAX ADU | |
| 1383 | 5" | 6.19 | F62-76 | | | | | 10ci | Sgs pgm | V473 Lyr BAD COSMIC RAY @ COLUMN 26 ROW 4240 | |
| | | | | | | | | 11ci | | | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 12ci | | | |
| 1509 | 5" | 5.16 | G7 IV | | | | | 13ci | RV Std | | |
| | | | | | | | | 14ci | | | |
| | | | | | | | | 14ci | | | |
| 860 | 6" | 6.19 | K2 | | | | | 15ci | Sgs pgm | 3.1AIR MASS SNR > 200 EXPOSURE TRUNCATED DUE TO CLOUDS FOR RV COMPARISON PURPOSES IN AND OUT OF CLOUD SEEING TRULY ANWFUL! | |

CCD
Spectr. Temp. -100°C

Dome Temp./Hum. ... 16.5°C / 85.5%

Transparency Conditions PARTLY CLOUDY NORTH

Focus 6.75

SLIGHTLY HAZY

348

Spectr. Temp.

Dome Temp./Hum. ... 16.5°C 86.5%
C LAMBDA

| Exp. Mtr. | Seeing | V475 Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------|--------|-----------|------|-------------|---------------------|-------------|----------|------|---------|--|---------|
| | | | | CASS CCD | 1800 h/μm G=5910 | 30μ FULL | 6900R | 16ci | | COMPARISON FOR HD15159 | |
| 500 | 5" | 6.15 | G0Ib | | | | | 17ci | | Sgs pgm { Y OPH SNR ~ 150 BECOMING MAINLY CLOUDY ABORTED DUE TO CLOUDS TAKEN AT Y OPH POSITION 11.2K MAX ADU. | |
| | | | | | | | | 18ci | | | |
| | | | | | | | | 19ci | | | |
| | | | | | | | | 20ci | | | |
| | | | | | | | | 1ci | | | |
| HII to WORM & PERSEUS | | | | | | | | | | | |

page #1 (349) Wed/Thur

Emulsion Batches:

Date ... 1994 ... JUNE 11/2 Observers ... [Ebin] III / Tn

CSS 386 Time 3 secs ahead of W.W.V. Time

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison Type/Filter | Exp. |
|---------------------|------------------------------|---------------------|----------------------|---------------------------|-----------------------|-------------------|-------------|---------------------------|-----------|
| CC 22747 | HARTMAN Focus TEST | | | 20:26 20:44 | | 0:17:48W | 39°3'6"N | Fe Ar clear | 60/60 |
| 48 | Bias x4 | BSUM4.BAT | | 20:52 | | | | Fe Ar clear | 60 |
| 49 | Comp | | | | | | | | |
| 50 | HD 93521 | 1042 42 | +38° 6' | 21:04:30 | | 2:53W | | | 767 |
| 51 | HD 93521 $\frac{1}{2}$ | 1042 42 | +38° 6' | 21:17:41 | | 3:8 W | | | 872 |
| 52 | Comp | | | 21:32 | | | | Fe Ar clear | 60 |
| 53 | Bias x4 | BSUM4.BAT | | 21:35 | | | | | |
| 54 | HD 93521 | 10 42 42 | +38 06 | 21:36 | | 3:26W | | | 861 |
| 55 | HD 93521 | " | " | 21:51:55 | | 3 42 W | | | 853 |
| 56 | Comp | | | | | | | Fe Ar CLEAR | 60s |
| 57 | Comp | | | | | | | " | " |
| 58 | HD 87901 | 10 03 03 | +12 27 22 | 22:11 50 | | | | | 47s |
| 59 | HD 87901 | | | 22:13 34 | | | | | 51s |
| 60 | Comp HD 136849 | 15 17 43 | +33 17 30 | | | | | Fe Ar clear | 60 |
| CC 22762 | Comp HD 136849 | 15 17 43 | +33 17 30 | 22:23 | | 0:25 | | Fe Ar | 60 534 |

CCD
Spectr. Temp. -100.0°
Focus 6.80
Spectr. Temp. c gain 9.9
Spectr. Temp. c gain 9.9

Dome Temp./Hum. 11.8°C / 49.9%
Dome Temp./Hum.

Transparency Conditions Fine
Dome fans off
420 0 50 102 + 4 1 CCD fnt

(350)

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|----------------------|--------|-----------|-------|-------------|--------------|-----------|----------|------|--------------|--|---------|
| 11.0° for focus test | | | | Cass CCD | 13002 / m | 300 um | 6604 Å | 3/4 | FOCUS TEST | | |
| | | | | | G=6065 | um | | 1ci | | | 11.0° |
| | | | | | | | | 5ci | | TELESCOPE REVERSED 1ci Telescope East side of Piers for this star | |
| 1400 | 4" | 7.04 | 09.5V | | 150:1 | S/W | | 6ci | Bin 0* pgm | | 10.7 |
| 1546 | | | | | | | | 7ci | | | 10.4 |
| | | | | | | | | 8ci | | | 10.2 |
| | | | | | | | | 1ci | | | 10.0 |
| 1520 | 4" | | | | | | | 9ci | | 64% humidity on catwalk | |
| 1450 | 3-4" | | | | | | | 10ci | | | |
| | | | | | | | | 11ci | | | |
| | | | | | | | | 12ci | | | |
| 7700 | | 6.35 | B7V | | | | | 13 | telluric std | | |
| 3741 | | | | | | | | 13ci | | | 8.9 |
| | | | | | | | | 14ci | | | |
| | | | | | | | | 15ci | | | |
| 3640 | | 5.37 | B9V | | | | | 16ci | telluric std | | |

Date ... 1994 ... JUN 1 / 2 Observers [B.L.W.] [H.L.T.]

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|------|
| | | | | | | | | Type/Filter | Exp. |
| cc 22763 | COMP | | | 22:33:50 | | | | Fe Ar clear | 60 |
| 64 | Bias x 4 | Bsum 4. BAT | | 22:35:34 | | | | | |
| 65 | COMP | | | 22:42:22 | | | | Fe Ar clear | 60 |
| 66 | HD 93521 | 10 42 42 | +38° 6' | 22:44:40 | | 4:35 W | | | 900 |
| 67 | HD 93521 | | | 23:00:04 | | 4:51 W | | | 900 |
| 68 | COMP | | | 23:16:03 | | | | Fe Ar clear | 60 |
| 69 | HD 93521 | | | 23:19:36 | | 5:10 W | | | 900 |
| 70 | HD 93521 | | | 23:35:32 | | 5:26 | | | 900 |
| 71 | COMP | | | 23:52:02 | | | | Fe Ar clear | 60 |
| 72 | Bias x 4 | Bsum 4. BAT | | 23:53:30 | | | | | |
| 73 | HD 93521 | | | 23:56:13 | | 5:47 W | | | 900 |
| 74 | HD 93521 | | | 0:12:34 | | 6:03 W | | | 900 |
| 75 | COMP | | | 0:28:30 | | | | Fe Ar clear | 60 |
| 76 | HD 93521 | | | 0:31:14 | | 6:22 W | | | 900 |
| 77 | HD 93521 | | | 0:47:03 | | 6:38 W | | | 900 |

CCD Spectr. Temp. -1.00°C Dome Temp./Hum. .. 8:8°C/58.3% Transparency Conditions ... Mostly clear:

Focus 6.8D.

Dome fine o/p

Spectr. Temp. ... 2.9 gain = 9.2

Dome Temp./Hum.

C 2117844

352

| Exp. Mtr. | Seeing | Pig. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulston | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------|-------------|--------------------|------------|----------|------|------------|----------------------------------|---------|
| | | | | C455 CCD | 1800#/mm G-6065 | 300 F44 | 6604A | 17c | | | |
| | | | | | | | | 1 | | | |
| | | | | | | | | 13c | | | |
| 1381 | | 7.0+ | 09.5I | | 160:1 | SIN | | 19c | 3In O* pgm | | 8.8° |
| 1286 | | | | | | | | 20c | | | 8.1° |
| 3 | | | | | | | | 8c | | | |
| 1119 | | | | | | | | 21c | 3In O* pgm | | |
| 1159 | 6" | | | | 145:1 | SIN | | 22c | | | 7.9° |
| 3 | | | | | | | | 8c | | | |
| | | | | | | | | 1c | | | |
| 1064 | | | | | | | | 23c | | | 7.2° |
| 951 | | | | | | | | 24c | | | |
| - | | | | | 135:1 | SIN | | 8c | | | 7.0° |
| 792 | 7" | | | | | | | 25c | | 2.744 air mass at end | 6.8 |
| 648 | | | | | | | | 26c | | 84% hum. d. by on the catwalk | |

Pg 3

Wed / Thurs

353

Emulsion Batches:

Date 1954 June 1/2..... Observers [Blm] III / Ta.....

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-----------|-----------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------|------|
| | | | | | | | | Type/Filter | Exp. |
| CL 2777B | Comp | | | 1:02:51 | | | | FeAr Clear | 60 |
| 79 | Bias x 4 | Bsum 4. | BAT | 1:04:30 | | | | | |
| 80 | Comp | | | | | | | FeAr Clear | 60s |
| 81 | HD 124224 | 14 07 12 | +02 53 00 | 01:44:03 | | 03 37W | | | 600s |
| 82 | HD 124224 | | | 01 24 52 | | | | | 600s |
| 83 | HD 124224 | | | 01 35 14 | | 3:57W | | | 600 |
| 84 | Comp | | | 01:46:15 | | | | FeAr clear | 60 |
| 85 | Bias (4) | Bias 4. | BAT | 01:47 | | | | | |
| 86 | HD 124224 | | | 01:50:06 | | 4:12W | | | 600 |
| 87 | HD 124224 | | | 02:01:03 | | 4:23W | | | 600 |
| 88 | HD 124224 | | | 02:11:48 | | 4:34W | | | 600 |
| 89 | Comp | | | 02:22:38 | | | | FeAr clear | |
| 90 | Bias x 4 | Bsum 4. | BAT | 02:24:17 | | | | | |
| 91 | HD 124224 | | | 02:27:13 | | 4:49W | | | 500 |
| 92 | HD 124224 | | | 02:38:11 | | 5:00W | | | 60 |

CCD
 Spectr. Temp. ... -100 °d Dome Temp./Hum. .. 6.0°C / 70.9% Transparency Conditions ... *Fine* (354)
 Focus ... 6:80
 Spectr. Temp: .. *gain = 9.0* Dome Temp./Hum.
c / AMBDA

Gusty NNW wind starting up.

| Exp. Mtr. | Seeing | Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|----------------------|------|------------------|-------------|------------------|-------------|----------|------|---------------------|---------------------------------------|---------|
| | | | | CASS ccd | 1800/1/2mm | 300 FULL | 6604Å | 8ci | | | |
| | | | | | | | | 1ci | | | |
| | | | | | | | | 8ci | | | |
| 2950 | 5.8" 5.00 | | ApS _i | (Cuv.r.) | 265 | SIN | | 9 | Bl _n He* | 2.116 AIR MASS S/N <u>265/1</u> | 6.6° |
| 2700 | | | | | | | | 10 | | humidity on the catwalk | |
| 2695 | | | | | | | | 11 | | | |
| | | | | | | | | 8ci | | | |
| | | | | | | | | 1ci | | | 6.5° |
| 2720 | | | | | | | | 12ci | | | |
| 2899 | | | | | | | | 13ci | | | 7.3° |
| 2870 | | | | | | | | 14ci | | | 7.5° |
| | | | | | | | | 8ci | | | 7.6° |
| | | | | | | | | 1ci | | 80% humidity on the catwalk | |
| 2450 | 6" | | | | | | | 15ci | | | |
| 2070 | | | | | | | | 16ci | | | |

page 44

Wed / Thu

355

Emulsion Batches:

Date ... 1994 June 1/2. Observers ... F. B. J. III ... L. T. O. ...

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | |
|-------------|------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|----------------|--------|
| | | | | | | | | Type/Filter | Exp. |
| cc27793 | HD 124224 | | | 2:48:59 | | 5:11 W | | | 600 |
| 94 | Comp | | | 3:00:20 | | | | Fe Ar clear | 60s |
| 95 | Bias (4) | | Bias 4. BAT | 3:01:55 | | | | | |
| 96 | HD 124224 | | | 3:03:31 | | 5:31 W | | | 920 |
| 97 | Comp | | | 3:20:32 | | | | | |
| CG 40215-18 | HD 187120 | | 19 43 12 + 45 29 00 | | | | | 4 x | e.067 |
| 19,20 | HD 187120 | | | | | | | 2 x | e.133s |
| cc27798 | FLAT x1 | | +45°43' | | | 2:30 W | | Tunn 1/4 | 6s |
| 799,800 | FLAT x2 | | | | | | | | |
| 801-810 | FLAT x10 | | | 3:47:13 | | | | | |
| 811-812 | Comp / STELLAR FOCUS TEST | | | | | 0:0 E + 39° 20' | | Fe Ar clear | 60 |
| 813 | Bias x4 | | Bias 4. BAT | 4:15:07 | | | | | |

CCD Spectr. Temp. -100.0°C. Dome Temp./Hum. 7.6°/70.8% Transparency Conditions Five

Focus 6.8.0

Spectr. Temp. ... again = 9.0

Dome Temp./Hum. 7.1°C ... 75%RH

Dome fans off

356

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------|---------|-----------|-----|----------|--------------|--------|----------|-----------------|---------|---------------------------|---------|
| 1690 | 235 S/N | | | Cass CCD | 1800nm | 300 um | 6604A | 17ci | | 82% humidity in catwalk | 7.40 |
| | | | | | | | | 3ci | | | 7.30 |
| | | | | | | | | 1ci | | | |
| 1695 | | | | | | | | 18ci | | 7.69 air mass (?) | 7.20 |
| | | | | | | | | 8ci | | | |
| | | | | | | | | 19ci | | SEEING TEST | |
| | | | | | | | | 8ci | | Dome East, gusty NNW wind | 7.30 |
| | | | | | | | | 10ci | | | |
| | | | | | | | | 8ci | | | |
| | | | | | | | | 8ci | | | |
| | | | | | | | | 314 | | FOCUS TEST | 7.00 |
| | | | | | | | | 1ci | | | |
| All To worm & perseus | | | | | | | | | | | |

