



5

Sat-Sun

Date July 31 - Aug 1 Observers Crow-Ri

8⁶⁸

Emulsion Batches:

D.P.E. 20012-29072 23 178

| 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. |
|------------------|---------------------------------|-----------------------------------|---------------------|-------------------------|-----------------------|----------------------|-------------|---------------------------|-------|
| 46958F | FOCUS TEST | | | | | | | Fe/- | 16-5 |
| 46958 | HD 161096 | 17 38.5 | +04° 32' | 20:15 | 20:54 | 0h 29 ^m E | +09° 35' | Fe/- | 5-5-5 |
| 46959 | RAOL (HD 177946) | 19 ^h 01.5 ^m | +8° 05' | 21:02 | 01:04 | 2h 09 ^m W | +08° 13' | Fe/- | 5-5-5 |
| 46959T | SPOT CAL FOR PLATES 46958-46961 | | | | 15 MIN 150 LITS | 3900 | 4300 | 4810 | |
| 46960 | EP AQR (KZP 5468) | 21 ^h 41.4 ^m | -2° 40' | 1:48 | 3:46 | 2h 19 ^m W | -02° 17' | Fe/- | 5-5-5 |
| 46961 | O CET (HD 14386) | 2h 14.3 ^m | -3° 26' | 3:50 | 4:17 | 1h 40 ^m E | -03° 04' | Fe/- | 5-5-5 |
| 46961F | FOCUS TEST | | | | | | | Fe/- | 15-5 |

Spectr. Temp.

Focus...

Spectr. Temp.

Exp. Mtr.

S

8/90 3

400/400

400/250

200/200

223178

Spectr. Temp. 74°F.....

Dome Temp./Hum. 70°F 88%

Transparency Conditions Hazy..... 6

Focus 506.....

Spectr. Temp.

Dome Temp./Hum. 59°F 105%

| Comparison Filter | Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------------|-------|-----------|--------|-----------|--------------|-------|--------------|---------|---------------------|------|------------|---|--------------------|
| | 14-5 | | | | | B.C. | 820/68 | 150/1.0 | I ₁₀₀ -E | A | | | good |
| | 5-5-5 | 80/90 | 3"-4" | 3.9 | K2 III | B.C. | 830/68 | 150/1.5 | I ₁₀₀ -E | B | STO. VEL. | EXP=39 ^m 13 DOHFW & PAGES | red end fuzzy |
| | 5-5-5 | 400/400 | " | 8.2 | M50 -M78c | B.C. | " | 150/3 | T ₁₀₀ -E | A | CW-MIRAS | EXP=242 ^m lost in dev. tank | black discarded |
| | 5-5-5 | 400/250 | 3" | 8.0 | M7 III | " | " | " | " | B | M STANDARD | EXP=118 ^m Focus=507 T=68°F | weak |
| | 5-5-5 | 200/200 | " | 5.8 | M50 -M7c | " | " | " | " | A | CW-MIRAS | Focus=507 T=66°F T=66°F F 507 | |
| | 15-4 | | | | | " | " | 150/1.0 | " | B | | EXP=27 ^m | |
| comparisons all strong | | | | | | | | | | | | | |

Spectr. Temp. 75°F

Dome Temp./Hum. 70°F 87%

Transparency Conditions Hazy w/ thick
cirrus late, moderate strength
during most of the night

Focus 505

Spectr. Temp.

Dome Temp./Hum. 64°F 100%

| Comparison Filter | Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------|-------|-----------|--------|-----------|------------------|-------|--------------|------|----------|------|----------|-------------------------------------|--------------|
| | 10-10 | | | | | B.C. | 830/1.68 | B.S. | IIW-E* | A | | | very sl. red |
| | 4-4 | 40/40 | 3 | 3.9 | 10III | B.C. | 830/1.680 | B.S. | IIW-E* | B | STD VEL | | sl str |
| | 3-3-3 | 200/180 | 3-4 | 5.2 | 8BTV | B.C. | 830/1.680 | B.S. | IIW-E* | A | STD VEL | | sl str |
| | 3-3-3 | 400/500 | 3 | 7.3 | 80I _p | B.C. | 830/1.680 | B.S. | IIW-E | B | Bl - He* | T=73°F F=506 | sl str. |
| | 3-3-3 | 400/258 | 3 | 7.85 | Bl.5Ve | B.C. | 830/1.680 | B.S. | IIa-OE | A | Runaway* | SOME CIRRUS CLOUDS FOR ~1HR 70°F | fine |
| | 10-10 | | | | | B.C. | 830/1.68 | B.S. | IIa-OE | B | | T=68°F F=506 | very sl blue |

Spectr. Temp. ... 77°F Dome Temp./Hum. 70% 94% Transparency Conditions ... clouds about 10

Focus 503

Spectr. Temp. Dome Temp./Hum.

| Comparison Filter | Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------|-------|-----------|--------|-----------|-----------|-------|--------------|---------|----------|------|-----------|--------------------------------------|---------------|
| 26 | 10-20 | 40/120 | | 4.2 | K5H B? | B.C. | 1200/.200 | 150/1.3 | Ind-E | A | Asm Sp/KK | Forgot field lens in front of slit! | fine comp str |
| 26 | 10-15 | 400/266 | | 5.0 | B8V | " | " | " | " | B | " | Clouds NOM #3 END 4100 sl weak | fine comp str |
| 6 | 25-28 | | | | | BC | 1200/.200 | 150/1.0 | Ind | A | | T=79°F F=503 | blue |

Spectr. Temp. ... 75°F Dome Temp./Hum. ... 70°F ... 68% Transparency Conditions ... clouds on ad off

Focus ... 505

Spectr. Temp. ... 64° Dome Temp./Hum. ... 58°F ... 100%

| Comparison Filter | Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------|-------|-----------|--------|-----------|-------|-------|--------------|------|----------|------|---------------|---------------------------------|---------|
| - | 10-0 | | | | | BC | 830/.68 | BS | IIa0 | A | | | stred |
| - | 4-6 | 40/35 | | 3.9 | K2II | " | " | " | IIa0-E | B | Std. Velocity | BROKEN 2 PIECES | |
| 3-3-3 | | 40/219 | 3-4 | 8.16 | B0.5I | " | " | " | " | A | Runaway * | Cond 22:05 22:23 F=506 | |
| 2 | 310 | | | | | | | | IIa0-E | | | | |
| - | 3-3-3 | 40/259 | 3-4 | 7.93 | 05f | BC | 830/.68 | BS | IIa0-E | B | Runaway * | T=68° Cond last half hour F=507 | |
| - | 10-0 | | | | | " | " | " | IIa0 | A | | T=64° F 507 | good |

Spectr. Temp. ... 65°F ...

Dome Temp./Hum. 60°F ... 78%

Transparency Conditions ... good with decontamination 14

Focus ... 508

Spectr. Temp. ... 57°F ...

Dome Temp./Hum. ... 53°F ... 100%

RADIUM EXHAUST 40/16 60sec

| Comparison Filter | Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------|-------|-----------|--------|-----------|--------|-------|--------------|------|----------|------|---------------|------------------------------|---------|
| | 10-10 | | | | | B.C. | 830/1.68 | BS | IIaO | A | | T=65°F F=508 | |
| | 4-4 | 40/35 | 4 | 3.9 | K2 III | " | " | " | IIaO-E | B | Std. Velocity | | |
| | 3-3 | 400/200 | 4 | 7.27 | B5 II | " | " | " | " | A | Runaway* | | |
| | | | | | | | | | IIaO-E | | | | |
| | 3-3 | 100/300 | 3-4 | 7.83 | B0 III | B.C. | 830/1.68 | BS | IIaO-E | B | Runaway* | T=63° F=509 | |
| | 3-3 | 100/300 | 3 | 7.39 | B2 II | " | " | " | IIaO-E | A | Runaway* | T=60° ^{clear} F=510 | |
| | 3-3 | 200/175 | 3 | 6.94 | B2 IV | " | " | " | IIaO-E | B | Runaway* | T=58° ^{clear} F=510 | |
| | 10-10 | | | | | B.C. | 830/1.68 | B.S. | IIaO-E | A | | T=57 F=510 | |

Spectr. Temp. 65°F

Dome Temp./Hum: 62°F/70%

Transparency Conditions Fine. 1/1 0245

Focus 510

Spectr. Temp. 58°F

Dome Temp./Hum: 52°F/97%

Comparison Filter Exp.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|-------------------|-----------|------|-------|--------------|--------|----------|------|-----------|---------------|-----------------------|
| | | | | BC | 833/68 | B5 | IBOE | B | | 65°F | red |
| 4-4 | 4/35 | 2" | 3.9 | K2III | " | " | " | B | Std Vel | | exp fine comp. strong |
| 2-1 | 200/100 80/220 | 3" | ~7.0 | NGO | " | " | " | A | Ceph/Evan | | sl strong |
| | | | | | | | IBOE | | | | |
| | 80/81 | 2-3" | ~3.2 | EGOTT | BC | 830/68 | B5 | " | B | Ceph/Evan | 63°F |
| 2-3 | 80/80 | 2-3" | ~6.6 | F2 | " | " | IBOE | A | Ceph/Evan | cloud at end | good |
| 2-2 | 80/1.4 | 3" | ~7.0 | NGO | " | " | " | B | Ceph/Evan | 41°F cloud! | good |
| 3-3 | 80/68 | 3-4" | 6.2 | F2 | " | " | " | A | Ceph/Evan | cloud; P. 1/5 | fine |

Spectr. Temp. 69°F

Dome Temp./Hum. $65^{\circ}\text{F}/85\%$

Transparency Conditions *Fine when clear*..... 18

Focus 507

Spectr. Temp. 66°F

Dome Temp./Hum. $60^{\circ}\text{F}/91\%$

| Comparison Filter | Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------|------|-----------|--------|-----------------------|------|-------|--------------|------|------------------|------|-------------|---|-------------------|
| - | 3-3- | 80/90 | 2" | ^A =7.30 | 6274 | BC | 830/.68 | BS | IIaO-E IIaO-E | A | Plan-TEX | cloud at end | red/str Fine |
| - | 3-3- | 40/36 | 2, | ^B =6.17 | F2 | BC | 830/.68 | BS | IIaO-E | B | Ceph/Evanis | | red/str Fine |
| - | 4-4 | 40/40 | 2" | 4.1 | K3U | " | " / " | " | " | A | STDVEL | | Fine |
| - | 4-4 | | | | | " | " / " | " | IIaO | B | | T=66°F, F=507 Thick cloud obscuring fine stars | car w/str blue |

Spectr. Temp. ... 70°F

Dome Temp./Hum. 66°F / 88%

Transparency Conditions Hazy

20

Focus ... 508

Spectr. Temp. ... 66°

Dome Temp./Hum. 61° / 90%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|---------|-----------|--------------|-------|--------------|---------|----------|------|-------------------|-----------------------------|--------------------------|
| 40/140 | 1.2" | 4.2 | H3D4B | BC | 1200/4.2 | 150/1.3 | U40-E | A | Asm Sp / KIK | | |
| 40/179 | 2" | 3.8 | G8II? +F? | " | " | " | " | B | Asm Sp / KIK | | |
| 400/100 | 1"-2.1" | 8.1 | ? | " | 830/68 | " | " | A | " | Furter comp = upper | |
| | | | | | | | " | | | 4100 sl weak, use 15" | |
| 40/100 | 2" | 7.3 | A2 | BC | 830/68 | 150/1.3 | " | B | Asm Sp | Program = lower in position | |
| | | | | | | | " | | | | |
| 40/120 | 2.3" | 4.7 | G500 -AS | BC | 1200/1.2 | 150/1.3 | " | A | Asm Sp | | |
| 40/70 | | 2.8 | A5V | " | " | " | " | B | Asm Sp - Standard | 8 Cas | Comp strong sl strong |
| | | | | " | " | 150/1.0 | " | A | | F=508 66°F | vsl blue |

Date Sun. Mon. Aug. 15-16 Observers C.W. - T.

Emulsion Batches:

Duo-E. 20012... 15087

20175

| 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. | Exp. Mtr. |
|-----------|------------------------|------------------------------------|---------------------|-------------------------|-----------------------|----------------------------------|-------------|---------------------------|-------|-----------|
| 46991 | R AQL (HD 177940) | 19 ^h 01 ^m .5 | +8°05' | 20:16 | 22:47 | 1 ^h 02 ^m W | +8°11' | Fe/ND | 555 | 200/200 |
| 46992 | R AND (HD 1967) | 0 ^h 18 ^m .7 | +38°01' | 23:00 | 23:54 ^m | 3 ^h 10 ^m E | +38°27' | Fe/ND | 555 | 80/100 |
| 46992T | Spot cal. for 46991-96 | | 96 | 15m @ 15V | | D4 3900 | D3 4300 | | | |
| 46993 | EP AQR (KCP 5463) | 21 ^h 41 ^m .3 | -2°40' | 00:14 | 1:30 | 1 ^h 03 ^m W | -2°17' | Fe/ND | 555 | 80/105 |
| 46994 | R TRI (HD 16210) | 2 ^h 31 ^m .0 | +33°50' | 1:36 | 2:57 | 2 ^h 20 ^m E | +34°11' | Fe/ND | 555 | 80/98 |
| 46995 | 45 RZ ARI (HD 18191) | 2 ^h 50 ^m .2 | +17°56' | 3:04 | 4:00 | 1 ^h 35 ^m E | +18°14' | Fe/ND | 555 | 80/100 |
| 46996 | O CET (HD 14386) | 2 ^h 14 ^m .3 | -3°26' | 4:02 | 4:14 | 0 ^h 46 ^m E | -3°03' | Fe/ND | 555 | 40/40 |
| 46996F | Focus Test | | | | | | | Fe/- | 12-12 | |

Spectr. Temp.

Focus...

Spectr. Temp.

Exp. Mtr.

Spectr. Temp. ... 74°F ...

Dome Temp./Hum. ... 70°F/76%

Transparency Conditions ... PARTLY cloudy ... 22

Focus ... 507 ...

Spectr. Temp. ... 69°F ...

Dome Temp./Hum. ... 69°F/90%

| Comparison e/Filter Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------------|-----------|--------|--------------|--------------|-------|------------------|--------|----------|------|------------|---|-----------------|
| /ND 555 | 200/200 | <1" | 8.7 | M50 -M80 | BC | 830/.68 | 150/.3 | IIa-OE | A | Crow-MIRAS | EXP = 151 ^m spectacular seeing! | Em OK S/wk |
| /ND 555 | 80/100 | " | 7.4 | 566 (M72) | " | " | " | " | B | " | EXP = 54 ^m | Em good S/wk |
| /ND 555 | 80/105 | 1.3" | 7.7 | M7III | " | " | " | " | B | M STANDARD | EXP = 76 ^m | Fine |
| /ND 555 | 80/98 | " | 7.8 | M40 -M80 | " | " | " | " | A | Crow-MIRAS | somed'nal EXP = 79 ^m | Fine |
| /ND 555 | 80/100 | 2" | 7.4 | M6III | " | " | " | " | B | M STANDARD | EXP = 56 ^m | Fine |
| /ND 335 | 40/40 | 2" | 5.7 | M50-M72 | " | " | " | " | A | Crow-MIRAS | EXP = 12 ^m | Fine |
| 0/-15 | | | | | " | " | 150/10 | IIa-O | B | set 507 | 69°F | OK |

* Some fog at red end of plates

Spectr. Temp. 72°F

Dome Temp./Hum. 67°/78%

Transparency Conditions Fine

Focus 506

Spectr. Temp. 64°F

Dome Temp./Hum. 61°/90%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|---------|-------|--------------|------|----------|------|---------------|-----------------|--------------------|
| | | | | B.C. | 830/68 | BS | IIa0 | B | | | Cart s/Red |
| 40/36 | | 3.9 | K2 III | " | " | " | IIa0-E* | B | Std. Velocity | | Fe s/wk Fine |
| 400/400 | 3"-4" | 7.83 | B0 III | " | " | " | " * | A | Runaway* | | Fine |
| | | | | | | | " * | | | | |
| 200/112 | 2 1/4" | 7.53 | 0N9 I | B.C. | 830/68 | BS | IIa0-E | B | Runaway* | T=67°F F=508 | reinst. w/ Fine |
| | | | | | | | IIa0-E | | | | |
| 200/150 | 2" | 7.05 | B1 III | B.C. | 830/68 | BS | IIa0-E | A | Runaway* | T=65°F | * vs/wk * |
| 40/32 | 2" | 4.33 | 09.5 Ia | " | " | " | " | B | Runaway* | | Fine |
| 40/34 | 1-2 | 4.04 | 07 | " | " | " | " | A | Runaway* | | * Fine |
| | | | | | | | | | | ** Fe s/wk | |

27

Emulsion Batches:

Date Wed. Thurs., Aug 18-19/62 Observers Gis - Tim

8^m 68°

IIa.O.-E... 20012... 17082

| 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. |
| 47006 F | Focus test | | | | | | | Fe/- | 9-9 |
| 47006 | HD 161096 | 17 ^h 38.5 | +4° 37' | 19:44 | 19:48 | 0 ^h 24' E | +4° 34' | Fe/ND | 9-9 |
| 47007 | HD 172488 | 18 35.4 | -8 49 | 19:56 | 23:08 | 1 59 W | -8 44 | Fe/ND | 6-9-6 |
| 47007 T | Spot Calc for 47006 → 10 | | | | 15 min @ | 15V | ^{D4} 3900 ^{D3} 4300 ^{D2} 4200 | | |
| 47008 | HD 220057 | 23 ^h 15.7 | +60° 37' | 23:15 | 01:21 | 0 ^h 33" E | +61° 02' | Fe/ND | 5-6-4-6 |
| 47009 | HD 210839 | 22 08.1 | +58 55 | 01:25 | 01:35 | 0 55 W | +59 18 | Fe/ND | 8-8 |
| 47010 | HD 219188 | 23 08.9 | +4 27 | 01:39 | 02:38 | 0 56 W | +4 53 | Fe/ND | 8-8 |
| | | | | | | | | | |
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Spectr. Temp

Focus... 50

Spectr. Temp

Exp. Mtr.

S

46/32

46/256

150

32

23/12

Spectr. Temp. 71.5° Dome Temp./Hum. $69^{\circ}\text{F}/65\%$ Transparency Conditions ... *some cloud*Focus 507 Spectr. Temp. 69° Dome Temp./Hum. $64^{\circ}\text{F}/80\%$

| Compensation Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|----------------------------|-----------|--------|--------------|--------|-------|------------------|------|----------|------|---------------|------------------------|--------------------------------|
| | | | | | B.C. | 830/.68 | B.S. | IIoE | A | | | cast 3/red ok |
| 10/9-9 | 40/32 | 2" | 3.9 | K2II | " | " | " | " | A | Std. Velocity | | fine |
| 19/ | 400/256 | 2.5" | 8.16 | 80.5IV | v | " | v | " | B | Runaway * | some cloud | fine |
| DR 2/2 | | | | | | | | " | | | | |
| 11/4 | 40/150 | 1" | 6.94 | 32II | BC | 830/.68 | BS | " | A | Runaway * | cloud | vsl sm |
| 10/8 | 40/32 | 1" | 5.29 | 06f | " | " | " | " | B | Runaway * | light struck - red end | vsl sm |
| 10/10 | 300/112 | 1" | 7.01 | BoSE | " | " | " | " | A | " | cloud. | light struck - red end fine |

Spectr. Temp. 72.5°F.....

Dome Temp./Hum. 69°F./81%.

Transparency Conditions *some cloud*..... 30

Focus... 507.....

Spectr. Temp. 65°F.....

Dome Temp./Hum. 58°F./92%

*See next page for details
5070. 10/10/1*Comparison
/Filter Exp.

| Comparison /Filter Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|----------------------------|-----------|------------|-----------------------|-------|-------|------------------|------|----------|------|-------------|--|-------------|
| | | | | | BC | 830/.68 | B3 | IIa0-E | A | | F=507 | cent vs rad |
| NDG 8-8 | 200/129 | 3-4" = 6.5 | ^B | 095II | " | " / " | " | IIa0-E | B | Var Bin/Fin | Telescope reversed; cloud. | Fine |
| " 8-8 | 200/121 | 3-4" | " | " | " | " / " | " | " | A | " | | Fine |
| " 8-8 | 200/33 | " | " | " | " | " / " | " | " | B | " | some cloud; reversed! | wk |
| " 10-10 | 80/45 | " | ^B = 2.5 | KOIIa | " | " / " | " | " | A | STD/EL | unreversed; cloud; waited for a bit. ^{Redo} | Fine |
| | | | | | | | | " | | | | |

31

2 Large Tours
Waterbury, Ct

Emulsion Batches:

...IIa0-E 20012-17087

...IIa0-E 20012-19082

Date Aug. 21-22/82..... Observers C.R.-Tee.....

| 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. | Exp. Nr. |
|-----------|--------------------|--------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|----------|
| 47015 | HD 194093 | 20 18.6 | +39 56 | 22 28 | 22 31 | 0 07E | | Fe/106 | 10-10 | 90/36 |
| 47016 | HD 200465 | 20 58.5 | +37 06 | 22 38 | 00 40 | 1 21W | +39 26 | " | 8-8-8 | 900/350 |
| 47017 | HD 218634 | 23 04.5 | +8 08 | 00 45 | 01 21 | 0 04E | +8 34 | " | 8-8-8 | 800/130 |
| 47017T | Spot Calc | for 47015-18 | | 15 min | @ 15V | D4 3900 | D3 4300 | D2 4800 | | |
| | HD 3165 | 00 27.8 | +36 17 | 01 33 | 01 41 | | | | 8 | 900 |
| 47018 | HD 6224 | 00 58.7 | +00 50 | 01 46 | 03 30 | 0 11W | +1 16 | Fe/106 | 8-8-8 | 900/150 |
| 47019 | HD 15524 | 02 24.8 | +24 48 | 03 35 | 04 33 | 0 14E | +25 10 | " | 8-8 | 900 |
| 47019F | Focus Test | | | | | " | " | Fe/- | 8-8 | |
| 47019T | Spot Calc | for 47019 | | 15 min | @ 15V | D4 3900 | D3 4300 | D2 4800 | | |

Spectr. Temp. ... 60°F

Dome Temp./Hum. +54°F/88%

Transparency Conditions ... Fine - cloudy 32

Focus ... 51.0

Spectr. Temp. ... 53.7

Dome Temp./Hum. +46°F/95%

| Comp. n Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------|-----------|--------|--------------|-------|-------|------------------|------|---------------------|------|-----------------------|----------------|-------------------------------------|
| 7017 0092 | 40/36 | 3" | | | BC | 830/68 | BS | II ⁰ -E | A | Waterloo wide slit | | Fine OK |
| 8-12 | 400/350 | 2.3" | 8.0 | K2I | " | " | " | " | B | " | | Fe OK v slit |
| 8-13 | 80/130 | 2" | 6.6 | M2III | " | " | " | " | A | " | 56.5°F set 512 | Fine |
| 8-14 | 500/ | 2" | | | BC | 830/68 | BS | II ⁰ -E | B | Waterloo prog | too cloudy | |
| 8-15 | 200/150 | 2" | 6.4 | A8III | BC | 830/68 | BS | II ⁰ -E | A | Wat prog | | Fine |
| 8-16 | 200/ | 2" | 6.3 | F2IV | " | " | " | II ⁰⁰ *E | B | " | cloudy | slut OK mainly centr. v. slit |
| 8-17 | | | | | " | " | " | II ⁰ 0 | A | | 53°F set 512 | |
| | | | | | | | | II ⁰⁰ *E | | | | |

Date Mon. Tues., Aug. 23-24/82 Observers G.S. - Tr

Emulsion Batches:

H&O: E... 20012 - 19082

| 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. | Exp. Mtr. |
|-----------|----------------------|-----------------------------------|---------------------|-------------------------|-----------------------|----------------------------------|-------------|---------------------------|-------|-----------|
| 47020 | HD 161096 | 17 ^h 38 ^m 5 | + 4' 37" | 20:02 | 20:09 | 0 ^h 16 ^m W | +4 34' | Fe/ND 5 | 10-10 | 43/30 |
| 47021 | HD 187567 | 19 45.4 | +7 39 | 20:12 | 23:10 | 1 10 W | +7 52 | Fe/ND 6 | 8-8-8 | 20/165 |
| 47021T | Spot check for 47020 | | 29 | | 15 min @ 15V | D1 3900 | D3 4300 | F2 4810 | | |
| 47021F | Focus test | | | | | | | Fe1 | 9-9 | |
| 47022 | HD 203064 | 21 ^h 14.7 | +43° 31' | 23:22 | 23:34 | 0 ^h 06 ^m W | +43° 52' | Fe/ND 6 | 11-11 | 44/31 |
| 47023 | HD 210839 | 22 08.1 | +58 55 | 23:37 | 23:49 | 0 32 E | +59 20 | Fe/ND 6 | 11-11 | 45/30 |
| 47024 | HD 4142 | 00 38.9 | +47 19 | 23:52 | 00:09 | 2 43 E | +47 44 | Fe/ND 6 | 11-11 | 46/49 |
| | | | | | | | | | | |
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Spectr. Tem

Focus... 50

Spectr. Tem

Exp. Mtr.

Spectr. Temp. 67°FDome Temp./Hum. $62^{\circ}\text{F}/98\%$ Transparency Conditions *po. clarity*..... AFocus 50%Spectr. Temp. 63°FDome Temp./Hum. $57^{\circ}\text{F}/96\%$ Comparison
Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|-------|--------------|------|----------|------|---------------|----------------|--------------|
| 40/36 | 2" | 3.9 | K2II | B.C. | 830/.68 | BS | IIa0-E | A | Std. Velocity | | Fast Fine |
| 200/165 | 2" | 6.42 | B2.5Ic | " | " | " | " | B | Runaway* | cloud | Fast Fine |
| | | | | | | | " | | | | right on |
| | | | | B.C. | 830/.68 | BS | IIa0 | B | | T=64°F F=509 | |
| 40/31 | 1" | 4.98 | 08II | " | " | " | IIa0-E | A | Runaway* | adj. at 10 arc | Fast Fine |
| 40/30 | 1.5" | 5.29 | 06F | " | " | " | " | B | " | | Fast Fine |
| 80/49 | 2" | 5.53 | B5II | " | " | " | " | A | " | cloud cloud | Fast Fine |

35

Date Wed-Thurs Aug 25/26 Observers Wk/RcEmulsion Batches:
pm 680 Had-E 20012-19082
5m 680 099 05031-23082

| 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. |
|-----------|---------------------|----------------------|---------------------|---------------------------------|---------------------------------|-----------------------------------|--------------|---------------------------|------------|
| 47025F | Focus Test | | | | | | | Fc/- | 9-9 |
| 47025 | HD 182572 | 19 ^h 20.2 | +11° 44' | 19 ^h 50 ^m | 20 ^h 34 | 0 ^h 52 E | +11° 53' | Fc/nd | 11-11 |
| 47026 | V 1016 Cyg | 19 ^h 53.6 | +39° 33' | 20 ^h 45 ^m | 22 ^h 15 ^m | 0 ^h 17 ^m W | +39° 46' | Fc/nd | 3-3 |
| 47027 | V 1016 Cyg | " | " | 22 ^h 25 ^m | 23:55 | 02 ^h 00 ^m W | | Fc/nd Nc/nd | 3-3 7-7 |
| 47026T | SPOT CAL FOR PLATES | 47025- | | | 15 MIN @ 15 VOLTS | 0 00 00 03 02 | 3900 4810 | | |
| 47027T | SPOT CAL FOR PLATE | 47027 | | | 15 MIN @ | 0 03 15 01 01 00 | 4810 Hd 5450 | | |
| 47027F | Focus Test | | | | | | | Fc/- | 9-9 |
| 47028 | HD 203156 | 21 15.4 | +39° 49' | 00:16 | 01:14 | 01 ^h 54 W | +38° 08' | Fc/nd.6 | 8-8 |
| 47029 | HD 214930 | 22 36.6 | +33° 19' | 01:20 | 03:32 | 02 ^h 50 W | +33° 44' | Fc/nd.6 | 8-8 |
| 47030 | HD 14220 | 02 12.8 | +52° 07' | 03:41 | 05:02 | 00 ^h 42 W | +52° 28' | Fc/nd.6 | 8-8 |
| 47030F | Focus Test | | | | | | | Fc/- | 9-9 |

37

Date ~~Thurs~~/Fri Aug. 26/27, 82 Observers W.L./Ri.....

Emulsion Batches:

5^m 68°

098-22c 05031-23032

8^m 68°

The R. 22012-23032

| Plate No. | Object | R.A. 1900 | Declination 1900 | Starting Time E.S.T. | Ending Time E.S.T. | Hour Angle End | Declination | Comparison | | Exp. Mr. | Spectr. Temp. |
|-----------|----------------------------|----------------------|---------------------|---------------------------------|-----------------------|-------------------|-----------------|-----------------|--------------|----------|---------------|
| | | | | | | | | Type/Filter | Exp. | | |
| 47031 | V1016 Cyg | 19 ^h 53.6 | +39° 33' | 21 ^h 35 ^m | 22:20 | 00 | +39° 46' | Fc/ND No/ND | 3-3 7-7 | | |
| 47032 | " | | | 22:22 | 22:45 | 00° 52W | | Fc/ND No/ND | 2-3 2-2 | | |
| 47033 | HD 182572 | 19 20.2 | + 11° 44' | 22:53 | 23:08 | 014 45W | +11° 53' | Fc/ND No/ND | 3-3 7-7 | | |
| 47033T | SPOT CAL FOR PLATES 47031- | | | | 15 MIN @ | 0 08:10 4810 | 0 01:40 4810 | 0 02:10 5450 | | | |
| 47034 | HD 182572 | 19 20.2 | +11° 44' | 23:16 | 23:53 | 02° 32W | +11° 53' | Fc/ND No/ND | 4-4 8-8 | | |
| 47035 | " | | | 00:05 | 00:32 | 3° 10 W | | Fc/ND No/ND | 9-9 13-13 | | |
| 47035F | FOCUS TEST | | | | | | | Fc/- | 7-7 | | |
| 47036 | HD 201910 | 21 07.5 | +40° 47' | 00:48 | 02:23 | 03° 15W | +41° 07' | Fc/ND | 8-8 | | |
| 47036T | SPOT CAL FOR PLATES 47036- | | | | 15 MIN @ | 0 04 3900 | 0 05 4300 | 0 02 4810 | | | |
| 47036F | FOCUS TEST | | | | | | | Fc/- | 9-9 | | |

Spectr. Temp. + 70°F

Dome Temp./Hum. 66°F/92%

Transparency Conditions

38

Focus 506

Spectr. Temp.

Dome Temp./Hum. 62°F/99%

Occasional high clouds
general haze

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|---------------|----------|------|---------|----------------------------|-----------------------|
| — | | 10.4 | [e] | BC | 1200/.7 | 250/5 50/3 | 098e | A | wh PN | 45 min Timed | 4x OK |
| — | | - | - | - | - | - | - | B | - | | str 4x |
| 80/40 | 2 | 5.2 | 48U | B.C. | 120/.7 | 250/5 30/3 | 098e | A | std 2ul | | Fine |
| | | | | | | | 098e | | | | |
| 400/280 | 2 | 5.2 | 48U | B.C. | 120/.7 | 150/7 30/3 | 09802E | B | std 2ul | 7 speed check 37min | largest Fine Fuzzy |
| 400/280 | | | | B.C. | 120/.7 | R.S. | 09802E | A | - | RS vs slit 07min | s/wk |
| | | | | B.C. | 120/.7 | R.S. | std | B | | T=68°F F=506 | cent vs/blue |
| 400/280 | 3 | 7.27 | B5U | B.C. | 830/680 | B.S. | IIAD-E | A | POWHA* | T=68°F F=508 checked in | s/wk |
| | | | | | | | IIAD-E | | | | |
| | | | | B.C. | 830/68 | B.S. | IIAD | B | | T=67°F F=508 | OK Fine |

Spectr. Temp. 65°F Dome Temp./Hum. $58^{\circ}\text{F} / 75\%$ Transparency Conditions Good 40Focus 509 Spectr. Temp. 52°F Dome Temp./Hum. $46^{\circ}\text{F} / 82\%$ 40/21 $\frac{1}{2}$

| Comparison No./Filter Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|----------------------------------|-----------|--------|--------------|--------|-------|------------------|------|----------|------|-------------|--------------------------------------|---------------------|
| | | | | | B.C. | 830/68 | B.S. | IIAD-E | A | | | |
| | 400/300 | 3-4 | 6.15 | 09.5II | " | " / " | " | " | B | Var Bin/Flu | Telescope reversed | |
| | 400/300 | | " | " | " | " / " | " | " | A | " | " | comp w/ Fine |
| | | | | | | | | IIAD-E | | | | |
| | 400/300 | | 6.15 | 09.5II | B.C. | 830/680 | B.S. | IIAD-E | B | " | " | comp w/ wk |
| | 400/241 | | " | " | " | " | " | " | A | " | T=61°F, F=510 | comp v. wk |
| | 400/156 | 5-6 | " | " | " | " / " | " | " | B | " | | comp v wk |
| | 400/352 | 3-4 | 6.94 | E2IV | " | " / " | " | " | A | RUNAWAY* | Telescope reversed. T=57°F, F=512 | |
| | 400/300 | 4-5 | 7.01 | B05II | " | " / " | " | " | B | RUNAWAY* | | v s/wk comp s/wk |
| | 80/80 | | 5.1 | K4III | " | " / " | " | " | A | STDVEL | T=52°F, F=513. | s/wk |
| | | | | | " | - / - | " | " | B | | T=52°F, F=513 | cont's/Rel |

Spectr. Temp. 53°F

Dome Temp./Hum. 42°F 93%

Transparency Conditions .. good

42

Focus 512

Spectr. Temp.

Dome Temp./Hum. 44°F 96%

lost 1/2 due to broken coupling to
THE FOCUSING MOTOR

| Comparison pe/Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------------|-----------|--------|--------------|------|--------|------------------|--------|----------|------|---------|---------|----------------------|
| 20/18 | 2 | 2.9 | F81B | B.C. | 830/68 | B.S. | IIAD-E | A | | | | s/str |
| 400/450 | 2-3 | 7.1 | K01V | B.C. | 830/68 | B.S. | IIAD-E | B | | | | Fine |
| | | | | | | | IIAD-E | | | | | |
| 20/400 | 3 | 6.6 | M2II | B.C. | 830/68 | B.S. | IIAD-E | A | | T=520°F | F=513 | Fine |
| 400/400 | 3 | 7.7 | K01V | B.C. | 830/68 | B.S. | IIAD-E | B | | T=500°F | F=514 | " |
| 40/40 | 3 | 4.6 | F7V | B.C. | 830/68 | B.S. | IIAD-E | A | | | | " |
| 40/45 | 3 | 5.4 | K31B | B.C. | 830/68 | B.S. | IIAD-E | B | | | | " |
| 20/24 | 3 | 2.2 | K01Vab | B.C. | 830/68 | B.S. | IIAD-E | A | | | | comp. w/ Fine |
| | | | | | | | IIAD | B | | T=49°F | F=514 | Black centrifugal |

47

SAT SUN

Date Sept. 4-5, 1962 Observers Winters, Tn

Emulsion Batches:

ILRLE 20012-28082

| 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. | Exp. Mtr. |
|-----------|------------------------|--------------|---------------------|-------------------------|-----------------------|-----------------------|-----------------------|---------------------------|----------|-----------|
| 47060 | HD 161797A | 17 42.5 | +27 47 | 19 21 | 19 27 | 0: 18 W | + | Fe/ND | 12-12 | 40/40 |
| 47061 | HD 165590 | 18 01.6 | +27 26 | 19 35 | 21 19 | 1 51 W | +21 27 | " | 10-10-10 | 400/400 |
| 47061T | Spot Calc for 47060-68 | | | | 15 min @ 15V | ^{D4} 3900 | ^{D3} 4300 | ^{D2} 4800 | | |
| 47062 | H3 194093 | 20 18.6 | +39 56 | 21 22 | 21 24 | 1 40 E | | Fe/ND | 10-14 | 40/25 |
| 47063 | HD 260465 | 20 58.5 | +39 06 | 21 28 | 23 03 | 0 38 W | +39 26 | " | 10-10-10 | 200/250 |
| 47064 | HD 218634 | 23 04.5 | +08 08 | 23 08 | 23 37 | 1 06 ^x E | +8 34 | " | 10-10-10 | 20/160 |
| 47065 | HD 218381 | 23 02.5 | +20 03 | 23 40 | 02 11 | 1 46 W | +20 30 | " | 10-12-12 | 200 |
| 47066 | HD 14189 | 02 12.6 | +39 49 | 02 19 | 04 31 | 0 53 W | +40 11 | " | 10-10-10 | 20/25 |
| 47067 | HD 15524 | 02 34.8 | +24 48 | 04 34 | 05 03 | 1 12 W | +25 08 | " | 10-10-10 | 20/95 |
| 47068 | HD 12929 | 02 01.5 | +22 59 | 05 05 | 05 07 | 01 40 W | + | " | 10-10-10 | 40/35 |

Spectr. Temp. ... 65°F

Dome Temp./Hum. 58°F / 85%

Transparency Conditions ... Fine ... 48

Focus ... 510

Spectr. Temp. ... 57°F

Dome Temp./Hum. 51°F / 99%

Comparing
Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|-------|------------------|------|--------------------|------|----------|-----------------|---------|
| 40/43 | 1" | 4.20 | G5IV | BC | 830/68 | BS | II ₄ OE | A | Wet Prog | | |
| 400/400 | 2" | 7.3 | G1V | " | " | " | " | B | " | | |
| | | | | | | | " | | " | | |
| 40/35 | 2" | 2.9 | F8Ib | BC | 830/68 | BS | " | A | " | | |
| 200/250 | 2.5" | 8.0 | K2I | " | " | " | " | B | " | | |
| 20/160 | 1.5" | 6.6 | m2 III | " | " | " | " | A | " | T=61°F | |
| 200/300 | 2" | 7.7 | K0 III | " | " | " | " | B | " | | |
| 200/225 | 1.5" | 7.46 | F2 | " | " | " | " | A | " | Set 5/11 T=58°F | |
| 80/95 | " | 6.7 | F2 IV | " | " | " | " | B | " | | |
| 40/35 | " | 2.2 | K20.5 | " | " | " | " | A | stUvel | | |

49

Date Sun-Mon. 5/6 Sept. 82 Observers Blu-Tu

Emulsion Batches:

... II^{40E}... 20012... - 03092

| 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. |
| 47069 ¹ | Focus Test | | | | | 00 05W | +12° 43' | Fe/- | 12-12 |
| 47069 | HD 192 685 | 20 ^{11.0} 14.4 | +25 17 +25 32 | 19 15 | 19 27 | 02 06 E | +25 33 | Fe/No. 6 | 14-14 ² |
| 47070 | " | " | " | 19 29 | 19 37 | 01 56 E ^V | " | " | 14-14 |
| 47071 | " | " | " | 19 38 | 19 44 | 01 44 E ^X | " | " | 14-14 |
| 47072 | " | " | " | 19 45 | 19 58 | 01 35 E ^X | " | " | 14-14 |
| 47073 | " | " | " | 20 01 | 20 10 | 01 24 E ^V | " | " | 14-14 |
| 47074 | HD 217 311 | 22 ["] 53 ["] 2 | +43° 31' | 20 18 | 20 40 | 03 40 E | +43 57 | Fe/- | 14-8 |
| 47074 ¹ | Spot 6.16 Fe | 47069 - | 74 | 15 min | @ 15V | D4 3900 | D3 4300 | D2 4810 | |

Spectr. Tem

Focus. 50

Spectr. Tem

Exp. Mtr.

40/58

40/45

40/45

40/45

40/45

40/61

Spectr. Temp. ... 68°F

Dome Temp./Hum. 66°F/74%

Transparency Conditions Haze, scattered cirrus, and worse

Focus ... 508

Bright aureole low in N @ ≈ 19 45

Spectr. Temp. ... 67°F

Dome Temp./Hum. 65°F/1

Comparison
Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|--|--------|-----------|-----|-------|--------------|------|------------------|------|---------|---------------------------|---------|
| | | | | BC | 830/68 | B3 | IIa-OE | A | | 507.9 T=68°F, F=508 | 0+ |
| 40/58 | <1" | 4.59 | B3V | BC | 830/68 | B3 | IIa-OE | B | S13-Blu | | |
| 40/45 | 2" | " | " | " | " | " | " | A | " | | |
| 40/45 | " | " | " | " | " | " | " | B | " | | |
| 40/45 | " | " | " | " | " | " | " | A | " | | |
| 40/45 | 1-4" | " | " | " | " | " | " | B | " | | |
| 40/61 | 2-3" | 6.38 | B2V | BC | 1200/000 | B3 | IIa-OE IIc-OE | A | Blu-He* | C50/0-2240 T=67° F=509 | |
| Fri, Sat, Sunday plates dev'd Sunday @ 68° 8min T ₁ | | | | | | | | | | | |

Spectr. Temp. 60°F Dome Temp./Hum. $58^{\circ}\text{F}/77\%$ Transparency Conditions *Fine* 52Focus 510 *Strange "horizontal" pattern seen in 25
frame forward by 1/2 of page, 2 lines, some faint
in 17 of page, 2 lines, some faint
more below*Spectr. Temp. 52°F Dome Temp./Hum. $47^{\circ}\text{F}/100\%$

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|--|--------|-----------|-------|-------|--------------|------|----------|------|---------------|--------------|---------|
| 200/37 | 2" | 3.9 | K2II | B.C. | 830/68 | BS | IIaO-E | B | Std. Velocity | | |
| | | | | " | " | " | IIaO | A | | T=60°F F=510 | |
| 400/263 | 2" | 8.16 | B05I | " | " | " | IIaO-E | A | Runaway* | | |
| | | | | | | | IIaO-E | | " | | |
| 200/155 | 2" | 7.85 | B05Ic | B.C. | 830/68 | BS | " | B | Runaway* | T=56°F F=512 | |
| 200/172 | 2" | 7.08 | B2Ic | " | " | " | " | A | " | T=53°F F=513 | |
| 200/175 | 1.5" | 7.01 | B2V | " | " | " | " | B | " | T=52°F F=513 | |
| <p>By 23130, "Aurora Cloud" as reported in <i>Planetology</i> by G. C. ... <i>(blue white)</i> like a bright sun. Above green-white cloud $\approx 15^{\circ}$ in length, mainly elongated E-W - Saw also a narrow arch fairly roughly South, G.C. says it just W of ... - nothing of obs, 1/05 for remainder of night, - No "normal" ... as is usual!</p> | | | | | | | | | | | |

Spectr. Temp. 62°F

Dome Temp./Hum. 59°F / 65%

Transparency Conditions Hazy

Focus 510

Spectr. Temp. 56°F

Dome Temp./Hum. 52°F / 97%

Good Aurora by 21:30 - good 1st
gone shortly after

5A

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|-------|--------------|------|----------|------|-----------|--------------|---------|
| | | | | B.C. | 830/.68 | BS | IIa0 | B | | T=62°F F=510 | |
| 40/35 | 1" | 3.9 | K2III | " | " | " | IIa0E | B | std. Vel. | | |
| 200/172 | 1.2" | 7.26 | B0.5IV | " | " | " | " | A | Runaway* | thick bed | |
| | | | | | | | IIa0E | | | | |
| 400/200 | 1.2" | 8.3 | B2? | B.C. | 830/.68 | BS | " | B | Runaway* | T=61°F | slwk |
| 80/72 | 2" | 6.94 | B2IV | " | " | " | " | A | Runaway* | T=57°F F=512 | Fine |
| 80/72 | 2-3" | 7.05 | B1II | " | " | " | " | B | Runaway* | | |
| 80/71 | 1" | 7.01 | B2I | " | " | " | " | A | Runaway* | | |
| 40/36 | 1" | 5.87 | B2IVn | " | " | " | " | B | Runaway* | | |
| 40/38 | 1" | 4.04 | O9 | " | " | " | " | A | " | | |

Date Fri-Sat Observers Crow-Ta
Sept 10-11/82

Emulsion Batches:

R: SEPT 13 Bmw 68th IIa-DE 20012-05092

IIa-DE 20012-08092

| 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. | Exp. Mtr. |
|-----------|---------------------|------------------------------------|---------------------|-------------------------|-----------------------|----------------------------------|-------------|---------------------------|----------|-----------|
| 47093F | Focus Test | | | | | | +4 36 | Fe/ND | 14-14 | |
| 47093 | HD 161096 | 17 38.5 | +9 37 | 19 04 | 19 08 | 0 ^h 27 ^m W | +4 36 | Fe/ND | 14-14 | 40/37 |
| 47094 | EP AQR (HD 5468) | 21 ^h 41. ^m 3 | -2°40' | 19:18 | 21 18 | 1 26 E | -2 17 | Fe/ND | 10-10-10 | 40/30 |
| 47095 | R AQL (HD 17794) | 19 ^h 01. ^m 5 | +8°05' | 21:27 | 00:04 | 4 ^h 00 ^m W | +8 12 | Fe/ND | 10-10 | 40/38 |
| 47095T | Spot Calc for | 47093 | 99 | 15 min @ 15V | 3900 | 4300 | 4810 | | | |
| 47096 | R AND (HD 1967) | 0 ^h 18. ^m 7 | +38°01' | 00:09 | 00 46 | 0 35 E | +38°28' | Fe/ND | 10-10-10 | 40/30 |
| 47097 | R TRI (HD 16210) | 2 ^h 31. ^m 0 | +33°50' | 00 52 | 02 01 | 1 33 E | +34°11' | " | 10-10-10 | 40/30 |
| 47098 | 45 R2 ARI (HD 1819) | 2 ^h 50. ^m 2 | +17°56' | 02:07 | 03 05 | 0 47 E | +18°15' | " | 14-14 | 40/40 |
| 47099 | O CET (HD 14886) | 2 ^h 14. ^m 3 | -3°26' | 03:09 | 03 19 | 0 03 W | -3°04' | Fe/ | 14-14 | 40/40 |

Spectr. Temp. 72.5°F.....

Dome Temp./Hum. 71°F/69%

Transparency Conditions 5/1 hazy.....

58

Focus 5.07.....

Spectr. Temp. 67°F.....

Dome Temp./Hum. 67/94%

| Comp. No. Filter Exc. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|--------------------------|-----------|--------|-----------|----------------|-------|------------------|--------|----------|---------|------------|---|---------------------------|
| | | | | | BC | 830/68 | 150/10 | II-OE* | A | | | |
| | 40/37 | <1" | 3.9 | K20 | BC | 830/68 | 150/5 | II-OE* | A | std Uel | | |
| | 100/250* | " | 8.2 | M III | BC | 830/68 | 150/3 | II-OE | A | M STANDARD | prob ≈ 200/200 | ≅ 120 ^m & weak |
| | 400/238 | <1.5" | 9.0 | MSE -M80 | " | " | " | " | B | CRW-MIRAS | EXP = 157 ^m | V. weak |
| | | | | | | | | " | (NO #3) | | T = 69°F, F = 507 | |
| | 80/80 | 1"-2" | 7.4 | 56.60 (M80) | BC | 830/68 | 150/3 | II-OE | A | | EXP = 37 ^m /CORR = 58 ^m | comp OK fine |
| | 70/80 | 2" | 7.6 | M80 -M80 | " | " | " | " | B | | EXP = 69 ^m | fine |
| | 40/40 | 2" | 7.4 | M60 | " | " | " | " | A | | EXP = 58 ^m | fine |
| | 40/40 | 2" | 6.0 | MSE -M80 | " | " | " | " | B | | EXP = 10 ^m | weak |

Spectr. Temp. ... 68°F

Dome Temp./Hum. 65% / 90%

Transparency Conditions *Very Fine* 60

Focus 507

Spectr. Temp. ... 67°F

Dome Temp./Hum. 63% / 100%

Comparison
e/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------|--------|-----------|-------|---------------|-------------------|---------------|--------------|--------------|---------------------|----------------------|-------------------|
| 200/200 | 2" | 5.5 | FSV | BC | 830/68 | BS | ITGDE | A | Waterloo | | |
| 80/80 | " | 5.5 | K21II | " | " | " | " | B | " | | |
| 80/80 | 1 1/2" | 6.5 | M01II | " | " | " | " | A | " | | |
| 200/ | | 7.3 | K1:II | BC | 830/68 | BS | " | B | Waterloo | too faint | |
| 80/80 | 2" | 6.7 | K51II | BC | 830/68 | BS | ITGDE | A | Waterloo | | comp ok slwk |
| 200/200 | 1 1/2" | 6.9 | F1 IV | " | " | " | " | B | " | | ok comp Fine |
| 80/80 | 2" | 2.2 | K21II | " | " | " | " | A | Std. Vel. | | comp slwk Fine |

Spectr. Temp. 75°F

Dome Temp./Hum. 74°F/80%

Transparency Conditions Very Hazy

62

Focus 506

Spectr. Temp. 74°F

Dome Temp./Hum. 67°F/100%

| Compansor Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------------|-----------|--------|--------------|-------|-------|------------------|------|----------|------|-----------|---------|---|
| / | | | | | BC | 830/68 | BS | IIa-0 | A | | T=75°F | ok wk wk comp Fine wk comp Fine Exp wk comp |
| 10/6/4 | 40/39 | 2-3 | 3.9 | K2III | BC | 830/68 | BS | IIa-0E | A | Std. Vel. | | |
| M-1 | 40/45 | 2-3 | 4.59 | 83V | " | " | " | IIa-0E | B | SB Bln | | |
| D-1 | 40/45 | 3" | 5.35 | 85Vp | " | " | " | IIa-0E | A | SB Bln | | |

Spectr. Temp. ... 7.7 Dome Temp./Hum. Transparency Conditions

Focus ... 07

Spectr. Temp. Dome Temp./Hum.

Comparison
e.Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|---------|--|----------------|
| 1-12 | | | | BC | 230/68 | B5 | D-OF | A | | | |
| 1-12 | | | | " | " | " | " | B | | | |
| 1-12 | | | | " | " | " | " | A | | Wires in the middle of comp. may probably be offset, but not the case. | |
| 1-12 | | | | " | " | " | " | B | | I moved yellow-green wire away from comp window. | |
| 1-12 | | | | " | " | " | " | B | | If not an improvement, then the comp feed has been rotated due to prior contact of lens comp fid lens mount with bolt at port end of Enclosure. 5/15/54 | |
| | | | | | | | | Note | | (Post development) Yes indeed - Adjust your comp exposures accordingly. Probably last week's exposure times still applicable. | |
| | | | | | | | | | | | T ₇ |

Emulsion Batches:

SEPT 20 to 8 hrs 68°F J.F.F. 20012-13092....

Date SAT. SUN. SEPT. 18-19. Observers BK - R1

| 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. | Exp. Mtr | S |
|-----------|------------------------------|--------------|---------------------|-------------------------|-----------------------|----------------------------------|-------------|---------------------------|----------|----------|---|
| 47118F1 | FOCUS TEST | | | | | | | Fe/- | 14-14 | | |
| 47118 | HD 182572 | 19 20.2 | +11° 44' | 18:58 | 19:33 | 00° 15'E | +11° 55' | Fe/ND.6 | 10-10/10 | 80/80 | |
| 47119 | HD 203156 | 21 15.4 | +37° 49' | 19:44 | 21 10 | 0 38W | +38° 09' | Fe/ND.6 | 10-10/10 | 200/200 | |
| 47119T1 ✓ | SPOT CALN' FOR PLATES 47118- | | | 15410 @ 150VOLTS | | 0 D4 0 D3 0 D2 3900 4300 4800 | | | | | |
| 47120 | HD 187691 | 19 46.2 | +10 10 | 21 13 | 21 48 | 1 30W | +10 22 | Fe/ND.6 | 10-10/10 | 200/200 | |
| 47121 | HD 1094442 | 20 52.1 | +0 05 | 21 53 | 00 02 | 2 38W | +0 24 | Fe/ND.6 | 10-10/10 | 400/500 | |
| 47122 | HD 215549 | 22 40.9 | +29 55 | 00 08 | 02 18 | 3 07W | +30 20 | Fe/ND.6 | 10-10/10 | 400/500 | |
| 47123 | HD 14189 | 02 12.6 | +39 49 | 02 23 | 05 02 | 2 20W | +40 10 | Fe/ND.6 | 10-10/10 | | |
| 47124 | HD 17506 | 02 43.4 | +55 29 | 05 08 | 05 20 | 2 05W | +55 48 | Fe/ND.6 | 10-10/10 | 40/50 | |
| 47125 | HD 16895 | 02 37.4 | +48 48 | 05 24 | 05 34 | 2 25W | +49 08 | Fe/ND.6 | 14-14 | 10 | |
| 47125F | FOCUS TEST | | | | | | | Fe/- | 14-14 | | |

Spectr. Temp. ... 61°F

Dome Temp./Hum. 53°F 63%

Transparency Conditions ... good

68

Focus ... 510

Spectr. Temp.

Dome Temp./Hum. 44°F 95%

40/25

Compensator
Type Filter Exp.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------|--------------|------|----------|------|-----------|----------------|-----------------|
| | | | | B.C. | 830/68 | B.S. | Ilad-E | A | | | cent. fully red |
| 80/80 | 3.4 | 5.2 | G8IV | B.C. | 830/68 | B.S. | Ilad-E | B | STD VEL | | Free |
| 200/200 | 4 | 6.17 | K2 | B.C. | 830/68 | B.S. | Ilad-E | A | CFP/EUNUS | | Free |
| | | | | | | | Ilad-E | | | | |
| 200/200 | | 5.6 | F8 | B.C. | 830/68 | B.S. | Ilad-E | B | Waterloo | T=57°F F=512 | Free |
| 400/500 | 3 | 7.3 | K2 | B.C. | 830/68 | B.S. | Ilad-E | A | -11- | | Free |
| 400/500 | | 7.3 | K1 | B.C. | 830/68 | B.S. | Ilad-E | B | -11- | T=54°F | Free |
| 400/500 | | 7.5 | F2 | B.C. | 830/68 | B.S. | Ilad-E | A | -11- | T=52°F F=513 | Free |
| 40/50 | | 5.4 | K3 | B.C. | 830/68 | B.S. | Ilad-E | B | -11- | T=50°F F=514 | Free |
| 80/40 | | 4.6 | F7 | B.C. | 830/68 | B.S. | Ilad-E | A | -11- | | Free |
| | | | | | | | Ilad-E | B | | T=49.5°F F=514 | cent. fully red |

73

Sept 23/24

Date Thurs/Fri

Observers Ly-In-Stagg's wife

8^m 68°

Emulsion Batches:

* IL-DE 20012 - 18092
 II-DE 00012 - 20092
 III-DE 09061 - 04092

| 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. | Spectr. Tem | Focus... | Spectr. Tem | Exp. Mtr. |
|-----------|----------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|-------------|----------|-------------|-----------|
| 47130 ✓ | HD157482 | 17 18.6 | +40° 04 | 19:51 | 21:23 | 03 55W | +40 00 | Fe/- | 6-6 | | | | 365 |
| 47130 T | Spot Calc for | 47131-35, | | 15min 15vel. | 3900 | 4300 | 4810 | | | | | | |
| 47131 | HD1337 | 00 12.4 | +50 53 | 22:20 | 23:18 | 01 06E | +51 21 | Fe/- | 6-6 | | | | 102 |
| 47132 | " | " | " | 23:19 | 00 05 | 00 19E | " | " | 6-6 | | | | 112 |
| 47133 | HD 6582 | 01 01.6 | +54 26 | 00 08 | 00 43 | 00 31E | +54 49 | " | 6-6 | | | | 50 |
| 47134 | HD352 (5 Ceti) | 00 03.1 | -03 00 | 00 49 | 03 39 | 03 25W | -02 31 | " | 4-4 | | | | 100 |
| 47134 F | focus | | | | | 00 02W | -02 31 | " | 14-14 | | | | |
| 47135 | HD33328 | 05 04.4 | -08 53 | 03 50 | 04 37 | 00 36E | -8 45 | " | 8-8 | | | | 93 |
| 47135 T ✓ | Spot Calc for | 47135- | | 15min @ D9 | 17.5V 3900 | 15V 4300 | 15V 4810 | | | | | | |

Spectr. Temp. 60°F

Dome Temp./Hum. 58°F/85%

Transparency Conditions ... Hazy ...

Focus 508

Spectr. Temp. 56°F

Dome Temp./Hum. 110/76

humid

74

| Comp. No. Filter Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|--------------------------|-----------|--------|-----------|-------|-------|------------------|------|----------|------|---------|----------------------------------|-------------------|
| 1-56 | 40/265 | 2 | 6.2 | dF8 | BC | 1200/.025 | B5 | IIaOE* | A | SB-Ly. | No spot Co for this set 508 | complete sl/wk |
| | | | | | | | | IIaOE | | | Pass to repair DEC drive | complete sl/wk |
| 1-60 | 80/102 | 2 | 6.1 | 09III | BC | 1200/.025 | B5 | IIaOE | A | MSB-Ly. | * Note KK red end missing C1* | vs/wk |
| 1-62 | 80/112 | 2-3/10 | " | " | " | " | " | " | B | " | T=58°F set 509 | sl/wk |
| 1-64 | 40/60 | 1.5 | 5.81 | 65Vp | " | " | " | " | A | KK p.m. | cloud | sl/wk |
| 1-64 | 80/180 | 2 | 7.3 | gK2 | " | " | " | " | B | SB-Ly. | cloud | sl/wk |
| 1-64 | | | | | Be. | 1200/.025 | B5 | IIaOE* | A | | T=56.5°F | complete sl/wk |
| 1-62 | 40/93 | 2" | 4.3 | B2IV | " | 880/.68 | B8 | IIIg-JE | B | Be-Rln. | set 512 cloud | general fog |
| | | | | | | | | " | | | | |

Spectr. Temp. $+61^{\circ}\text{F}$

Dome Temp./Hum. $58^{\circ}\text{F}/87\%$

Transparency Conditions Hazy to Fog

Focus 510

Spectr. Temp. $+59^{\circ}\text{F}$

Dome Temp./Hum. $54^{\circ}\text{F}/>100\%$

Comparison
e/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|-------|--------------|------|--------------------|------|---------------|---------|-------------------------------------|
| | | | | BC | 830/68 | BS | I ₁₀ O | B | | | s/str cent s/Rad comp v/s/str |
| 40/39 | 2" | 3.9 | K2 III | " | " | " | I ₁₀ OE | B | Std. Velocity | | v/s/lw comp fine |
| 400/168 | 2.3" | 8.16 | B0.5V | " | " | " | " | A | Runaway* | | cut |
| | | | | | | | " | | | | |

77

Emulsion Batches:

IIaQE 20012-20092

Date Thurs. Fri. Sept. 30 - Oct. 1 / Observers Gis. Tr. Anderson
/ez

| 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. | Exp. Mtr. |
|-----------|--------------|------------------------------------|---------------------|-------------------------|-----------------------|----------------------------------|-------------|---------------------------|----------|-----------|
| 47138F | Focus test | | | | | 0 ^h 05 ^m W | +4° 34' | Fe/- | 14-14 | |
| 47138 | HD 161096 | 17 ^h 38 ^m .5 | +4° 37' | 18:38 | 18:43 | 1 20 W | +4° 35' | Fe/ND6 | 14-14 | 43/43 |
| 47139 | HD 189957 | 19 57.6 | +41 43 | 18:50 | 21.04 | 1 19 W | +41° 57' | Fe/ND.6 | 10-10-10 | 43/350 |
| 47137 | Spot C&K for | 47138-45 | | | 15 min @ 15V | D1 3900 | D3 9300 | D2 7810 | | |
| 47140 | HD 201910 | 21 ^h 07 ^m .5 | +40° 47' | 21:10 | 22:37 | 1 46 W | +41° 06' | Fe/ND.6 | 10-10-10 | 43/310 |
| 47141 | HD 203064 | 21 14.7 | +43 31 | 22:45 | 22:55 | 1 58 W | +43° 52' | Fe/ND.6 | 14-14 | 43/35 |
| 47142 | HD 210839 | 22 08.1 | +58 55 | 23:00 | 23:13 | 1 23 W | +59 19 | Fe/ND.6 | 14-14 | 43/35 |
| 47143 | HD 4142 | 00 38.9 | +47 19 | 23:16 | 23:37 | 0 45 E | +47 46 | Fe/ND.6 | 14-14 | 43/35 |
| 47144 | HD 220057 | 23 15.7 | +60 37 | 23:41 | 01:26 | 2 27 W | +61 03 | Fe/ND.6 | 10-10-10 | 43/175 |
| 47145 | HD 24912 | 3 52.5 | +35 30 | 01:32 | 01:38 | 1 59 E | +35 44 | Fe/ND.6 | 14-14 | 43/39 |

Spectr. Temp. 63.5°F

Dome Temp./Hum. 63°F / 81%

Transparency Conditions / Hazy - cloudy - foggy

78

Focus 509

Spectr. Temp. 62°F

Dome Temp./Hum. 57°F / 100%

| Comparison /Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---------------------------|-----------|--------|--------------|------|-------|------------------|------|----------|------|---------------|---------|--|
| | | | | | BC | 830/68 | BS | IIa0 | A | | | light on |
| | 40/43 | 1" | 3.9 | K2II | " | " | " | IIa0-E | A | Std. Velocity | | fine |
| | 400/350 | 1" | 7.83 | B0I | " | " | " | " | B | Runaway* | | good |
| | | | | | | | | " | | | | |
| | 400/360 | 1" | 7.27 | B5I | BC | 830/68 | BS | " | A | Runaway* | T=63°F | fine |
| | 40/35 | | 4.98 | O8I | " | " | " | " | B | Runaway* | | fine |
| | 40/35 | 2" | 5.29 | O6F | " | " | " | " | A | Runaway* | | fine |
| | 40/35 | 2" | 5.53 | B5V | " | " | " | " | B | Runaway* | | |
| | 400/175 | 2" | 6.94 | B2II | " | " | " | " | A | Runaway* | | good, but bgnd uneven & sl smog |
| | 40/39 | 1.5" | 4.04 | O7 | " | " | " | " | B | Runaway* | | |

Spectr. Temp. 63°F Dome Temp./Hum. $61^{\circ}\text{F}/83\%$ Transparency Conditions *Fine... some... dust* 80Focus 5.10 Spectr. Temp. 50°F Dome Temp./Hum. $43^{\circ}\text{F}/94\%$ Compensator
Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|-------|--------------|------|----------|------|---------------|-------------------------------------|--------------------------|
| | | | | B.C. | 830/68 | BS | I60 | B | | | no stellar |
| 400/46 | 3" | 3.9 | K2II | " | " | " | I60 E | B | Std. Velocity | | fine |
| 400/350 | 3.2" | 7.93 | 05f | " | " | " | " | A | Runaway* | | good but finger print |
| | | | | | | | " | | | | |
| 400/325 | 3-4" | 7.85 | B1.5V6 | B.C. | 830/68 | BS | " | B | Runaway* | T=60°F F=511 * broken (1pc seen) | fine |
| 400/355 | 3" | 7.01 | B2V | " | " | " | " | A | Runaway* | T=55°F cloud | many marks |
| 400/350 | 3.2" | 7.47 | B6V | " | " | " | " | B | Runaway* | | fine |
| 400/175 | 2.3" | 6.18 | 095I | " | " | " | " | A | " | T=51°F F=512 | v sl spray |
| 400/100 | " | 5.71 | B2V6 | " | " | " | " | B | Runaway* | | v sl spray |

Spectr. Temp. ... 54°F

Dome Temp./Hum. 48°F / 100%

Transparency Conditions ... Some cloud

82

Focus ... 51.2

Spectr. Temp. ... 50.5°F

Dome Temp./Hum. 46°F / 100% + 8

| Comparison /Filter Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|----------------------------|-----------|--------|--------------|----------------|-------|------------------|--------|----------|------|----------|--|---------|
| L 12-5 | | | | | BC | 8301-68 | 150/10 | DI-DE | A | | | good |
| N 10-0-0 | 200/200 | 2" | 7.4 | S6,6e (M7e) | " | " | " | " | B | CW-MIRAS | EXP = 60 ^m | Fine |
| N 10-0-0 | 200/200 | 2" | 8.6 | M4e -M8e | " | " | " | " | A | " | cloud? EXP = 180 ^m | good |
| L 14-0 | | | | | " | 200/-025 | BS | " | B | | so 51.2 T = 50.5°F | |
| | | | | | | | | | | | Cloudy Foc. (center had not focused) | |
| | | | | | | | | | | | * broken spec saved | |

83

Sun - Mon

Date 1982 Oct 3/4 Observers KK-Tn

Emulsion Batches:

Mes 2¹/₂ d 8% H₂ 20°C
D.E. 20012 - 031025¹/₂
8¹/₂

| 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. |
| 47155 | HD 182640 | 19 20.5 | +2 55 | 20:44 | 21 20 | 2 27 W | | Fe/- | 10-10 -10 |
| 47156 | HD 196524 | 20 32.9 | +14 15 | 21:23 | 21 35 | 1 30 W | +14 32 | Fe/ND | 14-14 |
| 47157 | HD 206901 | 21 40.7 | +25 11 | 21:37 | 21 52 | 0 41 W | | Fe/ND | 14-14 |
| 47158 | HD 3712 | 0 34.8 | +55 59 | 21:59 | 22 01 | 2 06 E | | Fe/ND | 14-14 |
| 47159 | HD 6582 | 1 01.6 | +54 26 | 22:05 | 22 40 | 1 55 E | +54 49 | Fe/ND | 14-14 |
| 47160 | HD 6961 | 1 05.0 | +54 37 | 22:43 | 22 59 | 1 38 E | | Fe/ND | 14-14 |
| 47160T | Spot calib | for 47156 | -62 | 15 min @ 15V | 3700 | | | | |
| | | | | | | | | | |
| 47161 | HD 217782 | 22 58.0 | +42 13 | 23:07 | 23 28 | 0 57 W | +42 39 | Fe/ND | 14-14 |
| 47162 | HD 217675 | 22 57.3 | +41 47 | 23:30 | 23 35 | 1 05 W | +42 | Fe/ND | 14-14 |
| 47162F | Focus Test | | | | | | | Fe/- | 14-14 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Spectr. Temp.

Focus

Spectr. Temp.

Exp. Mir.

Spectr. Temp. 69°F

Dome Temp./Hum. 61°F/84%

Transparency Conditions HALY AND GETTING THERE

Focus 509

Spectr. Temp. 61°F

Dome Temp./Hum. 56°F/98%

40/32

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------|--------------|------|----------|------|---------------|---------------------------------|---------|
| | | | | BC. | 830/68 | BS | IIaO | A | | | |
| 40/42* | 3" | 4.1 | K3II | " | " | " | IIaOE | B | Std. Velocity | * On radium dot | sl weak |
| 80/70 | | 4.98 | 08V | " | " | " | " | A | Runaway* | | fine |
| 80/70 | | 5.29 | 06f | " | " | " | " | B | Runaway* | | good |
| | | | | | | | IIaO-E | | | | |
| 400/300 | 3-4 | 7.27 | B5V | B.C. | 830/68 | B.S. | IIaO-E | A | Runaway* | BROKEN 2 PIECES ^{1/2"} | good |
| 400/350 | | 5.53 | B5V | " | " | " | " | B | Runaway* | T=62° F=510 | fine |
| 80/90 | | 5.34 | B2V | " | " | " | " | A | SB-Bln | Cloud | fine |
| | | | | " | " | " | " | B | | had plate T=61°F F=510 | |

Spectr. Temp. 63°F Dome Temp./Hum. $57^{\circ}\text{F}/89\%$

Transparency Conditions . OCCASIONALLY . STARRY 88

Focus 510 Spectr. Temp. 53°F Dome Temp./Hum. $48^{\circ}\text{F}/100\%$

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|---------|-------|--------------|------|----------|------|----------|---------------------------------|---------|
| 400/350 | 4" | 7.39 | B2 IV | BC. | 830/68 | BS | IIaO-E | A | Runaway* | | fine |
| | | | | | | | IIaO-E | | | | |
| 400/350 | 5" | 7.01 | B05 III | B.C | 830/68 | BS | " | B | Runaway* | ADJUSTED Fc ARC T=58°F F=511 | fine |
| 400/350 | 4" | 7.05 | B1 III | " | " | " | " | A | Runaway* | T=56°F F=512 | fine |
| 400/350 | | 7.47 | B6 V | " | " | " | " | B | Runaway* | T=54°F | fine |
| 200/133 | 3-4" | 7.22 | B3 I ne | " | " | " | " | A | Runaway* | T=53°F Cloud | fine |
| | | | | " | " | " | " | B | | T=53°F F=512 | sl ned |

Ri ?

8⁶⁸

Emulsion Batches:

Dias F. 2002-08102... 22 1.83

Date Sun. Mon. 12-11 Oct. Observers W. Webber, C.P. ANT.

| 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. |
|-----------|--------------------------------|--------------|---------------------|-------------------------|-----------------------|----------------------------------|-------------|---------------------------|--------|
| 47174 | HD 210839 | 22 08.1 | +58°55' | 23:01 | 23:10 | 02°55 W | +59°20' | Fe/ND.6 100/10 | 80/30 |
| 47175 | HD 217811 | 22 58.2 | +43°31' | 23:23 | 23:48 | 01 45 W | +43°57' | Fe/ND.6 1020 | 200/50 |
| 47175 F | Focus Test | | | | | | | Fe/- | 14-14 |
| 47175 T ✓ | SPOT CALN FOR PLATES 47174-475 | | | 15 MIN @ 1500/15 | | 0 04 0 03 0 02 3500 4300 4010 | | | |

Spectr. Temp. 56°F Dome Temp./Hum. 52°F 93% Transparency Conditions

Focus 5.2
Spectr. Temp. Dome Temp./Hum.

Comparison
Filter Exp.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|----------|------------|---------|
| 80/70 | 2 | 5.29 | 06P | B.C. | 830/68 | B.S. | Ilad-E | A | Runway* | | |
| 200/50 | 3 | 6.33 | B2V | B.C. | 830/68 | B.S. | Ilad-E | B | B1/2-He* | 9= | |
| | | | | - | - | - | - | A | | ES12, 9=56 | sl red |

Spectr. Temp. ... 57°F

Dome Temp./Hum. 57°F / 90%

Transparency Conditions ... *partly clear*

92

Focus ... 5.1

Spectr. Temp. ... 50°F

Dome Temp./Hum. 42°F / 100%

(New D19)*so so humid most of night*Comparison
of Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------------|-------|--------------|--------|----------|------|-----------|--|-----------|
| 400/420 | 4"? | 7.8 | 56,6e M7e | BC | 830/.68 | 150/.3 | TaO-E | A | Crw-MIRAS | EXP = 95 ^m <i>cloud</i> | sl weak |
| 400/405 | 3-4" | 8.6 | M4e M8e | " | " | " | " | B | " | EXP = 189 ^m | good |
| 200/260 | 3" | 7.3 | M6e M8e | " | " | " | " | A | " | F=513, T=52°F EXP = 80 ^m | fine |
| | | | | " | " | 150/10 | " | B | | F=513 T=50 | v sl. red |

Spectr. Temp. 52°F.....

Dome Temp./Hum. 48°F./80%

Transparency Conditions cloudy & clear.....

Focus 5.5.....

Spectr. Temp.

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

Comparison
Filter Exp.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------|-----------|------------|-----------|-----------|---------------|-----------|---------------|----------|-------------------|--------------------------------|-------------|
| <u>2/50</u> | <u>4</u> | <u>6.2</u> | <u>F2</u> | <u>BC</u> | <u>830/68</u> | <u>BS</u> | <u>IIa-OE</u> | <u>A</u> | <u>Ceph/Evans</u> | <u>* m. sl. l. very strong</u> | <u>good</u> |
| <u>2/58</u> | <u>4"</u> | <u>29</u> | <u>B3</u> | <u>BC</u> | <u>830/68</u> | <u>BS</u> | <u>"</u> | <u>B</u> | <u>Ceph/Evans</u> | <u>cloud</u> | <u>wts</u> |

Sat-Sun

Date 1982/10/16-17 Observers Blu-Tu/KK-Tu

Emulsion Batches:

Do-OE... 2002... 13/102
 Da-Jeb... 09061... 00102 5x 3x
 8.7i. H₂ 2Aⁿ. 21°C

| 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. | Exp. Mtr. |
|-----------|----------------------------------|------------------------------------|---------------------|-------------------------|-----------------------|-------------------|---------------|---------------------------|--------------|-----------|
| 47181 ✓ | HD 6582 | 01 ^h 01 ^m .6 | +54° 26' | 23:10 | 23:59 | 0:16 W | +54° 50' | F/ND | 14-14 | 40/90 |
| 47181T | Spot + Calc for 54117 HD 6961 | 47181-83, 86 | | 15 min | @ 15V | 3900 | D3 4300 | D3 4300 | | |
| 47182 | HD 9696 | 01 05.0 | +54 37 | 00:01 | 00:16 | 0:30 W | | Fc/ND | 14-14 | 40/70 |
| 47183 | HD 29316 | 04 32.0 | +53 17 | 00:20 | 01:05 | 2:10 E | | Fc/ND | 10-10 -10 | 40/70 |
| 47183F | Focus test | | | | " | " | " | Fc/- | 12-12 | |
| 47184 | HD 33328 | 05 04.4 | -8 53 | 01:15 | 02:21 | 1:23 E | - | Fc/- | 10-10- | 40/130 |
| 47184T ✓ | Spot + Calc for | 47184, 85 | | 15 min | @ 15V | 3900 | 17.5V 4300 | 15V 4300 | 10V 4300 | |
| 47185 | HD 47105 | 6 31.9 | +16 29 | 02 24 | 02 28 | 2:45 E | | Fc/- | 14-14 | 40/90 |
| 47186 | HD 32147 | 4 55.9 | -5 52 | 02 33 | 04 08 | 0 33 W | | Fc/ND | 10-10.5 | 40/84 |
| 47186F | Focus Test | | | | | | | Fc/- | 12-12 | |

Spectr. Temp. $44^{\circ}F$Dome Temp./Hum. $35^{\circ}F/86\%$ inside Transparency Conditions *Fine - cloudy*..... 96Focus 512Spectr. Temp. $39.5^{\circ}F$Dome Temp./Hum. $32^{\circ}/92\%$ *outside off scale 100%+
all night**fast stars seen*Comparison
e/Filted Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------|--------------|------|----------|------|-------------|------------------------------|------------------|
| 40/90 | 5" | 5.81 | 65Vp | BC | 1200/-0.25 | BS | IIa-OE | A | Asm Sp/KK | | fine |
| | | | | | | | IIa-OE | | | | |
| 40/70 | 3-4" | 4.50 | A7V | BC | 1200/-0.25 | BS | IIa-OE | B | Asm Sp/KK | | vsl str |
| 40/70 | | 5.5 | A5m | BC | 1200/-0.25 | BS | IIa-OE | A | Asm Sp/KK | | fine |
| | | | | " | " | " | II-O | B | | T=40.5 F 512 | |
| 40/130 | 3" | 4.07 | B2Ve | BC | 220/.68 | BS | IIa-OE | A | Be / Blw | some cloud Set 516 T=40.5 | fine |
| | | | | | | | " | | | * both turned out fogged | |
| 40/90 | 3" | 1.9 | A0IV | BC | 230/.68 | BS | " | B | Asm Sp / KK | finger prints | vsl str. good |
| 200/18A | 2-3" | 7.77 | K3V | " | " | " | IIa-OE | A | Asm Sp / KK | clouds | good |
| | | | | " | " | " | II-O | B | | | |

Spectr. Temp. 49°F.....

Dome Temp./Hum. 38°F/83%

Transparency Conditions Some... cloud 98

Focus 51.6.....

Spectr. Temp. 42.5°F.....

Dome Temp./Hum. 43°F/95%

Comparison
e/Filter Exp.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------------|-------|------------------|--------|----------|------|------------|------------------------------|---------|
| 400/100 | 1"-2" | 7.8 | 56.6e M7e | BC | 830/.68 | 150/.3 | IIaO-E | A | Crow-MIRAS | cloud @ 160 (21) EXP = 125 | S/WK |
| | | | | | | | IIa-OE | | | | |
| 400/200 | " | 8.6 | M7e -M8e | BC | 830/.68 | 150/.3 | " | B | Crow-MIRAS | cloud EXP = 130 ^m | S/WK |
| | | | | " | " | 150/10 | IIaO | B | | | |

Spectr. Temp. +50°F

Dome Temp./Hum. +50°F/88%

Transparency Conditions ... Hazy - cloudy ... 100

Focus 512

Spectr. Temp. +50.5°F

Dome Temp./Hum. +47°F/93%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------|---------------|-----------|------|--------------|--------------|--------------|-------------------|--------------|-----------|---|------------------------------|
| 200/200 | 1" | 6.17 | F2 | BC | 830/68 | BS | IIa-OE | A | Leph-Rm | | Fine |
| | | | | | | | " | | | | |
| 40/120 | 2" | 4.07 | B70e | BC | 830/68 | BS | IIaJ-cb | B | Be Bl'n | *If important, weight towards cloud again | high fog aver- luperal |
| | | | | | | | " | | | | |
| 40/78 | 1" | 1.9 | A012 | BC | 830/68 | BS | " | A | Asm Split | | |
| 200/ | 1" | | | " | " | " | IIa-OE | A | | | |
| | | | | | | | IIaO | A | | Set 512 | Fine |

Spectr. Temp. 47°F

Dome Temp./Hum. 45°F/68%

Transparency Conditions Photometric almost 100

Focus 5.13

Spectr. Temp. 41°F

Dome Temp./Hum. 37°F/97%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|----------|-------|--------------|------|----------|------|-----------|---------|------------|
| | | | | BC. | 830/68 | BS | Ia0 | A | | | |
| 40/40 | 2" | 4.1 | K3I | " | " | " | Ia0 E | A | std vel | | Fine |
| 200/175 | 2.3" | 7.83 | B0II | " | " | " | " | B | Runaway * | | Fine |
| | | | | | | | Ia0 E | | | | |
| 200/175 | 2.3" | 7.93 | 05F | BC | 830/68 | BS | " | B | Runaway * | T=47°F | s/wk |
| 200/178 | " | 6.94 | B2IV | " | " | " | " | A | Runaway * | T=44°F | F=514 fine |
| 200/175 | " | 8.29 | 095II | " | " | " | " | B | Runaway * | | v s/wk |
| 200/175 | 2" | 8.31 | 095II(n) | " | " | " | " | A | Runaway * | | fine |
| 200/140 | " | 7.61 | 09I | " | " | " | " | B | Runaway * | T=41°F | F=515 fine |

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Date 1982/10/24-25..... Observers Blu-Tn/
SUN/MON

Emulsion Batches:

8^m (S) . IIu-OE. 20912. - 1910.2

| 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. | Exp. Mtr. |
|-----------|--------------------------|------------------------------------|---------------------|-------------------------|-----------------------|-----------------------------------|-------------|---------------------------|----------|-----------|
| 47200F | Focus TEST | | | | | 00 ^h 05 ^m W | +29° 20' | Fe/- | 12-12 | |
| 47200 | HD 184927 | 19 ^h 31 ^m .6 | +31° 04' | 17 51 | 21:19 | 03 ^h 39 ^m W | +31 13 | Fe/ND | 10-10-10 | 200/254 |
| 47200T | Spot Cal'n for 47200-201 | | | | 15 min @ 15V | D4 3900 | D3 4300 | D2 4810 | | |
| 47201 | HD 203516 | 21 ^h 15 ^m .4 | +37° 49' | 21 22 | 22:08 | 02 44 W | +38° 07' | Fe/ND | 10-10-10 | 200/202 |

Spectr. Temp. 47.5°F

Dome Temp./Hum. 46/64%

Transparency Conditions *Cirrus (general)* 106

Focus 5.3

rapid humidity rise 1st half

Spectr. Temp. 46°F

Dome Temp./Hum. 40°F/100+%

Compass
Type Filter Exp.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------|-------|--------------|------|----------|------|-----------|-------------------------------------|---------|
| | | | | 13C | 830/68 | 135 | IIa-0E | 13 | | T = 47.5°F | sl vecl |
| 200/254 | 1.4" | 7.30 | 132Vp | 13C | 830/68 | 135 | IIa-0E | 13 | He-15.2h* | ^{note} Broken 2pc saved | Fine |
| | | | | | | | IIa-0E | | | T = 46°F | |
| 200/202 | 2.3" | 6.17 | F2 | BC | 830/68 | 135 | IIa-0E | A | Capeid-Rm | | fine |

107

Mon-Tues

Date 1982 Oct 25-26 Observers W.K.-T.H.

Emulsion Batches:
8^m 68 IIa-OE 20012-19102
4^h 68 IIIa-OB 09061-06102

| 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. | Exp. Mtr. |
|-----------|---------------|---------------|---------------------|-------------------------|-----------------------|--------------------|-------------|---------------------------|----------|-----------|
| 47202 | HD 186791 | 19 41.5 | +10 22 | 17 48 | 17 58 | 0 11W | +10 34 | F ₄₃₅ | 12-12 | 40/100 |
| 47203 | HD 187567 | 19 45.4 | +7 39 | 17 59 | 19 32 | 1 42W | +7 49 | " | 12-12-10 | 40/182 |
| 47203T | Spot Calc for | 47202- | 08,10,12 | 15min @ 15V | | D4 3900 | D3 4300 | D7 4810 | | |
| 47204 | HD 197419 | 20 38.5 | +35 06 | 19 36 | 20 17 | 1 34W | +35 22 | F ₄₃₅ | 10-10-10 | 200/175 |
| 47205 | HD 217811 | 22 58.2 | +43 31 | 20 19 | 20 54 | 0 09E | +43 56 | " | 10-10-10 | 40/50 |
| 47206 | HD 214930 | 20 36.6 | +23 19 | 20 58 | 22 46 | 2 04W | +23 44 | " | 10-10-10 | 200/180 |
| 47207 | HD 3950 | 0 37.0 | +51 48 | 22 49 | 23 28 | 0 ^h 40W | +52° 13' | " | 10-10-10 | 50/77 |
| 47208 | HD 11606 | 1 48.8 | +58 47 | 23 27 | 00 05 | 0 10W | +59 09 | " | 10-10-10 | 50/77 |
| 47209 | HD 33328 | 5 4.4 | -8 53 | 00 12 | 00 53 | 2 16E | -8 47 | Fe/- | 10-10-10 | 40/125 |
| 47209T | Spot Calc for | 47209, 11, 13 | | 15min @ 17.5V | | D4 3900 | D3 4300 | D7 4810 | | |
| 47210 | HD 25799 | 4 00.3 | +32 06 | 00 57 | 01 57 | 0 09E | +32 18 | F ₄₃₅ | 10-10-10 | 80/100 |
| 47211 | HD 33328 | 5 4.4 | -8 53 | 02 01 | 02 28 | 0 41E | -8 47 | Fe/- | 13-13 | 40/125 |
| 47212 | HD 37017 | 5 30.4 | -4 34 | 02 31 | 03 25 | 0 09E | -4 31 | F ₄₃₅ | 13-13 | 40/125 |
| 47213 | HD 33328 | 5 4.4 | -8 53 | 03 28 | 03 58 | 0 50W | -8 47 | Fe/- | 13-13 | 40/125 |
| 47213F | Focus Test | | | | | 1 | " | " | 13-13 | |

Spectr. Temp. ... 50°F

Dome Temp./Hum. 50°F/50%

Transparency Conditions ... Cloudy ... 108

Focus 5.12

Spectr. Temp. ... 47°F

Dome Temp./Hum. 43°F/100%

Then Fine.
Very good Aurora seen today.

| Comparison pe/Filter/ Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------------------|-----------|--------|--------------|-------|-------|------------------|------|----------|------|---------|-----------------|---------|
| | 40/40 | 2" | | | BC | 830/68 | BS | II-OE | A | std Vel | | Fine |
| | 200/182 | 2" | 6.42 | B23Vp | BC | " | " | " | B | Runway | | Fine |
| | 200/175 | 1.3" | 6.52 | B2Ve | BC | 830/68 | BS | " | A | Runway | | Fine |
| | 40/50 | " | 6.38 | B2V | " | " | " | " | B | He-BIn | | Fine |
| | 200/180 | " | 7.39 | B2IV | " | " | " | " | A | Runway | | Fine |
| | 80/77 | " | 7.05 | B1IV | " | " | " | " | B | Runway | 50°F | Fine |
| | 80/72 | " | 7.08 | B2Ve | " | " | " | " | A | " | | slwk |
| | 40/125 | 2.3" | 4.07 | B2Ve | " | " | " | II-OE | B | Ro-BIn | 48°F | fine |
| | 80/100 | 1.3" | 7.11 | B2V | BC | 830/68 | BS | II-OE | A | SBIn | broken 1pc seal | Fine |
| | 40/125 | 2" | 4.07 | B2Ve | " | " | " | III-OE | B | Ro-BIn | | fine |
| | 80/100 | 2" | 6.42 | B2Vp | " | " | " | II-OE | A | B2Vp | | Fine |
| | 40/139 | 3" | 4.07 | B2Ve | " | " | " | II-OE | B | Ro-BIn | | fine |
| | | | | | " | " | " | II-OE | A | | | |

Date Tues-Wed, Oct. 26-27/82 Observers Gris - Th

Emulsion Batches:

8^m 62°
IIa.O.E. 20012... 26102 23 181

| 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. |
|-----------|------------------------|------------------------------------|---------------------|-------------------------|-----------------------|----------------------------------|-------------|---------------------------|-----------------|
| 47214F | Focus test | | | | | 0 ^h 01 ^m E | +10° 34' | Fe/— | 13-13 |
| 47214 | HD 186791 | 19 ^h 41 ^m .5 | +10° 22' | 17:45 | 17:48 | 0 ^h 05 ^m W | +10° 34' | Fe/ND 6 | 13-13 4/44 |
| 47215 ✓ | HD 192281 | 20 09.0 | +39 58 | 17:54 | 19:41 | 1 31 W | +40° 12' | Fe/ND 6 | 10-10-10 20/175 |
| 47215T | Spot Calc for 47214-22 | | | 15 min @ | 15V 3900 | D4 D3 D2 4300 4810 | | | |
| 47216 | HD 191566 | 20 ^h 05 ^m .5 | +35° 11' | 19:44 | 21:36 | 3 30 W | +35° 24' | Fe/ND 6 | 10-10-10 20/175 |
| 47217 | HD 219188 | 23 08.9 | +4 27 | 21:40 | 22:18 | 1 07 W | +4° 54' | " | 10-10-10 20/175 |
| 47218 | HD 220057 | 23 15.7 | +60 37 | 22:23 | 22:55 | 1 39 W | +61 03 | " | 10-10-10 20/175 |
| 47219 | HD 14220 | 02 12.8 | +52 07 | 22:59 | 23:33 | 0 42 E | +52 28 | " | 10-10-10 20/175 |
| 47220 | HD 16429 | 02 33.1 | +60 51 | 23:36 | 01:37 | 1 01 W | +61 12 | " | 10-10-10 20/175 |
| 47221 | HD 37737 | 05 35.7 | +36 09 | 01:41 | 04:12 | 0 34 W | +36 10 | " | 10-10-10 20/175 |
| 47222 | HD 37657 | 05 35.1 | +43 00 | 04:15 | 05:49 | 2 12 W | +43 02 | " | 10-10-10 20/175 |

Spectr. Temp. ^{54°}.....

Dome Temp./Hum. ^{+52°F/62%}.....

Transparency Conditions ^{51.8%}.....

Focus ⁵¹¹.....

Spectr. Temp. ^{49°F}.....

Dome Temp./Hum. ^{+42°F/99%}.....

Comparison
e/Filter Exp.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|-------|--------------|------|----------------------|------|---------------|---|---------|
| | | | | BC | 830/68 | BS | II ₀ -0 | A | | | |
| 40/44 | 1" | 4.1 | K3II | " | " | " | II ₀ -0 E | A | Std. Velocity | some lens still and broke in rapid motion. | Fine |
| 200/175 | 1" | 7.93 | 05F | " | " | " | " | B | Runaway* | | slut |
| 200/175 | 1" | 7.26 | B05II | BC | 830/68 | BS | " | A | Runaway* | | Fe slut |
| 200/178 | 1" | 7.01 | B05III | " | " | " | " | B | " | possibly 400g/m | slut |
| 40/37 | 1" | 6.94 | B2II | " | " | " | " | A | " | | Fe slut |
| 80/72 | 1" | 7.01 | B2I | " | " | " | " | B | " | | Fe slut |
| 200/175 | 1" | 8.29 | 095II | " | " | " | " | A | " | bad Label - In process T = 53°F with 1' off line | slut |
| 200/175 | <1" | 8.31 | 095II | " | " | " | " | B | " | | Fine |
| 200/205 | 2" | 7.22 | B2I | " | " | " | " | A | " | T = 51°F f = 52 | Fe |

(* All Fe are composites allowed)
slut

21 198

Spectr. Temp. 55°F

Dome Temp./Hum. 50°F 81%

Transparency Conditions cirrus streaks 112

Focus 510

Spectr. Temp. 53°F

Dome Temp./Hum. 46°F 100%

Compu-
de-Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------------|----------------------|-------|--------------|---------|----------------------|------|------------|------------------------------------|-------------------|
| 40/30 | 1" | 4.4 | MSI ₁₀ -I | BC | 830/.68 | 150/3 | II ₁₀₀ E | A | Std Vcl. | d/Hen, tried to keep comp off slit | fine |
| 500/55 | | 10 | MSV | . | - | - | - | B | Asm-Sp/ICK | aborted - too slow | vv weak |
| | | | | | | | II ₁₀₀ -E | | | | |
| 800/604 | 1" | V: 8.07 | MI ₁₀ | BC. | 830/.68 | 150/3 | II ₁₀₀ -E | A | Asm-Sp/ICK | | good v si flex |
| | | | | | | 150/1.0 | II ₁₀₀ E | B | | too humid | v sl blue |

Date *Fri/Sat Oct 29/30* Observers *Wh/Ra*Emulsion Batches:
8^m 68^o Tri-E 20012-27102
4 1/2^m 68^o Tri-Jeb - 26102

21 186

19 200

| 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. |
|-----------|---------------------------------|------------------------------------|---------------------|---------------------------------|-----------------------|----------------------|------------------|---------------------------|----------|
| 47226 | HD 203156 | 21 ^h 15 ^m .4 | +37° 49' | 21 ^h 41 ^m | 22:25 | 3 ^h 21 W | +38° 09' | Fe/NDL | 10-16-16 |
| 47226T | SPOT CALN' FOR PLATES 47226-27. | | | | 15MIN@1500LTS | | 0 2 0 23 0 02 | 3900 4300 9810 | |
| 47227 | HD 220057 | 23 15.7 | +60° 37' | 22:31 | 23:29 | 02 ^h 25 W | +61° 03' | Fe/ND.6 | 10-10-16 |
| 47228 | HD 33328 | 05 ^h 04 ^m .4 | -8° 53' | 23:38 | 00:45 | 02 ^h 08 E | -08 47' | Fe/- | 10-10-16 |
| 47228T | SPOT CALN' FOR PLATE 47228 | | | | 15MIN@ D4 | | 0 17.5 0 15 0 15 | 3900 4300 4810 | |
| 47228F | FOCUS TEST | | | | | | | Fe/- | 13-13 |
| 47228T2 | SPOT CALN' NEW Tri-Jeb batch | | | | 4300 | 15 ^m | 1500LTS | D3 | |

Spectr. Temp. 57°F Dome Temp./Hum. $54^{\circ}\text{F}/93\%$ Transparency Conditions Hazy, T. Cirrus

Focus 510

Spectr. Temp. 55°F Dome Temp./Hum. $52^{\circ}\text{F}/>100\%$

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------------|-------|-------|--------------|------|----------|------|------------|---------------------------|--------------|
| 200/200 | 2-3 | $B = 6.17$ | F2 | BC | 830/.680 | BS | IIaDe | A | Rm - Crph. | | Faint |
| | | | | | | | IIaE | | | * Fe 410 slit | |
| 200/175 | | 6.94 | B2IV | B.C. | 830/.680 | B.S. | IIaE | B | Runway | | Faint |
| 80/250 | 3-4 | $B = 4.07$ | B2IIc | BC | 830/.680 | " | IIIaJ-eb | A | Bln - Be | | slit |
| | | | | | | | IIIaJ-eb | | | entirely blue | |
| | | | | | | | IIaE | B | | Humidity too high to wait | Cent vs blue |

Emulsion Batches:

... Dia-OE 20012-27102 23²⁰⁰
 * Dia-OE 20012-07112

Mon-Tues
 Date Nov. 8-9/82 Observers M.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. |
|-----------|---------------------------|--------------|---------------------|-------------------------|-----------------------|---------------------|-------------|---------------------------|----------|
| 47233 | HD 206901 | 21 40.1 | +25 11 | 19:20 | 20 12 | 1 22 W | +25 32 | Fel- | 5-5 |
| 47234 | HD 221264 | 23 25.5 | +30 18 | 20 20 | 22 50 | 2 14 W | +30 44 | Fel/ND | 15-15-15 |
| 47234T | Spot Calc | for 47233-39 | | 15min | 15V | D4 3900 | D3 4300 | D2 4810 | |
| 47234F | Focus Test | | | | | 2 18W | +30 44 | Fel | 10-10 |
| 47235 | HD 6582 | 01 01.6 | +54 26 | 23 28 | 23 57 | 1 45 W | +54 49 | Fel- | 6-6 |
| 47236 | HD 6961 | 01 05.0 | +54 37 | 00 02 | 00 21 | 1 51 ^x W | +55 02 | " | 6-6 |
| 47237 | HD 29316 | 04 32.0 | +53 17 | 00 25 | 00 59 | 0 45 E | +53 25 | " | 6-6 |
| 47238 | HD 47105 ^{8 Gen} | 06 31.9 | +16 29 | 01 04 | 01 07 | 2 35 E | +16 25 | " | 6-6 |
| 47239 | HD 56986 ^{8 Gen} | 07 14.1 | +22 10 | 01 15 | 01 24 | 3 00 E | +22 01 | " | 6-6 |
| 47240 | HD 35317 | 05 18.8 | -00 58 | 01 36 | 03 59 | 1 32 W | -00 50 | Fel/ND | 15-15 |
| 47240T | Spot Calc | for 47240 | | 15min | 15V | D4 3900 | D3 4300 | D2 4810 | |
| | HD 74874 | 08 41.5 | +06 47 | 04 03 | | | +06 30 | | |

Spectr. Temp. 51°

Dome Temp./Hum. 54°/75%

Transparency Conditions Sl. Hazy - cloudy

Focus 511

Spectr. Temp. 43

Dome Temp./Hum. 37°/92%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------|--------------|------|----------|------|------------|---|-------------|
| 80/163 | 3" | 44 | F5IV | BC | 1200/-025 | BS | U-O-E | A | Asm Bin KK | DUST COVER partly closed during 1st half exp | Fe str Fine |
| 200/103 | 3" | 7.7 | F5 | BC | 1200/-025 | BS | " | B | Asm Bin KK | cloud | sl weak |
| | | | | BC | 1200/-025 | BS | U-O | B | | T=46° set 511 | OK |
| 40/70 | 2.3 | 5.8 | G5Vp | BC | " | " | U-O-E | B | Asm Bin KK | | Fe str Fine |
| 40/62 | " | 4.50 | A7V | " | " | " | " | A | " | | Fe str Fine |
| 40/69 | 3-6 | 5.4 | A5m | " | " | " | " | B | " | CIRRUS | fine |
| 40/60 | 3" | 1.9 | A0II | " | " | " | " | A | " | | fine |
| 40/71 | 3' | 3.9 | F0IV | " | " | " | " | B | " | set 512 T=45° | fine |
| 100/256 | 3" | 6.9 | A7Z | " | " | " | U-O-E | B | " | Combined spectra of 2 but unreplicated comp Haze @ 4.2 mic = 200 | Fine |
| 40/ | | 4. | | | | | " | A | | THICK CIRRUS | |

119

Tues-Wed

Date ... 11/19/77 ... Observers ... P.A.-Th./MG-Th.

Emulsion Batches:

8^m 68^o

... Du-DE 2002-0712

| 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. |
| 47241 | HD 20305-H100 | 21 02.4 | +37 47 | 18 57 | 19 48 | 1 28 W | +38 08 | Fel | 12-12 |
| 47241 T | For 47241-46 | 15 min @ 15V | | 04 39 min | D3 4300 | D2 4610 | | | |
| 47242 | HD 16157-JWCS | 2 ^h 37.6 | +65 ^o 18 | 20 44 | 21 02 | 05 15 W | +65 39 | Fel/ND | 13-15-13 |
| 47243 | HD 21372 = 2nd | 22 51.0 | +2 13 | 00 12 | 01 04 | 05 00 W | +42 37 | Fel/ND | 5-5-? |
| 47244 | HD 21375 = 1st | 22 57.3 | +41 47 | 01 06 | 01 35 | 05 32 W | +42 12 | Fel- FEL/ND- | 6 18 |
| 47245 | HD 56996 | 7 14.1 | +22 10 | 01 42 | 02 18 | 02 03 E | +22 00 | Fel- | 7-7 |
| 47246 | HD 4-105 | 6 31.9 | -16 29 | 02 20 | 02 27 | 01 11 E | +16 23 | " | 6-6 |
| 47247 | HD 66751 | 7 59.9 | +70 0 | 02 33 | | | +69 45 | " | 4 |
| 47246A | Focus Test | | | | | 0 | | Fel- | 7-7 |

Spectr. Temp. ... 143°F ...

Dome Temp./Hum. 138°F/86%

Transparency Conditions ... *Some clouds - cirrus* ...

Focus ... 514 ...

Spectr. Temp. ... 135°F ...

Dome Temp./Hum. 130°F/90%

| Comparison pe/Filter, Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------------------|-----------|--------|--------------|------|-------|------------------|------|----------|------|-------------|---|------------------------|
| 72-2 | 20/220 | 3" | 62 | F2 | BC | 330/35 | RS | FOVE | B | Cap/Evan | | Fire |
| | | | | | | | | FOVE | | | | |
| 2-4 P-15-8 | 400/245 | 3"-2" | 84 | BAG | " | " | " | " | B | Rm | * Comp timer allowing are to fire longer <u>cloud</u> | vs/ok ok to Fire |
| 1-6-8 | 30/130 | 3" | 5.7 | A2 | " | 1200/-025 | " | " | A | Asm. Sp. RR | | Fire |
| 1-6-8 | 30/76 | 3" | 3.6 | B6p | " | " | " | " | B | " | <u>cloud</u> | Slut |
| 1-7-7 | 30/150 | 3" | 3.9 | FOV | " | " | " | " | A | " | | Fire |
| 1-8-5 | 48/71 | 2" | 1.9 | ADIV | " | " | " | " | B | " | | Fire |
| | 450/ | | | | | | | | | | Sorbed in | |
| | | | | | BC | 1200/-025 | RS | II90E | B | | Set 514 T=35°F | * but OK |
| | | | | | | | | | | | * Hartman must probably faulty (do not use this fans test) | |

121

Mon-Tues

Date Nov. 15/3, 92 Observers ...

Emulsion Batches:

A12 098-02E 05031 - 15112

29 192

| 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. | Exp. Mtr. |
|-----------|----------------|-----------------------------------|---------------------|-------------------------|-----------------------|---------------------|---------------|---------------------------|------|-----------|
| 47247 | HD 179315 | 19 ^h 7 ^m .0 | +4° 11 | 17:53 | 19:54 | 4 ^h 06 W | | Fe/- 3-6 Ne/- 6-10 | | 400/99 |
| 47247T | Spot color for | 47247-50 | | 15 min @ | 4810 | | 7V D2 5950 | | | |
| 47248 | HD 201078 | 21 ^h 02.3 | +30° 47 | 20:07 | 21:40 | 3 ^h 56 W | +31 05 | Fe/- 4-4-4 Ne/- 8-8-8 | | 200/110 |
| 47249 | HD 9250 | 1 ^h 25.9 | +63° 04 | 21:45 | 01 27 | 3 18 W | +63 30 | Fe/- 4-4-4 Ne/- 8-8-8 | | 200/77 |
| 47250 | HD 31964 | 4 54.8 | +43° 41 | 1:32 | 1:55 | 0 16 W | +43° 46' | Fe/- 6-6 Ne/- 11-11 | | 400/21 |

Spectr. Temp. $+37^{\circ}\text{F}$

Dome Temp./Hum. $+31^{\circ}\text{F}/65\%$

Transparency Conditions $S1. h. 42\% - cloudy$

Focus 5.14

Spectr. Temp. 32°F

Dome Temp./Hum. $27^{\circ}\text{F}/92\%$

Compass
Type Filter Exp.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-------------------|--------|-------|--------------|---------------|----------|------|----------|------------------------|----------------------------|
| 400/99 | 3" | \checkmark 7.69 | G256 | BC | 1200/.7 | 150° | 098-00E | B | Ans Proc | \checkmark V Filter | good in center |
| | | | | | | | 098-00E | | | | |
| 200/110 | 2.3" | \checkmark 5.8 | F5.5II | BC | 1200/.7 | 150° | " | A | " | V Filter T=36°F | fine |
| 200/77 | 3" | \checkmark 7.3 | G0 | BC | 1200/.7 | 150° | " | B | " | V Filter Some cloud | fine not guided @ end |
| 40/21 | 3" | \checkmark 2.99 | F07a | " | " | " | " | A | " | V Filter cloud | fine some guiding error |

X
Focus Test Failed, Why?
This is well described on the Telescope performance sheet!!

Emulsion Batches:

8W IIa-0E... 22012... 12112 21 196

Date Wed.-Thurs., Nov. 17-18/82 Observers Gus-Ri.....

| 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. | Exp. Mtr. |
|-----------|-------------------------------|------------------------------------|---------------------|-------------------------|-----------------------|----------------------------------|-------------|---------------------------|----------|-----------|
| 47253F | Focus Test | | | | | 0 ^h 06 ^m W | +10° 30' | Fe/- | 15-15 | |
| 47253 | HD 186791 | 19 ^h 41. ^m 5 | +10° 22' | 17:20 | 17:23 | 1 06 W | +10° 33' | Fe/ND.6 | 18-18 | +/45 |
| 47254 | HD 189957 | 19 57.6 | +41 43 | 17:28 | 19:30 | 2 59 W | +41° 57' | Fe/ND.6 | 12-12-12 | 400/350 |
| 47254T | SPOT CAL FOR PLATES 47253-60, | | | | 15 MIN @ 150 VOLTS | | 3900 | 4300 | 4800 | |
| 47255 | HD 214930 | 22 ^h 36. ^m 6 | +23° 19' | 19:34 | 21:17 | 2 ^h 05 ^m W | +23° 44' | Fe/ND.6 | 12-12-12 | 400/350 |
| 47256 | HD 3950 | 0 37.0 | +51 48 | 21:21 | 22:18 | 1 06 W | +52° 13' | Fe/ND.6 | 12-12-12 | 200/178 |
| 47257 | HD 14220 | 2 12.8 | +52 07 | 22:22 | 23:35 | 0 45 W | +52° 28' | Fe/ND.6 | 12-12-12 | 200/178 |
| 47258 | HD 37737 | 5 35.7 | +36 09 | 23:42 | 2:16 | 0 04 W | +36° 10' | Fe/ND.6 | 12-12-12 | 400/350 |
| 47259 | HD 39680 | 5 49.0 | +13 49 | 2:19 | 5:01 | 2 38 W | +13° 50' | Fe/ND.6 | 12-12-12 | 400/350 |
| 47260 | HD 37657 | 5 35.1 | +43 00 | 5:05 | 6:44 | 4 34 W | +43° 02' | Fe/ND.6 | 12-12-12 | 400/350 |
| 47260F | Focus Test | | | | | | | Fe/- | 15-15 | |

Spectr. Temp. 42°F

Dome Temp./Hum. 40°F/64%

Transparency Conditions

Focus 514

Spectr. Temp. 38°F

Dome Temp./Hum. 34°F/100%

40/36

Comparison
Filter Exp

1-15-5

10.6.19.6

10.6.19.7

03.0.02

3.0.400

1.4.20.2

1.4.20.3

1.4.20.4

1.4.20.5

1.4.20.6

1.4.20.7

1.4.20.8

1-15-5

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|----------|-------|--------------|------|----------|------|-------------|--------------|---------|
| | | | | BC | 830/.68 | BS | IIa0 | A | | | OK |
| 40/45 | 2" | 4.1 | K3II | " | " | " | IIa-0E | B | Std. Vebuty | | Fine |
| 400/350 | 2-3 | 7.83 | B0III | " | " | " | " | A | Runaway* | | fine |
| | | | | | | | IIa-0E | | | | |
| 400/350 | | 7.39 | B2II | BC. | 830/.68 | BS | " | B | Runaway* | T=42°F | fine |
| 200/175 | | 7.05 | B1II | " | " | " | " | A | Runaway* | T=41°F | fine |
| 200/178 | | 7.01 | B2IV | " | " | " | " | B | Runaway* | T=40°F F=515 | fine |
| 400/350 | 3 | 8.31 | 09.5I(m) | " | " | " | " | A | Runaway* | T=39°F | fine |
| 400/350 | 3 | 8.01 | 06.5I(m) | " | " | " | " | B | Runaway* | T=38°F F=516 | fine |
| 400/335 | | 7.22 | B3I(m) | " | " | " | " | A | Runaway* | T=38°F | fine |
| | | | | " | " | " | IIa0 | B | | T=38°F F=516 | vs blue |

Date ~~THURS-FRI~~ Nov 18-19 Observers ... ARE - P. / Bl. - Ri.

Emulsion Batches:
 4¹/₂ - 08 098-02E-05031-15112 33 190
 4¹/₂ - 68 Tri-Jeb 09061-09112 221
 8-65 Tri-Jeb 20012-16112.....

| 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. |
|-----------|---------------------------------------|------------------------------------|----------------------|---------------------------------|---------------------------------|---------------------|-------------|---------------------------|-------------------------|
| 47261F | FOCUS TEST | | | | | | | Fe/- | 15-15 |
| 47261 | HD179315 | 19 ^h 7. ^m 0 | +4° 11' | 17 ^h 30 ^m | 19 ^h 44 ^m | 04 ^h 06W | -04 19' | Fe/- No/- | 3 6 7 14 |
| 47261F | SPOT CALIB' FOR PLATES 47261-47266 | | | 15 MIN | 15 VOLTS FO10 | 70 DI Hd | 70 D2 | | |
| 47262 | HD9250 | 1 ^h 25. ^m 9 | +63° 04 ^m | 19 ^h 54 ^m | 22 ^h 15 ^m | 00 ^h 16W | +63° 28' | Fe/- No/- | 3-3- 7-7- 400/286 |
| 47263 | HD217476 | 22 ^h 55.9 | +56° 25' | 22 ^h 22 | 22 ^h 45 | 3 ^h 20W | +56° 50' | Fe/- No/- | 3-3-3 7-7-7 80/40 |
| 47264 | HD224014 | 23 ^h 44.4 | +56° 57' | 22 ^h 57 | 23 ^h 07 | 2 ^h 47W | +56° 23' | Fe/- No/- | 3-3- 7-7- 80/40 |
| 47265 | HD7927 | 1 ^h 13.8 | +57° 42' | 23 ^h 12 | 23 ^h 27 | 1 ^h 42 W | +58° 07' | Fe/- No/- | 3-3- 7-7- 80/40 |
| 47266 | HD 31964 | 4 ^h 54.8 | +43° 41' | 23 ^h 32 | 23 ^h 40 | 1 ^h 46 E | +43° 45' | Fe/- No/- | 3-6 7-14 60/20 |
| 47267 | HD 33328 | 05 ^h 04. ^m 4 | -8° 53' | 23:53 | 00:20 | 1 15 E | -8° 46' | Fe/- | 13-13 100/ |
| 47268 | HD 25799 | 04 ^h 00. ^m 3 | +32° 06' | 00:27 | 01:45 | 1 14 W | +32° 20' | Fe/ND | 12-12- 100/250 |
| 47268F1 | SPOT CALIB' FOR PLATES 47267, 70, 72. | | | | 15 MIN @ 24 | 3900 | 4300 | | |
| 47268F2 | SPOT CALIB FOR PLATES 47268-69, 72. | | | | 15 MIN @ 15 VOLTS | 3900 | 4300 | | |
| 47269 | HD 37017 | 05 ^h 30. ^m 4 | -4° 34' | 01:49 | 02:55 | 00:54 W | -4° 31' | Fe/ND | 12-12-1 80/20 |
| 47270 | HD 33328 | 05 ^h 04. ^m 4 | -8° 53' | 02:58 | 03:40 | 02:06 W | -8° 48' | Fe/- | 13-13 100/ |
| 47271 | HD 37468 | 05 ^h 33. ^m 7 | -2° 31' | 03:45 | 04:03 | 01:57 W | -2° 37' | Fe/- | 13-13 100/20 |
| 47272 | HD 37796 | 05 ^h 35. ^m 9 | -1° 32' | 04:06 | 04:55 | 02:00 W | -1° 32' | Fe/ND | 12-12- 100/250 |

Spectr. Temp. 43°F

Dome Temp./Hum. 40°F 88%

Transparency Conditions ... *lazy & some scattered clouds*

128

Focus 513

Spectr. Temp. 42°F

Dome Temp./Hum. 36°F/100%+

Comparison
pe/Filted Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------|-------|--------------|---------------|----------|------|---------|--|------------------------------------|
| | | | | B.C. | 1200/700 | 150/10 | 098-02 | A | | BROKEN 2 PIECES | OK |
| 800/185 | | 7.69 | G2Ib | " | " | 150/5 46.5 | 098-02E | B | Are Puz | REMOVED FILTER HALFWAY THROUGH EXPOSURE | Wk |
| | | | | | | | 098-02E | | | | |
| 400/286 | 2-3 | 7.3 | GOIb | " | 1200/.700 | 150/.5 | 098-02E | A | " | NO FILTER | Fine |
| 80/40 | | 4.99 | GOIa | " | 1200/.700 | 150/.5 | 098-02E | B | " | V FILTER ON <i>clouds</i> | Fine |
| 80/40 | | 4.95 | F8Iap | " | 1200/.700 | 150/.5 | 098-02E | A | " | V FILTER ON | Fine |
| 80/40 | | 4.95 | FOIa | " | 1200/.700 | 150/.5 | 098-02E | B | " | " | gng Fine |
| 40/20 | | 2.99 | FOIa | " | 1200/.700 | 150/.5 | 098-02E | A | " | " | fine |
| 40/151 | 2 | 4.07 | B2IVe | BC | 830/68 | BS | IIIa-Jeb | A | Bc-Bln | T=42°F F=514 | sl strong |
| 200/250 | | 7.11 | B2V | BC | 830/68 | BS | IIa-Oe | B | SB-Bln | | sl strong dust? |
| | | | | | | | IIIa-Jeb | | | <i>many</i> | |
| | | | | | | | IIa-Oe | | | | |
| 80/100 | | 6.42 | B2Vp | BC | 830/68 | BS | IIa-Oe | A | He-Red | T=42°F | Fine |
| 40/130 | | 4.07 | B2IV | BC | 830/68 | BS | IIIa-JEB | B | Bc-Bln | | Fine |
| 40/132 | | 3.71 | B2V | " | 830/68 | BS | IIa-Oe | A | Bc-Bln | | sl. strong dust? wide, unsh. |
| 200/55 | | 6.62 | B2V | BC | 830/68 | BS | IIa-Oe | B | He-Red | | Wk |

8^h68^m Emulsion Batches:
 IIa-OE 20012-16112... 22 195

Date Fri.-Sat., Nov. 19-20/82. Observers GIS.-RI.....

| 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. |
|-----------|--------------------------------|------------------------------------|---------------------|-------------------------|-----------------------|----------------------------------|-------------|---------------------------|---------|
| 47273 | HD 203064 | 21 ^h 14 ^m .7 | +43° 31' | 18:44 | 18:55 | 1 ^h 14 ^m W | +43° 51' | Fe/ND.6 | 18-18 |
| 47274 | HD 210839 | 22 08.1 | +58 55 | 18:58 | 19:11 | 0 36 W | +59 18 | Fe/ND.6 | 18-18 |
| 47274T | SPOT CALIB FOR PLATES 47273-82 | | | | 15 MIN @ 1500 | 1500 | 2000 | 3000 | 400 |
| 47275 | HD 197419 | 20 ^h 38.5 | +35° 06' | 19:15 | 20:26 | 3 ^h 21 ^m W | +35° 22' | Fe/ND.6 | 12-12-1 |
| 47276 | HD 4142 | 0 38.9 | +47 19 | 20:30 | 20:50 | 0 16 E | +47 45 | Fe/ND.6 | 12-12-1 |
| 47277 | HD 30614 | 4 44.1 | +66 10 | 20:57 | 21:03 | 4 12 E | +66 16 | Fe/ND.6 | 12-12-1 |
| 47278 | HD 29866 | 4 37.3 | +40 36 | 21:08 | 21:52 | 3 14 E | +40 43 | Fe/ND.6 | 18-18 |
| 47279 | HD 24912 | 3 52.5 | +35 30 | 21:55 | 22:00 | 2 19 E | +35 42 | Fe/ND.6 | 18-18 |
| 47280 | HD 34078 | 5 09.7 | +34 12 | 22:05 | 23:17 | 2 21 E | +34 16 | Fe/ND.6 | 12-12-1 |
| 47281 | HD 36576 | 5 27.7 | +18 28 | 23:20 | 0:30 | 1 24 E | +18 30 | Fe/ND.6 | 12-12-1 |
| 47282 | HD 22484 | 3 31.8 | +0 05 | 0:34 | 0:45 | 0 46 W | +0 21 | Fe/ND.6 | 12-12 |
| 47282F | Focus Test | | | | | 0 46 W | +0 21 | Fe/— | 18-1 |

Spectr. Temp. 46°F Dome Temp./Hum. 44°F / 93% Transparency Conditions HAZY & scattered clouds

Focus ... 513

Spectr. Temp. 46°F Dome Temp./Hum. 42°F / 100%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------------|--------|-----------|--------|-------|--------------|------|----------|------|--------------|------------------------|---------|
| 40/35 | 3" | 4.98 | 08I | BC | 830/68 | BS | Ia-OE | A | Runaway* | | fine |
| 80/72 | | 5.29 | 06f | " | " | " | " | B | Runaway* | | fine |
| | | | | | | | Ia-O-E | | | | |
| 200/175 | | 6.52 | B2Ie | BC | 830/68 | BS | " | A | Runaway* | | fine |
| 200/175 | | 5.53 | B5I | " | " | " | " | B | Runaway* | | fine |
| 40/37 | | 4.33 | 09.5Ia | " | " | " | " | A | Runaway* | T=47°F | fine |
| 200/175 | | 5.87 | B2Ie | " | " | " | " | B | Runaway* | | fine |
| 40/35 | | 4.04 | 07 | " | " | " | " | A | Runaway* | | fine |
| 200/175 | 3-4 | 6.18 | 09.5I | " | " | " | " | B | Runaway* | T=47°F some clouds | fine |
| 200/190* | " | 5.71 | B2Ie | " | " | " | " | A | Runaway* | | fine |
| 200/28* | | 4.4 | F8I | " | " | " | " | B | Std Velocity | Too cloudy | wk |
| | | | | | | | Ia-O | A | | T=46°F F=53 | ok |
| * Counter skipped "9"s | | | | | | | | | | still dwarf on slicer? | |
| actually ~10% less | | | | | | | | | | | |

Emulsion Batches:

098-02.05031-22112... 32 18A

Date MON. TOES. NOV. 22-23 Observers ARA-R.

| 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. |
| 47283 | HD 201078 | 2 ^h 02.3 | +30° 47' | 17 ^h 20 | 18:24 | 1 ^h 07 W | +30° 07' | F ₂ - D ₂ - | 3-8-3 7-7-7 |
| 47283T | SPOT CALIB FOR PLATES 47283-84 | | | | 15 MIN | 0 D3850 4810 | 0 D170 H ₂ | 0 D270 5450 | |
| 47284 | HD 239994 | 22 ^h 31.8 | 57° 04' | 19 ^h 55 | 21:50 | 3 ^h 07 W | +57° 13' | F ₂ - ND- | 3-6 7-14 |
| 47284T | <u>HD 13258</u> 1378 FOCUS TEST | | | | | | | F ₂ - | 10-10 |
| " 72 | " | | | | | | | F ₂ - | 10-10 |
| " 73 | " | | | | | | | F ₂ - | " |
| " 74 | " | | | | | | | F ₂ - | " |

Spectr. Te.

Focus...

Spectr. Te.

Exp. Mtr.

400/200

800/40

Spectr. Temp. 480F Dome Temp./Hum. 480F 59% Transparency Conditions

Focus 512

Spectr. Temp. Dome Temp./Hum. 400F 82%

13A

Comparison
Type Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------------------|------|-------|--------------|----------------|----------|------|---------|---------------|-------------------|
| 400/200 | | ^v 5.8 | F5.5 | B.C. | 1200/.7 | 150/.5 GC13 | 098-02E | A | | 'V' FILTER ON | Fine |
| | | | | | | | 098-02E | | | | |
| 800/40 | | ^v 9.0 | FB | " | 830/.95 | 250/.5 GC13 | 098-02E | B | | T=47 513 | Comp str V W K |
| | | | | | 635 | 250 GC13 | | A | | 45 513 | |
| | | | | | 900/.38 | 150 GC13 | 098-02 | B | | 9450F F. 516 | |
| | | | | | " | " | " | A | | NO 8470 F=518 | |
| | | | | | " | " | " | B | | 8473 F=520 | |

Spectr. Temp. $36\frac{1}{2}^{\circ}\text{F}$Dome Temp./Hum. $29^{\circ}\text{F}/74\%$ Transparency Conditions... *Some cloud*..... 136

Focus... 516.....

Spectr. Temp. 31°FDome Temp./Hum. $26^{\circ}\text{F}/90\%$ *good Aurora 2nd half - flashing*Comparison
type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------------------|-------|------------------|------|----------|------|---------------|---------------|---------|
| 40/45 | 4" | 4.1 | K3II | BC | 830/68 | BS | IIa-OE | A | Std. Velocity | | fine |
| 200/43 | 5" | 7.27 | B5V | " | " | " | " | B | Runaway* | cloud | wt |
| | | | | BC | 830/68 | BS | " | A | | T=32.5F F=516 | |
| 40/35 | 3" | 5.71 | B2II _{me} | " | " | " | " | A | Runaway* | T=32° F=518 | fine |
| 200/175 | 3.4" | 7.29 | B6V | " | " | " | " | B | Runaway* | | fine |
| 200/70 | 3" | 6.04 | B2V _{me} | " | " | " | " | A | Runaway* | cloud | slut |

Date Thurs.-Fri., Nov. 25-26,
182 Observers Gils.-Th.....Emulsion Batches:
8¹⁹ IIa-DE..20012...19/11.2.

| 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. | Exp. Mtr. |
|-----------|------------------------|---------------------|---------------------|-------------------------|-----------------------|----------------------------------|-------------|---------------------------|----------|-----------|
| 47290 | HD 29866 | 4 ^h 37.3 | +40° 36' | 22:25 | 23:07 | 1 ^h 36 ^m E | +40° 45' | Fe/NO.6 | 17-17 | 200/176 |
| 47291 | HD 34078 | 5 09.7 | +34 12 | 23:11 | 23:50 | 1 24 E | +34 16 | Fe/NO.6 | 12-12-12 | 200/175 |
| 47292 | HD 37657 | 5 35.1 | +43 00 | 23:53 | 1:00 | 0 40 E | +43 02 | Fe/NO.6 | 12-12-12 | 200/76 |
| 47292T | Spot Calc for 47290-92 | | | | 15 min @ 15U | D4 D3 3900 4300 | D2 4810 | | | |

Spectr. Temp. 36°FDome Temp./Hum. $31^{\circ}\text{F}/91\%$ Transparency Conditions *hazy*.....

138

Focus $5/6$Spectr. Temp. 35°FDome Temp./Hum. $27^{\circ}\text{F}/92\%$ Comparison
Type/Filter Exp.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------|-------|------------------|------|----------|------|----------|---------|---------|
| 200/176 | 2.4" | 5.87 | B8In | BC. | 830/68 | BS | IIa-DE | A | Runaway* | | Fine |
| 200/175 | 4.2" | 6.18 | 09.5V | " | " | " | " | B | Runaway* | | Fine |
| 200/76 | 2" | 7.22 | B3Znc | " | " | " | " | A | Runaway* | | slut |
| | | | | | | | " | | | | |

Spectr. Temp. 32°F Dome Temp./Hum. $27^{\circ}\text{F}/94\%$ Transparency Conditions .. cloudy .. *then just sooty* 140Focus 518 Spectr. Temp. 29°F Dome Temp./Hum. $23^{\circ}\text{F}/98\%$

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---|--------|-----------|-------|-------|--------------|------|----------|------|-----------|--------------|---------|
| 80130 200/108 | 3" | 5.87 | B8In | BC | 830/68 | BS | IIa-DE | A | Runaway* | thru cloud | Fine |
| | | | | | | " | | | | | |
| 200/175 | 2" | 6.11 | 09E2 | BC | 830/68 | BS | " | B | Runaway* | | Fine |
| 200/177 | 13" | 5.67 | B1Z | " | " | " | " | A | Runaway* | T=305°F | Fine |
| 200/176 | " | 6.04 | B2Ine | " | " | " | " | B | Runaway* | | Fine |
| 200/250 | 2" | 5.28 | BE | " | " | " | " | B | Skell-Bln | | Fine |
| | | | | " | " | " | " | A | | T=29°F F=518 | |
| all plates Nw 24/25 - Nw 27/28 developed together | | | | | | | | | | | |

Spectr. Temp. 53°F

Dome Temp./Hum 45°F/86%

Transparency Conditions ... getting progressively cloudier

Focus 512

Spectr. Temp. 48°F

Dome Temp./Hum 39°F/100%

Comparison
type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------|--------------|------|----------|------|---------|---|-------------|
| | | | | BC | 830/68 | B5 | IIa-O | A | | | OK |
| 400/303 | 3-8" | 7.30 | B2Vp | " | " | " | IIa-OE | A | He+Bl | blotter 2 pcs Loosey seeing - thin cloud | stark OK |
| | | | | | " | " | " | | | | |

Date Mon-Tues. Dec 6-7. 1962 Observers M.G.-T.M./C.L.-T.M.....

Emulsion Batches:

8m 68° ... IIa-OE 29912 - 25112
 4 1/2" 69° ... III. 9: J.E. 6. 09. 06. 1 - 08112
 * IIa-OE 20012 - 04122

| 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. |
|------------------|---------------------------|--------------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|----------------|
| 47299 | HD 315182 | 22 38.3 | +29 42 | 17 31 | 18 15 | 00 18 W | +30 07 | Fe/ND 6 | 6-6-6 |
| 47299T | Spot Calc for 47299-47305 | | | 15min @ 15V @ D4 | 3600 | 3900 | 4100 | | |
| 47300 | HD 302109 | 21 08.7 | +29 49 | 18 19 | 19 28 | 03 00 W | +30 08 | Fe/ND 6 | 6-6-6 |
| 47301 | HD 5442 | 00 51.2 | +37 57 | 19 32 | 19 55 | 00 16 E | +38 23 | Fe/ND 6 | 6-6-6 |
| 47302 | HD 17878 | 02 47.2 | +52 21 | 20 32 | 22 21 | 00 14 W | +52 40 | " | 9-9 |
| 47303 | HD 8538 ^{±Coss} | 01 19.3 | +59 43 | 20 24 | 22 38 | 01 57 W | +60 06 | " | 9-9 |
| 47304 | HD 18925 | 02 57.6 | +53 07 | 22 12 | 23 15 | 00 56 W | +53 24 | " | 9-9 |
| 47305 | HD 37017 | 05 ^h 30.4 | -4° 39' | 23:27 | 01:30 | 00 40 W | -4° 31' | Fe/ND | 12-12-12 |
| 47306 | HD 33328 | 05 04.4 | -8° 53' | 01:33 | 02:13 | 01 50 W | -8° 47' | Fe/- | 12-12 |
| 47307 | HD 37776 | 05 35.9 | -1° 32' | 02:16 | 04:24 | 03 30 W | -1° 32' | Fe/ND | 12-12-12 |
| 47307T1 | Spot Calc for 47306 | | | 15min @ D4 | 3900 | 4300 | 4810 | | |
| 47307T2 | Spot Calc for 47307 | | | 15min @ 15V | D4 | 113 | 122 | | |
| | | | | | 3900 | 4300 | 4810 | | |
| 47307 | HD 38021/2 | 10^h 05.3 | +20° 49' | 09 27 | | | | Fe/ND | 12- |
| 47307F | Revs Test | | | | | 00 20 E | +20 25 | Fe/- | 12- |

Spectr. Temp. 48°F

Dome Temp./Hum. 39°F / 72%

Transparency Conditions Clearing - some clouds

Focus 5.12

Heavy cirrus at end

Spectr. Temp. 37°F

Dome Temp./Hum. 34°F / 81%

* All Fene Camps Toastrung - there is some overexposure in some areas

Comparison type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------|--------|-----------|---------------|---------------|-------------------|---------------|---------------------|--------------|--------------------|----------------------------|-----------------|
| 20/400 | 2-3" | 3.8 | G2 | BC | 1200/.2 | 150/5 | Ia-DE | A | Asm Sp - KK | | X Fine |
| | | | | | | | " | | Asm Sp - KK | | |
| 40/200 | 2-3" | 4.2 | G8II | BC | 1200/.2 | 150/5 | " | B | std | some cloud T-45°F | X Fine |
| 40/60 | 3" | 4.0 | A5V | BC | 1200/.2 | 150/5 | " | A | Asm Sp KK | search for faint stars NW! | Fine |
| 30/450 | 3" | V=3.09 | G5II + A5 | " | " | " | " | B | " | cloud. | X complete Fine |
| 40/142 | 3" | 2.81 | A5V | " | " | " | " | A | std | probly strong | X sl star. |
| 40/222 | 3" | 3.63 | G8II + A5V | " | " | " | " | B | Asm Sp KK | | Fine |
| 200/251 | 4.5" | 6.42 | B2Z | BC | 830/68 | B3 | IIa-DE | A | He-rich * | T=40°F set 515 | Fine |
| 40/152 | " | 4.07 | B2IV | BC | 830/68 | B3 | IIIa-JEB | B | He-rich | T=39°F | v sl star |
| 200/135 | 4" | 6.83 | B2V | BC | 830/68 | B3 | IIa-DE | A | He-rich * | cloud | sl wk |
| | | | | | | | IIIa-JEB | | | | |
| | | | | | | | IIa-DE | | | | |
| 200/ | | 7.20 | A5 | BC | 830/68 | B3 | IIIa-JEB | B | vis 13h | cloud | |
| | | | | BC | 830/68 | B3 | IIa-DE | B | | T=37°F | v sl blue |

Note - extra plate in IIIa-JEB is a try test of the Oct IIIa-JEB before it is vacuum. There are only a few stars.

Spectr. Temp. 25.5°

Dome Temp./Hum. $17^{\circ}\text{F}/66\%$

Transparency Conditions

Focus 520

Spectr. Temp. 19°F

Dome Temp./Hum. $11^{\circ}\text{F}/66\%$

Comparison Type/Filt/Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|---------------|--------------|-----------------|
| | | | | B.C. | 830/68 | B5 | IIo-0 | A | | | very sl. red |
| 40/40 | >5" | 4.6 | F7E | " | " | " | IT20-E | B | Std. Velocity | | fine |
| 400/350 | >5" | 6.52 | B2E | " | " | " | " | A | Runway* | | fine |
| | | | | | | | IT20-E | | | | |
| 200/175 | 3-4" | 5.53 | B5Z | BC | 830/68 | B5 | " | B | Runway* | T=21°F F=521 | v sl str |
| | | | | " | " | " | " | A | | T=19°F F=521 | v, very sl. red |
| 80/51 | 2-3" | 5.67 | B1Z | " | " | " | " | A | Runway* | | fine |

Spectr. Temp. 28°F

Dome Temp./Hum. 20°F/68%

Transparency Conditions *fair*

Focus 51.9

Spectr. Temp. 22°F

Dome Temp./Hum. 16°F/98%

Comparison
Type/Filter Exp

F-22

F-22

F-22

B02

B03

B02

B02

B02

B02

B02

B02

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---|--------|-----------|-------|-------|--------------|------|----------|------|----------|------------------------|----------------------------|
| | | | | BC. | 830/.68 | BS | IIa-0 | A | | | ok stellar weak |
| 80/70 | 3" | 5.53 | B5V | " | " | " | IIa-0E | B | Runaway* | | fine |
| 400/350 | 3 | 7.08 | B2Ire | " | " | " | " | A | Runaway* | T=27°F F=520 | fine |
| | | | | | | | IIa-0E | | | | |
| 50/350 | 3-4 | 7.29 | B6V | BC. | 830/.68 | B.S. | " | B | Runaway* | T=26°F | fine |
| 100/320 | " | 7.61 | O9I | " | " | " | " | A | Runaway* | T=25°F | v s/wt defective emulsion* |
| 20/114 | | 7.18 | B2V | " | " | " | " | B | Runaway* | T=22°F clouds in F=521 | defective emulsion* |
| | | | | | | | | A | | T=22°F F=521 | |
| * peeling emulsion on all plates this night | | | | | | | | | | | |

Date Sun.-Mon., Dec. 12-13, '82 Observers Gis. - Ri.....

Emulsion Batches:

8^m 68° IIa-OE 20012-49122.45^m 68° IIa-TEB 0906-08112

| 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. | Exp Mtr |
|-----------|-----------------------------|------------------------------------|---------------------|-------------------------|-----------------------|----------------------------------|--------------------------------------|---------------------------|----------|---------|
| 47325F | Focus test | | | | | 0 ^h 05 ^m W | +5° 33' | Fel - | 12-12 | |
| 47325 | HD 222368 | 23 ^h 34 ^m .8 | +5° 05' | 17:10 | 17:30 | 1 01 E | +5° 35' | Fel/ND6 | 17-17 | 80/12 |
| 47326 | HD 203064 | 21 14.7 | +43 31 | 17:34 | 17:56 | 1 46 W | +43 55 | Fel/ND6 | 17-17 | 80/7 |
| 47327 | HD 210839 | 22 08.1 | +58 55 | 18:00 | 18:24 | 1 20 W | +59 23 | Fel/ND6 | 17-17 | 81/7 |
| 47327T | SPOT CALN FOR PLATES 47325- | | | | 15 MIN @ 15 VOLTS | | ⊙ 17.0 ⊙ 150 ⊙ 150 3900 4300 | | | |
| 47328 | HD 219188 | 23 ^h 08 ^m .9 | +4° 27' | 18:30 | 21:15 | 3 10 W | +4° 57' | Fel/ND6 | 12-12-12 | 80/12 |
| 47329 | HD 29866 | 4 37.3 | +40 36 | 21:22 | 22:25 | 1 10 E | +40 47 | Fel/ND6 | 12-12-12 | 80/12 |
| 47330 | HD 33328 | 5 04.4 | -8 53 | 22:32 | 23:31 | 0 29 E | -8 43 | Fel - | 12-12 | 80/12 |
| 47330T | SPOT CALN FOR PLATES 47330- | | | | 15 MIN @ 129 | | ⊙ 17.0 ⊙ 150 ⊙ 150 3900 4300 4410 | | | |
| 47331 | HD 36576 | 5 ^h 27.7 | +18° 28' | 23:36 | 0:27 | 0 04 W | +18° 35' | Fel/ND6 | 17-17 | 80/12 |
| 47332 | HD 33328 | 5 04.4 | -8 53 | 0:31 | 1:32 | 1 33 W | -8 43 | Fel - | 12-12 | 80/12 |
| 47333 | HD 43112 | 6 09.5 | +13 53 | 1:37 | 2:36 | 1 30 W | +13 54 | Fel/ND6 | 17-17 | 80/12 |
| 47334 | HD 45995 | 6 25.6 | +11 19 | 2:39 | 3:51 | 2 30 W | +11 18 | Fel/ND6 | 17-17 | 80/12 |
| 47335 | HD 76095 | 8 49.0 | +26 36 | 3:56 | 5:53 | 2 08 W | +26 19 | Fel/ND6 | 12-12-12 | 80/12 |
| 47335F | Focus test | | | | | 2 01 W | +26 19 | Fel - | 12-12 | |

Spectr. Temp. 23°F Dome Temp./Hum. $19^{\circ}\text{F}/72\%$ Transparency Conditions *Mostly very clear and cp. H* 152

Focus .520

Spectr. Temp. 9°F Dome Temp./Hum. $+02^{\circ}\text{F}/96\%$

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------|-------|--------------|------|----------|------|---------------|--|--------------------|
| | | | | BC. | 830/.68 | BS. | IIa-O | A | | | very sl. red |
| 80/70 | 4" | 4.6 | F7V | " | " | " | IIa-OE | B | Std. Velocity | | fine |
| 80/70 | | 4.98 | 06II | " | " | " | " | A | Runaway* | T=23°F | fine |
| 80/70 | | 5.24 | 06F | " | " | " | " | B | Runaway* | T=22½°F | fine |
| | | | | | | | IIa-O-E | | | | |
| 400/250 | 4-5" | 7.01 | B05II | BC | 830/.68 | BS | " | A | Runaway* | T=22°F <small>Some cloud</small> F=521 | good |
| 200/175 | 5-6" | 5.77 | B8IIa | " | " | " | " | B | Runaway* | T=17°F F=522 | fine |
| 200/300 | | 4.07 | B2IIc | " | " | " | IIIa-JEb | A | Be-Bln | T=16°F | sl strong |
| | | | | | | | IIIa-JEb | | | | |
| 200/175 | | 5.71 | B2IVc | BC | 830/.68 | BS | IIa-OE | B | Runaway* | T=15°F F=523 | fine |
| 200/300 | 4" | 4.07 | B2IVc | " | " | " | IIIa-JEb | A | Be-Bln | T=14°F | sl strong |
| 200/175 | | 5.67 | B1I | " | " | " | IIa-OE | B | Runaway* | T=13°F | fine |
| 200/175 | | 6.04 | B2IVc | " | " | " | " | A | Runaway* | T=12°F F=524 | fine |
| 200/308 | | 6.67 | G0 | " | " | " | " | B | Asm. Sp-8K | T=10°F <small>Some cloud</small> | fine. |
| | | | | " | " | " | " | A | | T=9°F F=52+ | no stellar discord |

Emulsion Batches:
 43^W 68^W ... 10122^W

Date *Thurs. Fri. Dec 16-17/82* Observers *P. 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. |
|-----------|--------------------|-----------------------------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| 47336 | HD 33328 | 05 29 ^h 4 | -8° 53' | 21 23 | 23 11 | 0 34E | -8° 47' | F/- | 12-12 |
| 47336T | Spot Cal for 47336 | | | 15 ^h 24 | 3400 | 4300 | 4810 | | |
| 47337 | HD 33328 | 05 044 | -8 53 | 23 13 | 01 04 | 01 20W | -8 48 | F/- | 12-12 |
| 47338 | HD 33328 | 25 ^h 24 ^m 4 | -8° 53' | 01 07 | 02 55 | 03 12W | " | " | 8-8-8 |

Spectr. T.
 Focus.
 Spectr. T.
 Exp. Mtr.

40/120
 40/120
 40/120

Spectr. Temp. $+32.5^{\circ}\text{F}$
 Focus 517
 Spectr. Temp. 22°F

Dome Temp./Hum. $+19^{\circ}\text{F} / 90\%$
 Dome Temp./Hum. $12^{\circ}\text{F} / 94\%$

Transparency Conditions *Clear by 5:30*

| Comparison Type/Filter Exo. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------------|-----------|--------------|-----------|-------|-------|--------------|------|----------|------|----------------------------------|------------|---------|
| 5/1-120 | 40/120 | 76° | 4.07 | B2IVe | BC | 830/68 | B5 | III-JEL | A | B ₀ -B ₁ u | clouds | good |
| | | | | | | | | " | | | | |
| 5-120 | 40/120 | 77° | 4.07 | B2IVe | BC | 830/68 | B5 | " | B | B ₀ -B ₁ u | T=28°F 519 | good |
| 2-120 | 40/120 | 76° | 4.07 | B2IVe | BC | 830/68 | B5 | " | A | " | | good |

Fe was at least visible on all trials should reduce in future. Tm

Date *1967 Dec. 26:27* Observers *Wbr...Tn.....*

Emulsion Batches:

A-10E 200.12 -13126 11¹⁹⁰
W-106 090.61 -23127 27³⁰

| 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. |
|-----------|-----------------------|---------------------------|--------------------------|-------------------------|-----------------------|-------------------|---------------|---------------------------|---------------|
| 47343 | <i>HD 217811</i> | <i>22 58.2</i> | <i>+13 31</i> | <i>18 24</i> | <i>20 35</i> | <i>3 36 W</i> | <i>+43 59</i> | <i>Fe/ND 12-12-12</i> | <i>20/300</i> |
| 47343T | <i>Spot Calc. for</i> | <i>47343, 50</i> | | | <i>15min @ 15V</i> | <i>3900</i> | <i>4300</i> | <i>4810</i> | |
| 47344 | <i>HD 33328</i> | <i>05 04.4</i> | <i>-8 53</i> | <i>20 42</i> | <i>21 32</i> | <i>1 32 E</i> | <i>-8 46</i> | <i>Fe/ND 10-10</i> | <i>80/100</i> |
| 47344T | <i>Spot Calc. for</i> | <i>47344-49,</i> | | <i>15min @ DA</i> | <i>3900</i> | <i>4300</i> | <i>4810</i> | | |
| | | <i>04 03.2</i> | <i>+13 26</i> | <i>21 40</i> | | | | <i>Fe/ND</i> | |
| 47345 | <i>HD 33328</i> | <i>05 04.4</i> | <i>-8 53</i> | <i>21 47</i> | <i>22 23</i> | <i>0 42 E</i> | <i>-8 46</i> | <i>Fe/ND 10-10</i> | <i>80/300</i> |
| 47346 | " | " | " | <i>22 24</i> | <i>23 05</i> | <i>0 00</i> | " | <i>Fe/ND 10-10</i> | <i>80/300</i> |
| 47347 | " | " | " | <i>23 06</i> | <i>00 02</i> | <i>0 57 W</i> | " | <i>Fe/ND 10-10</i> | <i>80/300</i> |
| 47348 | " | " | " | <i>00 03</i> | <i>00 59</i> | <i>1 54 W</i> | " | <i>Fe/ND 10-10</i> | <i>80/300</i> |
| 47349 | <i>HD 37468</i> | <i>05 33.7</i> | <i>-2 39</i> | <i>01 03</i> | <i>01 35</i> | <i>2 01 W</i> | " | <i>Fe/ND 10-10</i> | <i>80/300</i> |
| 47350 | <i>HD 82021/2</i> | <i>10 03.8</i> | <i>+20 49</i> | <i>01 43</i> | <i>04 19</i> | <i>0 16 W</i> | <i>+20 25</i> | <i>Fe/ND 12-12-12</i> | <i>80/300</i> |
| 47350F | <i>Focus test</i> | | | | | " | " | <i>Fe/ND 20-20</i> | |

Spectr. Temp. ... + 93°F Dome Temp./Humt ^{37°F} / ... 79.6 Transparency Conditions ... *Semi cloudy*
 Focus 515-516
 Spectr. Temp. ... + 350°F Dome Temp./Humt ^{127°F} / ... 100.7

Comparison
pe/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------|--------|-----------|----------------------|---------------|-------------------|------|------------------------|--------|------------------------|----------------|--------------------|
| 200/250 | 3-4" | 678 | B2V | BC | 830/68 | B5 | D-OE II-OE | A | He-Fl | | |
| 80/240 | 3" | 407 | B3V | BC | 830/68 | B5 | III-O-Sub III-O-Sub | B | Re-Bln | | Fine |
| 400+ | | | | BC | | | D-O | A | | too cloudy | |
| 80/240 | 3" | 407 | B3V | BC | 830/68 | B5 | III-O-Sub | B | Re-Bln | some cloud | Fine |
| 80/240 | " | " | " | " | " | " | " | A | " | T=39°F | Fine |
| 80/270 | " | " | " | " | " | " | " | B | " | | Fine |
| 80/240 | " | " | " | " | " | " | " | A | " | T=37°F set 516 | Fine |
| 80/240 | " | 351 | O9-V | " | " | " | " | B | " | | Fine |
| 400/300 | 3-3" | 720 | ⁸⁵ 720 | " | " | " | D-OE * III-O-Sub | A B | VI-Bln T=35 set 516 | Someday | Fine convul/Kel |

Note, This is, I think, the
 ideal for me exp for the III-O-Sub
 Th

* Also a test of the 10120 III-O-Sub hatch
Note This hatch looks OK by the note.

Spectr. Temp. 30.....

Dome Temp./Hum. 22°F / 75%

Transparency Conditions

Focus 5.18.....

Spectr. Temp. 27°F.....

Dome Temp./Hum. 21°F / 72%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------|--------|-----------|-------------------|-------|--------------|------|------------------------------------|------|--------------------------------|---------------|--------------|
| | | | | 13C | 830/128 | BS | I ₁₀ O | A | | | |
| 200/200 | 3.4 | 6.2 | F2 | " | " | " | I ₁₀ OE | B | Exp/Evaw | | Fine Fe slat |
| | | | | | | | I ₁₀ -E | | | | |
| 400/ | | | | | | | | A | Evaw | 28°F from 519 | |
| 10/48 | | 4.07 | 3-I ₁₀ | 3C | 830/128 | BS | I ₁₀ -I ₁₀ B | A | B ₂ B ₁₀ | some clouds | vslat |
| | | | | | | | I ₁₀ -I ₁₀ B | | | | |
| | | | | " | " | " | I ₁₀ OE | B | | CLOUD | 90°F |

JD = 245338.47

8^m 68^o

Emulsion Batches:

140-E 20012-30122 22 203

Date ~~1951-7-4~~ 1953

Observers ~~Rm-Ri // Ly-Ri~~

| 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. |
| 47354 | HD 18374 | 2 ^h 57.1 | +3 ^o 12 | 21:35 | 21:42 | 1 ^h 16W | +4 ^o 02 | Fe/ND | 17-17 |
| 47355 | HD 30022-111K | 4 ^h 41.1 | +36 ^o 33 | 21:48 | 22:14 | 2 ^h 04W | +36 ^o 41 | Fe/ND | 12-12 |
| 47356 | 3 spot Cal | | | 15:00 | 15:00 | 04 35 | 53 4300 | D -100 | |
| 47356 | HD 28911 | 4 28.2 | +13 02 | 00 21 | 02 17 | 4 20 W | +13 13 | Fe/ND | 14-14 |
| 47357 | HD 118216 | 13 30.3 | +37 42 | 02 30 | 03 00 | 4 00 E | +37 17 | Fe/- | 7-14 |
| 47357F | Folow | | | | | 0 00 | +37 | Fe/- | 15-15 |
| 47357H | | | 2 | D1 | 7 ^v | Hd | | | |
| | | | | " | " | | | | |

Spectr. Te
Focus.
Spectr. Te

Exp. Mtr.

40/260
5/660

Spectr. Temp. 33°F

Dome Temp./Hum. 20°F 68%

Transparency Conditions good

164

Focus 517

till 2¹⁰

Spectr. Temp. 20°F

Dome Temp./Hum.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------|--------------|------|----------|------|-------------|-------------------------------------|------------------------------------|
| 50/24 | | 2.8 | M15B | BC | 830/68 | BS | Ilce | A | Std Vel | | Fine |
| 400/120 | 5 | 7.9 | F15 | " | " | " | " | B | Ceph/Evanis | 32°F | 9.5/8 wk |
| | | | | | | | Ilce | | | | |
| 400/260 | | 7.0 | F5V | BC | 1200/-0.25 | BS | Ilce | A | Hyades - Ly | 24°F | F=516 stuck up ave wonder |
| 8/66 | 4.5 | 4.9 | F2V | " | " | " | " | B | H+K - Ly | 20°F | F=517 ave fine ok |
| | | | | " | " | " | " | A | | cloud 20°F | centre kba |
| | | | | | | | 098 | | | last 15 min @ 10 ⁴ /hour | |
| | | | | | | | 098 | | | | |

Emulsion Batches:

III-E 20012-03013 20 190
 III-E 6 09061-10122 20 305

Date TUES. WED JAN 4. 1953 Observers Ly-Ri

| 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. |
| 47357F8 | FOCUS TEST | | | 17:00 | | | | | A-A |
| 47358 | HD 9296 | 01 30.3 1 30 20.2 | 48 13 +48 12.7 | 20:39 | 21:50 | 02 55W | +48° 40' | Fe/- | 7-77 |
| 47358T | SPOT CAL FOR PLATES 47 | | 358-63,66 | 15 MIN @ 1500LTS | | 0 D4 3900 | 0 D3 4300 | 3 D2 4810 | |
| 47359 | HD 28911 | 4 28.2 | +13 02 | 21:54 | 23 40 | 01 46W | 13 13 | Fe/- | 7-17 |
| 47360 | HD 37043 | 05 30.5 | -05 59 | 23:45 | 23 50 | 00 54W | -05 55 | Fe/- | 10-10 |
| 47361 | " | " | " | 23:50 | 23 54 | 00 59W | " | Fe/- | 10-10 |
| 47362 | HD 36486 | 05 26.9 | -00 22 | 23:57 | 00:00 | 01 08W | -00 17 | Fe/- | 10-10 |
| 47363 | " | " | " | 00:01 | 00:04 | 01 12W | " | Fe/- | 10-10 |
| 47364 | HD 33328 | 05 04.4 | -8° 53' | 00:10 | 01:04 | 02 35W | -08 44' | Fe/- | 10-10 |
| 47364T | SPOT CAL FOR PLATES 47364+65 | | | 15 MIN @ D4 | | 0 17.50 3900 | 0 150 4300 | 3 150 4810 | |
| 47365 | HD 37468 | 05 33.7 | -2° 39' | 01:09 | 02:26 | 03 29W | -02 35' | Fe/- | 10-10 |
| 47366 | HD 62044 | 07 37.0 | +29° 07' | 02:33 | 03:30 | 02 27W | +28 50' | Fe/- | 7-77 |
| 47366F | Focus test | | | | | " | " | Fe/- | 14-14 |

Spectr. Temp. 23°F Dome Temp./Hum. 25°F 87% Transparency Conditions secondary frost over at start -2 1/2 ho

Focus 517 EXP HR 40/35 Spectr. Temp. 32°F Dome Temp./Hum. 28°F 80%

was 96% 2.17.00

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------|-------|--------------|------------|----------|------|-----------|--------------|-------------|
| | | | | BC | 1250/-025 | B.S. Two | | A | | 23°F 517 | OK |
| 60/160 | 2 | 7.13 | SKI | BC | 1200/-025 | B.S. Two-E | | B | Ly* | 26°F 517 | |
| | | | | | | Two-E | | | | | |
| 200/200 | 3-4 | 7.0 | FSV | BC | 1200/-025 | B.S. Two-E | | A | Hyades-Ly | 26°F cirrus | Fine |
| 20/30 | 3 | 2.8 | 09III | " | " | " | " | B | MSB-Ly | 28°F | Fine |
| 20/30 | 3 | " | " | " | " | " | " | A | " | | * Fine |
| 20/30 | 3 | 2.2 | 095A | " | " | " | " | B | " | | * Fine |
| 20/30 | 3 | " | " | " | " | " | " | A | " | | * Fine |
| 40/120 | 3 | 4.0 | B2IV | " | 830/68 | " | Two-Jeb | B | Re-Blu | 29°F set 518 | Fine |
| | | | | | | | Two-Jeb | | | | |
| 40/120 | 3 | 3.5 | 095Y | BC | 830/68 | BS | Two-Jeb | A | SB-Blu | 30°F cirrus | Fine |
| 40/70 | 3 | 5.4 | K1III | BC | 1200/-025 | " | Two-E | B | H-K-Ly | 31°F set 516 | Fine |
| | | | | " | " | " | " | A | | 32°F | cont sl Red |

Spectr. Temp. +34°
 Focus 516, 517
 Spectr. Temp. +27°E

Dome Temp./Humt 25°/66%
 Dome Temp./Humt 18°/97%

Transparency Conditions Clear
 Very good Aurora on next night
 ie night of Jan 210
 (no observing however)

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------|--------------|------|----------|------|---------|------------------------|--|
| 80/32 | 2" | 4.07 | B210 | BC | 830/68 | BS | Il-a-Jel | A | Be-Bh | cloud (print) * | VWk |
| 80/240 | 4" | " | " | " | " | " | " | B | " | set 517 | Fine |
| 100/390 | 3" | 7.11 | B210 | BC | 830/68 | BS | Il-a-OE | A | SB-Bh | broken 2pc saved (one) | Fine |
| 30/20 | 3" | 4.07 | B210 | BC | 830/68 | BS | Il-a-Jel | A | Be-Bh | set 519 | v wk |
| | | | | " | " | " | Il-a-OE | B | T-27°E | set 519 | That's huge flow present cent red in red Blue OK huge slope |

* Would have discarded but kept for development to look for the night flow

Emulsion Batches:

H.O.E. 20012 - 0501323²⁰²
 → W.L. Jek. 59061 - 23122

Date Jan 12-13, 1953 Observers Rim-Tn

That funny
batch

| 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. |
|-----------|--|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|--------|
| 47371F | Focus test | | | | 15 50 | 0 05W | +5°40 | Fe/ - | 25-2 |
| 47371 | HD 203156 HR 157 | 21 15.4 | +37°49 | 17:37 | 20:00 | 5 52 W | +38°10 | Fe/150 | 12-2-2 |
| 47371T | Spot + Calc for 47371-72 | | | | 15 min @ 15V | 3900 | 4300 | +200 | |
| 47372 | HD 203156 - Sec. Cam HD 203159 | 3 59.0 | +62°04 | 20 25 | 21:48 | 0 53 W | +62°18 | Fe/150 | 13-2-2 |

Spectr. T.
Focus
Spectr.
Exp. Mtr.
12/19
11/14

Spectr. Temp. 21° Dome Temp./Hum. $12^{\circ}\text{F}/73\%$ Transparency Conditions $Ok - cloudy$

Focus 520

Spectr. Temp. 19°F Dome Temp./Hum. $10^{\circ}\text{F}/90\%$

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------------|-------|--------------|------|----------|------|------------|-------------------------------------|--------------|
| | | | | 13C | 830/.68 | BS | IIIaJ | A | | $24^{\circ}\text{F}/520$ | Cents/Red |
| 200/197 | 54 | 6.2 | F2 | " | " | " | IIaDE | B | Ceph/Evans | v thin cloud | Fine |
| | | | | | | | " | | | | |
| 100/14 | 8" | 7.0 | 40% 101 | " | " | " | " | B | Bin/Evans | cloud checked <u>fast</u> carefully | Fastest slit |

Note The #2 Exp IIIaJ box in fig has 3 IIIaJs of the "furry" batch. One is 47371F and the other 2 are blanks taken straight from box. An inked "R" is on the one taken from the RH side of an exp box. I got these 3 out from L \rightarrow R with gas connection at back of box. In

PS I presume they can be just thrown in with the IIIaO's for development. It may tell us more if the beastly comas get stronger with extra development.

05113

Spectr. Temp. ⁺¹³.....

Dome Temp./Hum. ^{+8°F/78%}.....

Transparency Conditions 172

Focus ⁵²⁴.....

Spectr. Temp.

Dome Temp./Hum. ^{+5°F/}.....

Comparison
Type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|---------------|-------------------|---------------|-----------------|--------------|------------|-------------------------------|----------|
| 100/148 | 3" | G2 | F2 | BC | 730/68 | BS | T00E | A | Cepi/EVARS | Straw maybe later/ed ZL | vsl weak |
| | | | | | | | " | | | double 71 | |
| | | | | BC | 830/68 | BS | T00E | A | | | |

175

Tour 20 people worked at NQC 2392

Emulsion Batches:

Date 9 hrs. Fri. Jan 20-21 Observers W.L., S., B., R. // M.K., R., R. - 1301

| 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. |
|----------------------|---------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| Zulu 9 [✓] | α Gem | | | 12:00 | | | | | |
| 10 [✓] | Bateja | | | | | | | | |
| 11 [✓] | Back | | | | | | | | |
| 12 [✓] | Fe De + W 66 + ND 10 | | | | | | | | |
| 13 [✓] | α Cen, A | | | | | | | | |
| 14 [✓] | " | | | | | | | | |
| 15 [✓] | " | | | | | | | | |
| 16 [✓] | " | | | | | | | | |
| Zulu 17 [✓] | Tungela | | | 01:12 | 01:19 | | | | |
| 18 [✓] | " | | | 01:15 | 01:16 | | | | |
| Zulu 19 [✓] | HD 69243 ^R CNC | 8 11 | +12°03' | 01:36 | 02:06 | 01 35W | | | |
| Zulu 20 [✓] | HD 81748 ^R Low | 9 42.2 | +11 54' | 02:16 | 02:46 | 04 13W | | | |
| 21 [✓] | dark current | | | 02:47 | 02:48 | | | | |
| 22 [✓] | Fe/De | | | | | | | Fe/De W 66 + ND 10 | |
| 23 [✓] | Tungela | | | 02:53 | 02:54 | | | | |
| 24 [✓] | " | | | 02:57 | 02:58 | | | | |

Spectr. Temp. Dome Temp./Hum. Transparency Conditions

Focus

Spectr. Temp. Dome Temp./Hum.

Comparison
Type/Filtet Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|---------|--------------|--------|----------|------|---------|---------|---------|
| 480 m | | | | RETICON | 1200/.475 | 250/.7 | | | | | |
| 480 m | | | | | | | | | | | |
| 1400 m | | | | | | | | | | | |
| 10 m | | | | | | | | | | | |
| 180 L | | | | | | | | | | | |
| 240 - | | | | | | | | | | | |
| 240 - | | | | | | | | | | | |
| 240 - | | | | | | | | | | | |
| 1200 m | | | | | | | | | | | |
| 60 m | | | | | | | | | | | |
| 200/96 | | V= 6.0 | gm7c | RETICON | 1200/.475 | 250/.7 | | | | | |
| 80/77 | | U 5.0 | gm8c | " | " | 250/.3 | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 60 m | | | | | | | | | | | |
| 60 m | | | | | | | | | | | |

F. 10e
21.667/4710

Emulsion Batches:

Date ~~Jan 20-21~~ Jan 20-21 Observers Ri-Boi

| 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. |
| 25 | 41 112916 | 13 ^h 2 ^m 23 | -25° 10' | 03:05 | 03:35 | 1758E | | | 20/59 |
| 26 | HD 95689 | 10 57.7 | +62° 17' | 03:52 | 04:55 | 04 90W | | | 20/173 |
| 27 | HD 126315 | 13 43.7 | +49° 49' | 04:05 | 04:13 | 14 50E | | | 20/354 |
| 28 | Dark | | | 04:15 | 04:16 | | | | |
| 29 | Fe/No w/ 66 + ND1.0 | | | 04:18 | | | | | 10 min |
| 30 | 9 min gate | | | 04:19 | 04:20 | | | | |
| 31 | HD 133640 | 15 00.5 | +48° 03' | 04:30 | 05:00 | 24 20 E | | | 40/27 |
| 32 | HD 112413 | 12 ^h 51 ^m 20 ^s | +34° 51' | 05:08 | 05:20 | 00° 08 W | | | 20/176 |
| 33 | HD 115521 | 13 12.6 | +6° 00' | 05:29 | 05:59 | 00° 25 W | | | 4/80 |
| 34 | Dark | | | 06:02 | 06:03 | | | | |

Spectr. Temp. 25°FDome Temp./Hum. 22°F... 60%

Transparency Conditions 180

Focus 520

Spectr. Temp.

Dome Temp./Hum.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------|-------|--------------|------|----------|------|----------------|------------------------------|---------|
| | | | | B.C. | 830/68 | B.S. | J100 | A | | | OK |
| 20/20 | | 2.2 | K2006 | B.C. | 830/68 | B.S. | J100-E | B | STD VEL. | BROKEN $\frac{3}{4}$ missing | fine |
| 400/500 | 23 | 6.42 | B2TP | B.C. | 830/68 | B.S. | J100-E | A | HE-RICK BIN | 9:26°F | fine |
| | | | | | | | J100-B | | | CLOSED UP | |
| | | | | | | | | | | OBSERVER NO SHOW | |

Emulsion Batches:

Date Thurs.-Fri. Jan. 27-28/83 Observers T.M. - Ly

New Stop

4 1/2 68° .. IIIA J... 09061 - 11013
 8" 68° .. IVa-VE... 20012 - 05013
 4 1/2 68° .. 098... 05031 - 25013

| 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. |
|-----------|------------------------|--------------|---------------------|-------------------------|-----------------------|---------------------------------|-------------|---------------------------|----------|
| 47376 | HD 33328 | 05 044 | - 8 53 | 17 52 | 18 59 | 1 59 E | - 8 46 | Fe/- | 12-12 |
| 47376T | Spot Calc for 47376- | | | 15min @ D4 | | 3400 4300 4810 17.5V 15V 15V | | | |
| 47377 | HD 37017 | 05 304 | - 4 34 | 19 04 | 21 47 | 00 24 W | - 4 28 | Fe/ND | 12-12 |
| 47377T | Spot Calc for 47377-79 | | | 15min @ 15V | | D4 D3 D2 3400 4300 4810 | | | |
| 47378 | HD 37776 | 05 359 | - 1 32 | 21 53 | 00 51 | 03 21 W | - 1 30 | Fe/ND | 12-12-12 |
| 47379 | HD 65041 | 07 517 | +43 47 | 00 59 | 03 46 | 03 59 W | +43 35 | Fe/- | 7-7-7 |
| 47380 | HD 143313 | 15 546 | +25 52 | 03 57 | 06 40 | 01 06 E | +25 38 | Fe/ND No/ND | 7-7-7 |
| 47380T | Spot Calc for 47380 | | | 15min @ | | 15V D3 7V D1 4810 14 5450 | | | |
| 47380F | Focus Test | | | | | 01 05 E | +25 38 | Fe/ND | 21-21 |

Spectr. Temp. $+28^{\circ}\text{F}$ Dome Temp./Hum. $+21^{\circ}\text{F}/63\%$? Transparency Conditions *Fine - sl. hazy* 182

Focus *519*

Spectr. Temp. $+21.5$ Dome Temp./Hum. $+15^{\circ}\text{F}/?$ *stuck frozen* Fireball? the night before this *

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---|--------|-----------|------|-------|--------------|------|----------|------|-------------|----------------|---------------------|
| 40/120 | 2.4" | 4.0 | PK25 | PC | 830/68 | BS | TaJ | A | Be-Bln | | Fe to str sl str |
| | | | | | | | " | | | | |
| 200/250 | 2" | 6.42 | B24 | BC | 830/68 | BS | Ta-DE | B | He Rich-Bln | | Fine |
| | | | | | | | " | | | | |
| 100/203 | 2" | 6.83 | B2V | BC | 830/68 | BS | Ta-DE | A | He Rich-Bln | 27°F | * Fine |
| 200/200 | 1.5" | 6.87 | B2V | | 1200/.025 | | | B | SB-Ly | 25°F set 516 | * sl wt |
| 100/530 | " | 9.5 | K5 | BC | 1200/.7 | RS | 098 | A | SB-Ly | 23°F set 517 | |
| | | | | | | | 098 | | | | |
| | | | | BC | 1200/.7 | RS | 098 | B | | 21.5 F set 512 | OK |
| <p>* Mrs & Mr Karbe of Orangeville reported what seemed like a bright fireball at 7:55 PM Jan. 26. It moved E → W in 2-3 sec. white, also a yellow light. Apparently no other reports received.</p> | | | | | | | | | | | |
| | | | | | | | | | | * Fe sl wt | |

Spectr. Temp. +30°F Dome Temp./Hum. +25°F / 68% ?? Transparency Conditions *Hazy foggy* 184
 Focus *517*
 Spectr. Temp. +31°F Dome Temp./Hum. +28°F / 99%
Too low

Compass
 type Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|-------------|-----------------------------|----------|
| 200/172 | 2" | 6.40 | B2T | BC | 830/.68 | BS | IIa-OE | A | He-Rich-Bin | | * Foc |
| 200/231 | 1" | 6.83 | B2T | " | " / " | " | " | B | He-Rich-Bin | Very hazy * Foc sl wk | * Foc |

185

Posit Feature - It was a 2" mirror

Emulsion Batches:

Ug-OE 20012 - 21013

Date Feb 4-5/83..... Observers Byt-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. |
|-----------|----------------------|--------------|---------------------|-------------------------|-----------------------|----------------------------------|-------------|---------------------------|----------|
| 47383 | HD 88021/2 | 10 03.8 | +20 49 | 2 08 | 5 36 | 4 ^h 10 ^m W | +20 26 | Fe/HD | 12-12-10 |
| 47383T | Spot taken for 47383 | | | 15 min @ 15V | 3900 | 4300 | 4810 | | |
| 47384 | HD 137482 | 17 18.5 | +40 04 | 5 47 | 6 56 | 1 ^h 42 ^m E | | Fe/- | 54- |
| 47384F | Focus Test | | | | | " | " | Fe/- | 10-10 |

21013

Spectr. Temp. +20°F

Dome Temp./Hum +10°F/9-26?

Transparency Conditions... OK... sl. hazy

186

Focus... set 532

mount 4-20-09

Spectr. Temp. +13°F

Dome Temp./Hum 14°F/9-26?

Very Fine Astero
most of night

Comparison
Type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------------|-------|--------------|------|----------|------|----------|---------|---------|
| 400/282 | 5-3' | 7.70 | 955 -42 | BC | 830/68 | BS | D-10-E | A | VB 31/2 | | |
| | | | | | | | " | | | | |
| 80/70 | 4" | 6.22 | 4F8 | BC | 1200/-0.25 | BS | " | B | SP 1/2-4 | 5-518 | |
| | | | | " | " | " | D-10 | A | set 518 | | link |

Spectr. Temp. 30°F

Dome Temp./Hum. +22°F/60%

Transparency Conditions OK sl. haze 188

Focus 5.12

Spectr. Temp. +16°F

Dome Temp./Hum. +19°F/87%

Comparison
Type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------------|-------|--------------|------|----------|------|-----------|---------------------|------------------------|
| 100/181 | 3' | 8.4 | B1H6 | BC | 830/08 | BS | INOE | A | B10/EV100 | Reversed | good arc weak |
| | | | | | | | " | | | | |
| 21/84 | 3-4" | 7.8 | F6 | BC | 830/08 | BS | " | B | Cap/EV100 | T=24°F Reversed 520 | weak arc weak |
| 200/112 | 3 | 6.9 | B2V | BC | 1200/015 | BS | " | A | SB-Ly | 20°F set 517 | good arc sl. strong |
| 80/163 | 3 | 5.1 | A7V G5III | " | " | " | " | B | H+K-Ly | | fine arc sl. strong |
| 80/200 | 3 | 4.9 | F2LV | " | " | " | " | A | H+K-Ly | +17°F set 518 | fine arc sl. strong |
| | | | | " | " | " | IT60 | B | | +16°F set 518 | OK |

arc has been weak on all Tel. reversed plates recently, due to play in comparison feed arm most likely.

191

TOUR EL-LOOKED AT M42 ~60 people

Date ... FEB-10-11/83. Observers .. Crow - Ri

Emulsion Batches:
* IAD-E 20012 - 21013
IAD-E 08102 - 09023

| 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. |
|-----------|------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|---------|
| 47390F | FOTIS TEST HD 34019 | | | | | | | Fe/- | 20-20 |
| 47390 | R Aur | 5 09.2 | +53°28' | 18:30 | 20:28 | 0h 15m W | +53°37' | Fe/ND | ? 12-12 |
| 47390T | SPOT CAL FOR PLATES 47390-91 | | | 15MIN @ 15 VOLTS | | 3900 | 4800 | 3 22 | 4810 |
| 47390T2 | SPOT CAL FOR DIAJ TEST | | | 15MIN @ 15 VOLTS @ D4 | | 4300 | 4300 | 3 | 4300 |
| 47390T3 | " " " " " " | | | " " " " " " | | 4300 | 4300 | 3 | 4300 |
| 47391 | 1 CMi HD 109729 | 7h 03.2 | +10°11' | 21:10 | 23:20 | 1h 15m W | +10°06' | Fe/ND | 12-12 2 |
| 47392 | T OMa | 12h 31.8 | +60°02' | 23:30 | 2:52 | 0h 40m E | +59°39' | Fe/ND | 15-15 |
| 47392T | SPOT CAL FOR PLATES 47392- | | | 15MIN @ 15 VOLTS | | 3900 | 4300 | 3 22 | 4810 |

Spectr. Temp. ... 16°F

Dome Temp./Hum. ... 10°F 62%

Transparency Conditions ... CLEAR! 192

Focus ... 522

Spectr. Temp.

Dome Temp./Hum. ... 40°F 67%

40/34

Comparison
pe/Filter Exp23
2
7
72
490ND 12-12
12
5
40

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality | |
|-----------|--------|-----------|-------|-------|--------------|--------|-------------------------|------|---------|----------------|-----------------|---------------|
| | | | | | 830/.68 | 150/.7 | II ₁₀₀ -E* | A | | | capt sl | fine |
| 400/500 | 3"-4" | 9.2 | M7-M9 | BC | 830/.68 | 150/.3 | II ₁₀₀ -E* | B | CW-MRAS | | | fine |
| | | | | | | | II ₁₀₀ -E* | | | | | |
| | | | | | | | III ₁₀₀ -E | | | | | |
| 400/250 | 4" | 10.0 | S1 | " | " | " | * II ₁₀₀ -E* | A | " | T=15° F=523 | BROKEN 2 PIECES | slightly weak |
| 400/250 | | 10.5 | M7-M9 | " | " | " | II ₁₀₀ -E | B | " | T=14° F=523 | | fine |
| 400/ | | | | | | | II ₁₀₀ -E | | | T=10° F=524 | | fine |
| | | | | | | | | | | double in | | |

195

Date SAT. SUN. FEB 12-13.

Observers

CRD
WATERLOO - R.8^m 68°F

Emulsion Batches:

Dev-E 08102-09023
Dev-E 20012-2023

| 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. | |
|-----------|---------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|----------------|--------------------------------|-----------------|
| 47393F | FOCUS TEST | | | | | | | Fe/- | 17-17 |
| 47393 | HD 3627 | 0 34.0 | +30 19 | 18:10 | 18:16 | 2:51 W | +30° 48' | Fe/ND | 15-15-15 40/50 |
| 47394 | HD 20023 | 04 20.4 | +21 14 | 19:23 | 19:55 | 0:42 W | +21° 29' | Fe/ND | 15-15-15 40/400 |
| 47394T | SPOT CAL FOR PLATES 47393-403 | | | | | 15 MIN @ 1500LTS | 3900 4300 4810 | | |
| 47395 | HD 32092 | 4 55.6 | +26 32 | 20:03 | 21:03 | 1:15 W | +26° 42' | Fe/ND | 13-13-13 40/200 |
| 47396 | HD 38670 | 5 42.4 | +20° 50 | 21:07 | 21:22 | 0:49 W | +20 55 | Fe/ND | 13-13-13 40/35 |
| 47397 | HD 71663 | 8 23.5 | -20 11 | 21:28 | 22:12 | 1:52 E | -20° 25' | Fe/ND | 13-13-13 80/40 |
| 47398 | HD 79874 | 9 41.5 | +6° 47 | 22:18 | 22:22 | 0:11 E | +06 33 | Fe/ND | 19-19 20/20 |
| 47399 | HD 71153 | 8 20.7 | +24 52 | 22:27 | 00:29 | 1:16 W | +24 39' | Fe/ND | 13-13-13 20/200 |
| 47400 | HD 71152 | " | " | 00:30 | 01:07 | 1:55 W | " | Fe/ND | 13-13-13 80/20 |
| 47401 | HD 87822 | 10 02.5 | +32 06 | 01:10 | 01:33 | 0:39 W | +31° 45' | Fe/ND | 13-13-13 40/40 |
| 47402 | HD 101177 | 11 33.5 | +45 40 | 01:39 | 02:13 | 0:11 E | +45° 15' | Fe/ND | 13-13-13 40/45 |
| 47403 | HD 109510 | 12 30.1 | +18 56 | 02:19 | 02:53 | 0:28 E | +18° 32' | Fe/ND | 13-13-13 40/40 |
| 47404 | HD 109511 | " | " | 02 54 1/2 | 03:10 | 0:10 E | " | Fe/ND | 13-13-13 40/5 |
| 47404T | SPOT CAL FOR PLATES 47404-47409 | | | | | 15 MIN @ 1500LTS | 3900 4300 4810 | | |

Spectr. Temp. 20°PDome Temp./Hum. 18°P 52%Transparency Conditions skull #7 196Focus 521

Spectr. Temp.

Dome Temp./Hum.

40/35

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|-------|--------------|------|----------|------|---------------|---------|------------|
| | | | | B.C. | 830/.68 | B.S | Ilao | A | | | ref s/blue |
| 40/50 | | 4.6 | K3 II | B.C. | 830/.68 | B.S. | Ilao-E | B | WIDE VIS BIN | | Fine |
| 400/400 | 1-2 | 7.8 | F8 | B.C. | 830/.68 | B.S. | Ilao-E | A | " | | fine |
| | | | | | | | Ilao-E | | | | |
| 200/200 | | 7.3 | F5 | B.C. | 830/.68 | B.S. | Ilao-E | B | CLOSE VIS BIN | | fine |
| 40/35 | | 5.92 | B9 | B.C. | 830/.68 | B.S. | Ilao-E | A | " | | fine |
| 80/80 | 1-2 | 6.75 | F0 | B.C. | 830/.68 | B.S. | Ilao-E | B | " | | Fine |
| 20/20 | | 3.98 | F8 | B.C. | 830/.68 | B.S. | Ilao-E | A | " | | Fine |
| 200/200 | | 8.2 | G | B.C. | 830/.68 | B.S. | Ilao-E | B | " | | Fine |
| 80/70 | | 7.13 | A3 | B.C. | 830/.68 | B.S. | Ilao-E | A | " | | Fine |
| 40/40 | | 6.6 | F5 | B.C. | 830/.68 | B.S. | Ilao-E | B | " | | Fine |
| 40/45 | | 6.90 | G0 | B.C. | 830/.68 | B.S. | Ilao-E | A | " | | Fine |
| 40/40 | | 6.84 | F1V | B.C. | 830/.68 | B.S. | Ilao-E | B | " | | Fine |
| 40/55 | | 6.22 | K2 III | B.C. | 830/.68 | B.S. | Ilao-E | A | " | | Fine |
| | | | | | | | Ilao-E | | | | |

023

Spectr. Temp.

Dome Temp./Hum.

Transparency Conditions

standard

198

Focus

Spectr. Temp.

Dome Temp./Hum. *14°F 86%*

| Comparison Type/Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------------------|--------------|------------|--------------|------------|-------------|------------------|-------------|---------------|----------|---------------------------------------|---------------------------|------------------|
| <i>Fe/100 B-1</i> | <i>30/30</i> | <i>3</i> | <i>6.2</i> | <i>F8V</i> | <i>B.C.</i> | <i>830/.68</i> | <i>B.S.</i> | <i>IIco-E</i> | <i>B</i> | <i>CLOSE VIS B10 WATERLOO</i> | | <i>Fine</i> |
| <i>Fe/100 B</i> | <i>30/90</i> | <i>2-3</i> | <i>7.5</i> | <i>GIV</i> | <i>B.C.</i> | <i>830/.68</i> | <i>B.S.</i> | <i>IIco-E</i> | <i>A</i> | | | <i>Fine</i> |
| <i>Fe/100 B-5</i> | <i>30/80</i> | <i>1-2</i> | <i>7.5</i> | <i>F5</i> | <i>B.C.</i> | <i>830/.68</i> | <i>B.S.</i> | <i>IIco E</i> | <i>B</i> | | <i>NORTH STAR 20F</i> | <i>Fine</i> |
| <i>Fe/100 B-53</i> | <i>30/80</i> | <i>1-2</i> | <i>6.8</i> | <i>F0</i> | <i>B.C.</i> | <i>830/.68</i> | <i>B.S.</i> | <i>IIco-E</i> | <i>A</i> | | <i>SOUTH STAR</i> | <i>Fine</i> |
| <i>Fe/100 B-100</i> | <i>30/</i> | <i>1-2</i> | <i>7.11</i> | <i>G0</i> | <i>B.C.</i> | <i>830/.68</i> | <i>B.S.</i> | <i>IIco-E</i> | <i>B</i> | <i>"</i> | | <i>Fine</i> |
| <i>Fe/100 B-100</i> | | | | | <i>B.C.</i> | <i>830/.68</i> | <i>B.S.</i> | <i>IIco</i> | <i>A</i> | | <i>T = 19°F F = 521</i> | <i>cent blue</i> |

Spectr. Temp. ... 28°F

Dome Temp./Hum. ... 25°F 78%

Transparency Conditions ... Lazy 200

Focus ... 518

Spectr. Temp. ... 29°F

Dome Temp./Hum. ... 25°F 95%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------|--------------|------|----------|------|------------|------------------|------------|
| 200/250 | 3 | 6.4 | B27p | B.C. | 830/.68 | B.S. | IAD-E | A | Ha-Rex/312 | closed up | vsl strong |
| | | | | | | | IAD-E | | | because of frost | |
| | | | | B.C. | 830/.68 | B.S. | IAD-E | B | | forming in dome | vsl. red |

Date *Thursday, Feb. 7, 1953* Observers *T. - - - - - P. - - - - -*8^m 68°5^m 69°

Emulsion Batches:

..I.O.E. 200.12...15023 19218

..H2E.....

| 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. |
|-----------|------------------------|--------------|-----------------------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| 47411 ✓ | HD 63887 | 07 46.1 | +71 57 | 23 08 | 00 57 | 2 34 W | +71 52 | WRGND Fene | 3-3 |
| 47411T | Spot Caln for 47411-12 | | | | 15 min @ 15V | 3900 | 4300 | D3 D3 D3 | |
| 47412 | HD 88031/2 | 10 03.8 | +20 49 | 01 10 | 03 37 | 3 03 W | +20 28 | WRGND Fene | 3-3-3 |
| A7412T1 | Spot Cal | | 15 ^m @ 15 ^v | ① | D4 4300 | | | | |
| T2 | " " | | | ② | D4 4300 | | | | |

in Dome 100% H₂O but going down fast.

Spectr. Temp. ... 37°F

Dome Temp./Hum. 39°/97%

Transparency Conditions Fine Sl. heavy

Focus ... 5.16

Spectr. Temp. ... 36°F

Dome Temp./Hum. 38°/80%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------------|-------|----------------|------|----------|------|---------|---|-------------|
| 40/175? | 2" | 7.52 | A0 | BC | 830/68 | BS | TiO-E | A | SP-Bln | * Should be +71 +5 +8V. deal | Comp wk |
| 20/260 | 2-3" | 7.20 | 965 +42 | BC | 830/68 | BS | TiO-E | B | VB-Bln | 3-3 Vided somewhat | comp. wk |
| | | | 1A | 293 | | | TiO f.g. | | | (20 ^h 22°C 8% H ₂) | |
| | | | 09 | 268 | 800 | | TiO Se | | | | |

20.23 18 05

Spectr. Temp. ... $+38^{\circ}\text{F}$

Dome Temp./Humt ... $F/99\%$

Transparency Conditions ... *haze* 204

Focus ... *514*

Spectr. Temp. ... 37.5

Dome Temp./Hum. /

Compass
Type Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|----------------|-------------|------------|-------------|-----------|--------------------|-----------|---------------|----------|-------------------|--------------------|-------------|
| <i>200/249</i> | <i>1-2"</i> | <i>5.5</i> | <i>Asn</i> | <i>BC</i> | <i>1200/-0.625</i> | <i>BS</i> | <i>II20e</i> | <i>A</i> | <i>Asm Sp/10K</i> | | <i>good</i> |
| | | | | | | | <i>II20-e</i> | | | | |
| <i>40/45</i> | <i>1"</i> | <i>1.9</i> | <i>AoIV</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>II20e</i> | <i>B</i> | <i>Asm Sp/10K</i> | <i>arc misfire</i> | <i>fine</i> |
| <i>40/45</i> | | <i>0.8</i> | <i>F5</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>A</i> | <i>Std.</i> | <i>arc misfire</i> | <i>good</i> |
| | | | | | | | | | | <i>" "</i> | <i>ok</i> |

Emulsion Batches:

..Da. DE. 08102... - 15027
 ..Da. J.E. 09023... - 20023 22300

Date Fri. Sat. Feb 25-26/83 Observers Byt. - Tu.....

5th 68

| 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. |
|-----------|---------------|----------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| 47416 | HD 25799 | 04 00.3 | +32 06 | 18 31 | 21 30 | 328 W | +32° 22 | Fel/10 | 12-12 |
| 47416T | Spot cal. for | 17416-20,22,23 | | 15 min | 15V | D4 3900 | 107 4300 | DJ 4210 | |
| 47417 | HD 154291 D | 05 33.7 | -2 39 | 21 37 | 23 14 | 340 W | -2° 33 | Fel/10 | 12-12 |
| 47418 | HD 63882 | 07 46.1 | +71 57 | 23 23 | 2 46 | 4 56 W | +71° 43 | " | 12-12 |
| 47419 | HD 112028 | 12 48.3 | +83 58 | 2 57 | 4 02 | 1 22 W | +83 30 | " | 12-12 |
| 47420 | HD 157482 | 13 18.5 | +40 04 | 4 17 | 5 34 | 1 42 E | +40° 02 | Fel- | 6-5-5 |
| 47421 | HD 141513 | 15 44.4 | -3 07 | 5 40 | 6 07 | 0 24 W | -3° 19 | Fel- | 15-15 |
| 47421T | Spot Cal. for | 47421 | | 15 min | 175V 3900 | 15V 4300 | 5V 4210 | | |
| 47422 | HD 146051 | 16 09.1 | -3 26 | 6 11 | 6 17 | 0 09 W | - | Fel- | 6-6 |
| 47423 | HD 154289 | 17 55.3 | +4 22 | 6 20 | 6 36 | 1 17 E | -4 26 | " | 6-6 |
| 47423F | focus test | | | | | " | " | Fel- | 15-15 |

Spectr. Temp. $+30^{\circ}\text{F}$Dome Temp./Humt $+22^{\circ}\text{F}/70\%$..Transparency Conditions *Sl. Hazy*..... 266Focus *519*.....Spectr. Temp. $+20^{\circ}\text{F}$Dome Temp./Humt $+13^{\circ}\text{F}/90\%$..Comparison
Type Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|---------------------|------|----------------|----------------------|------------------|
| 100/176 | 2-3 | 7.11 | K2V | BC | 820/68 | BS | T ₂₀ D-E | A | SB-Pln | | Fine |
| | | | | | | | " | | | | |
| 100/87 | 3" | 6.4 | B2V | BC | 500/58 | BS | " | B | VB-Pln | Reversed | Fastok Slutok |
| 100/116 | 2" | 7.52* | A0 | " | " | " | " | A | SB-Pln | * Seems fainter Hazy | Fastok Fine |
| 100/258 | 3" | 5.28 | B8 | " | " | " | " | B | Shell-Pln | Reversed | str |
| 80/123 | " | 6.22 | dF8 | " | 1200/-0.075 | " | " | A | SB-Mf/Ly | unreversed T-21° | Fine Fine |
| 40/149 | " | 3.50 | A0V | " | " | " | T ₂₀ SE | B | SB-Pln | | Fine |
| | | | | | | | " | | | | |
| 40/53 | 2" | 4.3 | K2V | BC | 1200/-0.075 | BS | D ₂₀ E | A | SB-Pln | | Slut |
| 40/36 | 3 | 4.74 | B2V | " | " | " | " | B | Be-Pln | | vs lut |
| | | | | " | " | " | T ₂₀ S* | A | from old batch | | |

Date Sat. Sun. Feb. 26-27/53 Observers BK. T.H.

Emulsion Batches:

..IIa-OE.08102-15023

..Da*-OE.08102-25023

| 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. |
|------------------|---------------------|-------------------|---------------------|-------------------------|-----------------------|-------------------|-------------------|---------------------------|-------------------|
| 47424F1 | Focus Test | | | | | 0 | 0 | Fel- | ² 1515 |
| 47424F2 | " " | | | | | 0 | 0 | Fel- | 1010 |
| 47424 | HD 19134 | 2 59.6 | +24 52 | 18 41 | 18 56 | 2 00 W | +25 10 | Fel- | 6-4 |
| 47425 | HD 36044 | 5 23.8 | +29 29 | 19 00 | 20 20 | 1 00 W | +29 40 | " | 6- |
| 47426 | HD 71152 | 8 20.7 | +24 52 | 20 25 | 21 59 | 0 14 E | +24 33 | " | 6- |
| 47426 | HD 71152 | 8 20.7 | +24 52 | 20 01 | 22 46 | 0 30 W | " | " | 6-5 |
| 47427T | Spot Calc | for 47424-26 | | 15 min @ 15V | | D4 3900 | D3 4300 | D2 4800 | |
| 47427 | HD 74874 | 24 41.5 | +6 47 | 22 52 | 22 58 | 0 20 W | +6 32 | Fel- | 6-5 |
| 47428 | HD 87822 | 10 02.5 | +32 06 | 23 00 | 23 27 | 0 32 E | +31 45 | Fel- | 6-4 |
| 47429 | HD 106365 | 12 09.1 | +33 20 | 23 46 | 01 48 | 0 16 E | +32 55 | " | 6-6 |
| 47429T | Spot Calc | for 47427-33 | | 15 min @ 15V | | D4 3900 | D3 4300 | D2 4800 | |
| 47430 | HD 123408 | 14 02.4 | +35 16 | 01 52 | 03 43 | 0 15 E | +34 55 | Fel- | 6-6 |
| 47431 | HD 149930 | 16 32.7 | +34 01 | 03 47 | 05 10 | 1 15 E | +33 54 | " | 6-6 |
| 47432 | HD 152863 | 16 50.9 | +25 54 | 05 14 | 05 56 | 0 50 E | +25 47 | " | 6-6 |
| 47433 | HD 146361 | 16 10.9 | +34 07 | 06 05 | 06 29 | 0 24 W | +33 55 | " | 6-6 |

Spectr. Temp. 29°F

Dome Temp./Hum 28°F / 59%

Transparency Conditions .. Sl. Hazy .. Sin @ .. 208.

Focus

Spectr. Temp. 28

Dome Temp./Hum. 20°F / 97%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---------------|--------------|----------------|--------------|--------------|--------------|--------------|---------------------|--------------|--------------|------------------------|---------|
| | | | | BC | 1200/-1025 | BS | I ₁₀₀ | A | | Set 515 | |
| | | | | BC | 830/168 | BS | " | B | | Set 518 | |
| 40/40 | <1" | 606 | B58 | BC | " | " | I ₁₀₀ OE | A | Waterloo | | Fine |
| 40/55 | " | 794 | B5 | " | " | " | " | B | " | | Fine |
| 80 | " | 820 | " | " | " | " | " | A | " | *probleme to discoidal | |
| 30/75 | " | 718 | A3 | BC | 830/168 | BS | I ₁₀₀ OE | B | Waterloo | | Fine |
| | | | | | | | " | | | | |
| 40/40 | <1" | 296 | F8 | BC | 830/168 | BS | I ₁₀₀ OE | A | Waterloo | T=30°F | |
| 80/30 | 1" | 830 | F5 | " | " | " | " | B | " | | Fine |
| 200/230 | 1.2" | 810 | | " | " | " | " | A | " | T=29°C | |
| | | | | | | | " | | | | |
| 200/200 | 1" | 81 | K0 | BC | 830/168 | BS | " | B | Waterloo | | |
| 20/100 | 1.2" | 210 | K5 | " | " | " | " | A | " | T=29°F | |
| 40/50 | 1" | 710 | G-8 | " | " | " | " | B | " | | |
| 40/45 | 2" | 830 | F8 | " | " | " | " | A | " | | |

Spectr. Temp. ... 42°F

Dome Temp./Hum. 39°F / .56?

Transparency Conditions Hazy - Cloudy 210

Focus 5.15

Spectr. Temp. ... 39.5°F

Dome Temp./Hum. 39°F / .55?

Comparison
Type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|----------------------|-------|--------------|------|---------------------|------|-------------------------|------------------|---------|
| 20/250 | 2" | 6.42 | BVp | RC | 830/68 | BS | II ₀ -OE | A | He Rich-Bl _n | | str |
| | | | | | | | " | | | | |
| 20/300 | 2.5" | 7.20 | ⁹⁶⁵ A2 | BC | 830/68 | BS | " | B | VB-Bl _n | T=+2°F | str |
| 20/125 | 1" | 5.28 | B8 | " | " | " | III ₀ -E | A | Spell-Bl _n | | v str |
| | | | | | | | " | | | | |
| 20/84 | 1" | 6.45 | G8V | RC | 830/68 | ES | II ₀ -OE | B | F.1 p ₁ sig | | Fine |
| 20/130 | 2" | 3.0 | AOV | " | 1200/025 | " | III ₀ -E | A | SB-Bl _n | Set 513 | Fine |
| | | | | " | " | " | II ₀ -E | A | | Set 513 T=39.5°F | |

Spectr. Temp. 44.5

Dome Temp./Hum. 41 F / 74%

Transparency Conditions Some cloud 212

Focus 513

Very Fine Aurora
best and south of Zenith by 02 hrs ST

Spectr. Temp. 38.0 F

Dome Temp./Hum. 30 F / 97%

| Compansor Type/Filter Exo | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------------------|-----------|--------|--------------|--------------|-------|------------------|------|----------|------|----------|--|---------|
| | | | | | BC | 200/-0.2 | BS | IIa01 | B | | Focus 513 | |
| | 43 | 1" | 4.0 | F2V | " | " | " | IIa0-E | A | Std vel | | Fine |
| | 200/157 | 1-3" | 70-73 | 1200 +B1 | " | " | " | " | B | Capt-Rm | cloud | Fine |
| | | | | | | | | " | | | | |
| | 80/130 | 2.4" | 4.34 | F2IV | " | 1200/-0.025 | BS | " | B | KK prog. | 40° F Spd 513 cloud | Fine |
| | 40/57 | " | 2.8 | G0 | " | " | " | " | A | " | | |
| | 80/200 | " | 5.1 | A7V G5III | " | " | " | " | B | H+K-Ly | | |
| | 80/200 | 2" | 4.9 | F2IV | " | " | " | " | A | " | 13 34 10 01 | |
| | 80/125 | 2-3" | 6.22 | DF8 | " | " | " | " | B | SB-Bh-Ly | | |
| | | | | | | | | | | | No observer for test (probably clear to dawn) | |

Date SAT-SUN MAR 5-6 1983 Observers Bxt - Ri

Emulsion Batches:

TAO-E 08102-28023TAJ-E 09023-23023

| 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. |
|-----------|---------------------------------|--------------|---------------------|-------------------------|-----------------------|---------------------------------------|-------------|---------------------------|-------|
| 47446F | Focus TEST | | | | | | | Fel- | 12-12 |
| 47446 | HD 33328 | 05 044 | -08° 53' | 18 50 | 19 45 | 01 13 W | -8° 43' | Fel- | 12-12 |
| 47442 | " | " | " | 19 47 | 21 35 | 03 03 W | " | Fel- | 12-12 |
| 47447T | SPOT CAL FOR PLATES 47446-47+50 | | | 15 MIN @ 04 | | ⊙ 17.30 ⊙ 150 ⊙ 150 3900 4200 4810 | | | |
| 47448 | HD 38021/2 | 10 03.8 | +20° 49' | 21 40 | 02 00 | 02 26 W | +20° 23' | Fel/ND | 12-12 |
| 47448T | SPOT CAL FOR PLATES 47448+49,51 | | | 15 MIN @ 1500 | | ⊙ 04 ⊙ 23 ⊙ 02 3900 4300 4810 | | | |
| 47449 | HD 112028 | 12 48.3 | +83° 58' | 02 07 | 03 14 | 01 01 W | +83° 32' | Fel/ND | 12-12 |
| 47450 | HD 141513 | 15 44.4 | -03° 07' | 03 29 | 04 28 | 00 44 E | -03° 20' | Fel- | 15-15 |
| 47451 | HD 157482 | 17 18.5 | +40° 04' | 04 33 | 06 17 | 00 29 E | +40° 02' | Fel- | 5-5 |
| 47451F | Focus TEST | | | | | | | Fel- | 15-15 |

Spectr. Temp. 450°F

Dome Temp./Hum. 90°F 82%

Transparency Conditions ... haze with cirrus 214

Focus 513

Spectr. Temp.

Dome Temp./Hum. 370°F 99%

moving w by morning

Comparison
Type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----------------------|-------|----------------|------|---------------------|------|-----------|--|---------|
| | | | | B.C. | 830/68 | B.S. | I ₁₀₀ -E | A | | | |
| 40/120 | 4- | 4.07 | B2IVc | B.C. | 830/68 | B.S. | I ₁₀₀ -E | B | BE-Bln | | Fine |
| 40/110 | 4-6 | - | - | - | - | - | - | A | - | | Fine |
| | | | | | | | I ₁₀₀ -E | | | | |
| 40/600 | 4-5 | 72 | S ₄₅ A2 | B.C. | 830/68 | B.S. | I ₁₀₀ -E | B | UB-Bln | | Fine |
| | | | | | | | I ₁₀₀ -E | | | | |
| 40/500 | | 5.28 | BB | B.C. | 830/68 | B.S. | I ₁₀₀ -E | A | SHELL-Bln | THE DECKER BROKE LAST COMP IN STALLAR POSITION | Fine |
| 40/150 | 4 | 3.50 | ADV | B.C. | 1200/ -.025 | B.S. | I ₁₀₀ -E | B | SB-Bln | T430F F512 | Fine |
| 40/320 | | 6.22 | dfB | B.C. | 1200/ -.025 | B.S. | I ₁₀₀ -E | A | SB-Bln/Ly | | sl wt |
| | | | | B.C. | 1200/ -.025 | B.S. | I ₁₀₀ -E | B | | T = 400°F PAWN | F 512 |

Spectr. Temp. ... 73.5°F

Dome Temp./Hum. 73°F / 80%

Transparency Conditions ... clearing with wind. HI ...

Focus ... 514

∴ very bad seeing

Spectr. Temp.

Dome Temp./Hum.

Comparison
Type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|---------|-------------|-------|-------|--------------|------|----------|------|---------|----------------|-------------------------|
| FeI-K5 | | | | BC | 1200/-025 | BS | II40 | A | | Set 514 T=35°F | |
| FeI-7-7 | 100/80 | 10" + 5.2 | K0III | " | " | " | II40-E | A | Std Ue1 | | Wedge |
| FeI-6-12 | 100/120 | 6"-10" 3.51 | 09SV | BC | 830/-68 | " | II40-E | P. | SB-B14 | T=34°F Set 517 | Star str. comp. str. |
| | | | | | | | " | | | | |

Emulsion Batches:

D.J.E. 09023-11025

A.V.E. 08102-09023

Date Sat. Sun. Mar. 12-13/23 Observers ... Pyt. - 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. |
|-----------|-------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|--------|
| 47454F | Focus Test | | | | | 0 0 | -2 35 | Fel- 12-12 | |
| 47454 | HD 37462 | 05 337 | -2 39 | 18 48 | 19 25 | 0 50 W | - | Fel- 12-12 | 10/10 |
| 47454T | Spot Calc for 47454, 57, 61 | | | | 15 min @ DA | 17.50 19.25 | 150 4300 | 100 4810 | |
| 47455 | ADS 4291D | 05 337 | -2 39 | 19 29 | 21 56 | 3 19 W | -2 34 | Fel- 12-12 | 10/13 |
| 47456 | HD 87021/2 | 10 038 | +20 49 | 21 59 | 01 10 | 2 05 W | +20 28 | " 12-12 | 10/30 |
| 47456T | Spot Calc for 47455-56, 58-60 | | | | 15 min @ DA | 17.50 19.25 | 150 4300 | 100 4810 | |
| 47457 | HD 141513 | 15 444 | -3 07 | 01 18 | 01 50 | 2 56 E | -3 21 | Fel- 15-15 | 10/20 |
| 47458 | HD 157482 | 17 18.5 | +40 04 | 01 55 | 02 57 | 3 21 E | +40 02 | Fel- 5-5 | 10/127 |
| 47459 | HD 165174 | 17 59.6 | +1 55 | 03 05 | 04 58 | 2 01 E | +1 58 | Fel-* | 12-3 |
| 47460 | HD 191610 | 20 057 | +36 33 | 05 02 | 05 15 | 3 50 E | +36 48 | Fel- 5-5 | 10/30 |
| 47461 | HD 164284 | 17 55.3 | +4 22 | 05 19 | 06 12 | 0 44 E | +4 26 | Fel- 12-12 | 10/100 |

Spectr. Temp. ... 35.5°F

Dome Temp./Hum. + 30°F / ... 60%

Transparency Conditions ... Some cloud ... 218

Focus ... 517

Very good from N

Spectr. Temp. ... 32°F

Dome Temp./Hum. + 27°F / ... 65%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|---------|-------|--------------|------|----------|------|----------|---|------------------------|
| | | | | BC | 830/68 | BS | IIcO | B | | | |
| 10/120 | 5" | 3.51 | 095V | BC | 830/68 | BS | IIIa-J-E | A | SB-Bln | | fine comp. & str. |
| | | | | | | | IIIa-J-E | | | | |
| 10/133 | 5" | 6.4 | B2V | BC | 830/68 | BS | IIcO-E | B | VB-Bln | | fine are fine |
| 10/300 | 2-4' | 7.20 | 205 203 | " | " | " | " | A | VE-Bln | cloud thin 2.2V 3.5V ideal | fine are fine |
| | | | | | | | " | | | | |
| 10/120 | 3" | 3.50 | A0V | PC | 1200/-025 | PS | IIIa-J-E | B | SB-Bln | Set 517 T=24°F | good fine |
| 10/127 | 2-3' | 6.22 | dF8 | " | " | " | IIa-O-E | A | SB-Bln | 2.2V 7.0V 3.5V ideal | are fine fine |
| 10/160 | 5-8" | 6.15 | 095II | " | 830/68 | " | " | B | Var-Bln | * Too much Fe Arc at beginning T=33°F set 517 | are strong fine |
| 10/30 | 3" | 4.82 | B3Ve | " | " | " | " | A | SB-Bln | | are strong star strong |
| 10/120 | 4" | 4.79 | B2Ve | " | " | " | IIIa-J-E | B | Fluo-Bln | | comp. v. weak! |



Date *Sun-Mon. Mar. 13-14/83* Observers *K.K. - J.ay / C.W. - T.N.*

Emulsion Batches:

I. a. - I. E. - 09023 - 11033

II. a. - D.E. - 08102 - 02033

| 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. |
|-----------|--------------------|--------------------------------|---------------------|-------------------------|-----------------------|----------------------|-------------|---------------------------|----------|
| 47462 | HD 33328 | 05 04.4 | -8 53 | 18 44 | 19 12 | 1 11 W | - | Fel- | 12-12 |
| 47463 | NGC 2392 | 1980 25.0 7 28.0 | +21 18 +20 57 | 2 19 30 | 2 20 00 | 0 20 E | +21 00 | | |
| 47464 | " | " | " | 20 18 | 20 49 | 0 30 W | " | | |
| 47464T | Spot Calc | for 47462-64 | | | 15min @ D4 | 17.5V 3900 | 15V 4300 | 15V 4810 | |
| 47465 | HD 66751 | 7 59.9 | +70° 0' | 21 00 | 22:23 | 1 21 W | +69 47 | Fel- | 5-5-5 |
| 47466 | HD 8890 | 1 22.6 | +88 46 | 22 34 | 22 36 | 7 43 W | 89 10 | Fel- | 7-7 |
| 47465T | Spot Calc | for 47465-67 | | | 15min @ 15V | 17.4 3900 | 15V 4300 | 15V 4810 | |
| 47467 | R 800 HD 128609 | 14 ^h 32.8 | +27° 10' | 23:22 | 03:22 | 0h 07 ^m E | +26 51 | Fel/ND | 12-12-12 |

Emulsion Batches:

IIIa-1eb 09023 - 11033 18 29A
 IIa-0E 08102 - 02033

Date Wed. Thurs. Mar. 16-17/83 Observers ... 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. |
|-----------|-------------------------|---------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|----------|
| 47468 | HD 37468 | 05 33.7 | -2 39 | 18 49 | 19 15 | 0 55 W | -2 36 | Fel/- | 12-7-12 |
| 47468T | Spot Cal. for 47468, 71 | | | 15 min @ DA | | 17.5U 3900 | 15U 4300 | 15U 4300 | |
| 47469 | ADS 4291D | 05 33.7 | -2 39 | 19 17 | 21 25 | 3 06 W | -2 36 | Fel/- | 12-12-12 |
| 47469T | Spot Cal. for 47469-70 | | | 15 min @ 15U | | 09 3900 | 03 4300 | 09 4300 | |
| 47470 | HD 88021/2 | 10 3.8 | +20 49 | 21 29 | 00 06 | 01 17 W | +20 28 | Fel/40 | 12-12-12 |
| 47471 | HD 112028 | 12 48.3 | +83 58 | 00 14 | 02 06 | 00 35 W | +83 28 | Fel/- | 10-10-70 |
| 47471F | | | | | | 0 | -3° | " | 10-10 |

Spectr. T.
 Focus...
 Spectr. T.
 Exp. Mtr.

48/110
 70/85
 1/120
 1/120

Spectr. Temp. ... 370

Dome Temp./Hum. 26°F 83%

Transparency Conditions ... cirrus 226

Focus ... 513

incoming storm system

Spectr. Temp. ... 340

Dome Temp./Hum.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------|--------|-----------|-----|-------|-----------------|------|----------|------|----------|----------------|--------------------------|
| Fe/- 10-20 70/50 | 10 | VAR | F | B.C. | 1200/ -1,025 | B.S. | IIAO-E | A | AsmSp/KK | tele processed | fine conv. sl. strong |
| Fe/- 12-15 40/41 | 8 | 1.9 | AOV | " | " | " | " | B | AsmSp/KK | 9=35°F F=5 14 | fine |
| Fe/- 12-15 70/43 | | 0.8 | F5 | " | " | " | " | A | Std. | | peeled emulsion |
| 7/- 12-15 | | | | " | " | " | IIAO-E | B | | 34°F | ok |
| 02 9810 | | | | | | | IIAO-E | | | | |

Spectr. Temp. ... 28°F

Dome Temp./Hum. 20°F 63%

Transparency Conditions *Some thin curves around* 228

Focus 519

Spectr. Temp.

Dome Temp./Hum. 19°F

| Comparison Type/Filter Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|--------------------------------|-----------|--------|--------------|------------|-------|------------------|------|----------|------|-------------|------------------|------------------------|
| Fe/UD 400 3 22 480 | 400/320 | 3-4 | 6.42 | B210 | B.C. | 830/.68 | B.S. | I100-E | A | He-Rich/Blk | TELE LIMIT | fine vs/ok |
| | | | | | | | | I100-E | | | | |
| Fe/UD 400 | 400/500 | 3-4 | 7.20 | GA5+ A2 | B.C. | 830/.68 | B.S. | I100-E | B | UIB-Blk | T = 26°F F = 520 | err vs/ok vs strong |
| Fe/UD 400 | | | | | | | | I100-E | A | | T = 230 F = 520 | ok |

Emulsion Batches:

Tru-E 08102-20033 18 193

Date THURSDAY, MAR 29 25 Observers R

| 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. |
|-----------|-----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|----------|
| 47478 | ADS 4291 D | 05 33.7 | -02° 39' | 19:08 | 21:22 | 034 35 W | -02° 36' | Fe/ND | 14 4 1/2 |
| 47478T | SPOT CAL FOR PLATES 47478 - | | | | 15 MIN @ 150 VOLTS | 0 01 3000 | 0 03 4300 | 0 02 4810 | |
| 47479 | R LEO #089748 | 09 42.2 | +10° 54' | 21:28 | 22:38 | 00° 42 W | +11° 34' | Fe/ND | 14 4 1/2 |
| 47480 | HD 88001/2 | 10 03.8 | +20° 49' | 22:55 | 02:38 | 09° 21 W | +20° 24' | Fe/ND | 14 4 1/2 |
| 47481 | HD 136202 | 15 14.2 | +02° 09' | 02:47 | 03:22 | 00° 05 E | +01° 51' | Fe/ND | 14 4 1/2 |
| 47482 | HD 157482 | 17 18.5 | +40° 04' | 03:33 | 04:33 | 00° 56 E | +40° 00' | Fe/- | 8-8 1/2 |
| 47483 | HD 154417 | 17 0.2 | +00° 51' | 04:37 | 05:46 | 004 33 W | +00° 45' | Fe/- | 8-8 1/2 |
| 47483F | FOCUS TEST | | | | | | | Fe/- | 30-40 |

Spectr. Temp. 27°F Dome Temp./Hum. $+25^{\circ}\text{F}/48\%$ Transparency Conditions *Fine* *sl. hazy* 232Focus 519 Spectr. Temp. 22.5 Dome Temp./Hum. $+16^{\circ}\text{F}/48\%$?

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|---------|-------|--------------|------|----------|------|-----------|--|--------------------|
| 40/121 | 1.3" | 3.51 | 09.5V | BC | 830/68 | RS | IIIa-Job | A | SB-Plu | | Fest str sl str |
| | | | | | | | " | | | | |
| 200/144 | 2" | 6.4 | B2V | BC | 830/68 | RS | IIa-OE | B | VB-Plu | | Fine |
| | | | | | | | " | | | | |
| 20/168 | 2.3" | 7.52 | A0 | BC | 830/68 | RS | " | A | SB-Plu | Reversed | Fine |
| * 40/240 | 2" | 5.28 | B8 | " | " | " | IIIa-Job | B | Shalt-Plu | * 2x normal exp by mic. & T=23°F set 521 | Fest str str |
| 40/121 | 2" | 3.50 | A0V | " | 1200/425 | " | " | A | SB-Plu | T=22°F set 517 | Fine |
| 40/60 | 2" | 6.22 | DF8 | " | " | " | IIa-O-E | B | SB Plu/44 | one end broken roughly | Fine |
| 80/47 | 3" | 6.15 | 09.5III | " | 830/68 | " | " | A | Var Plu | Power | Fine |
| | | | | " | " | " | IIa0 | B | | T=22.5°F set 517 | |

233

Emulsion Batches:
5^m 68^p Iro-E. 08102-20033. 18 210

Date SAT SUN MAR 26-27 Observers RI-BK

| 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. |
| 47491F | | | | | | | | Fe/ | 27-28 |
| 47491 | HD 32092 | 4 55.6 | +26 32 | 19 05 | 20 35 | 3 32W | +26 41 | Fe/ND | 14-28 |
| 47491T ^v | SPOT CHL FOR PLATES | 47491- | | | 15 MIN @ 1500 LTS | | 3900 4300 4810 | | |
| 47492 | HD 74874 | 8 41.5 | +6 47 | 20 41 | 20 56 | 0 10W | +6 32 | Fe/ND | 14-14 |
| 47493 | +10 71115 | 8 20.5 | +7 53 | 20 58 | 22 56 | 2 30W | +7 40 | Fe/ND | 14-28 |

Spectr. Temp. *33°F*Dome Temp./Hum. *30°F 49%*Transparency Conditions *curio slants* 234Focus *517*Spectr. Temp. *32°F*Dome Temp./Hum. *36°F*

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|----------|-------------|---------|
| | | | | BC | 830/.68 | B.S. | IT100-E | A | | | |
| 200/66 | 3 | 728 | FS | B.C. | 830/.68 | B.S. | IT100-E | B | WATERLOO | Heck closed | vslwk |
| 40/40 | | 3948 | F8 | B.C. | 830/.68 | B.S. | IT100-E | A | | | Fine |
| 200/93 | | 41 | G8 | B.C. | 830/.68 | B.S. | IT100-E | B | | | slwk |

Spectr. Temp. 37°F

Dome Temp./Hum. 32°F 82%

Transparency Conditions ^{23p} cleaning with strong wind for north, poor seeing

Focus 516

Spectr. Temp.

Dome Temp./Hum. 20°F 73%

Comparison Type Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|---------|-------|--------------|------|----------|------|------------|--------------|---------|
| 80/240 | 4-10 | 5.28 | BB | B.C. | 830/.68 | B.S. | IIIaJE | A | SHELL-B1/2 | | Fine |
| | | | | | | | IIIaJE | | | | |
| 40/121 | 4.5 | 3.50 | A0J | B.C. | 1200/.025 | B.S. | IIIaJE | B | SB-B1/2 | T=37°F F=514 | Fine |
| 80/120 | 4-5 | 622 | dFB | B.C. | 1200/.025 | B.S. | IIa0-E | A | SB-B1/2/Ly | T=32°F F=515 | |
| | | | | | | | IIa0-E | | | | |
| 80/52 | | 615 | 09.SIII | B.C. | 830/.68 | B.S. | IIa0-E | B | VAR-B1/2 | T=30°F F=518 | Fine |
| | | | | B.C. | 830/.68 | B.S. | IIa0-E | A | | T=28°F F=518 | |

Tues-Wed
Date ... Mar. 29-30 ... Observers ... Cow - Ri / R

Emulsion Batches:
8^m 68^o Kod-E 02.02-29033

| 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. |
|-----------|----------------------------|------------------------------------|---------------------|-------------------------|-----------------------|-----------------------------------|-------------|---------------------------|---------|
| 47498F | FOCUS TEST FOR G12 | | | | | | | Fe/- | 24-24 |
| 47498 | R WR (HD 34117) | 5 ^h 09. ^m 2 | +53° 28' | 19:17 | 22:20 | 05 ^h 13 ^m W | +53° 36' | Fe/ND | 14-14 |
| 47498T | SPOT CAL FOR PLATES 47498- | | | | 15 MIN @ 150 VOLTS | | 3900 | 4300 | 4150 |
| 47499 | R VIR (HD 107714) | 12 ^h 33. ^m 4 | +07° 32' | 22:30 | 01:00 | 00 ^h 34 ^m W | +07° 07' | Fe/ND | 14-14 |
| 47500 | HD 102509 | 11 43 ^{42.7} | +20° 46' | 01:10 | 01:43 | 2 ^h 06 ^m W | +20° 22' | Fe/- | 8-8 E |
| 47501 | HD 118216 | 13 30.3 | +37° 42' | 01:47 | 02:37 | 01 ^h 14 ^m W | +37° 17' | Fe/- | 8-8 E |
| 47502 | HD 136202 | 15 14.2 | +02° 09' | 02:54 | 03:38 | 0 ^h 30 ^m W | +01° 53' | Fe/- | 8-8 E |
| 47503 | HD 157482 | 17 18.5 | +40° 04' | 03:43 | 04:32 | 00 ^h 38 ^m E | +40° 02' | Fe/- | 8-8 E |
| 47503F | FOCUS TEST FOR G8 | | | 04:43 | | | | Fe/- | 32-30 |
| 47504 | HD 165174 | 17 59.6 | +01° 55' | 04:43 | 05:29 | 00 ^h 24 ^m E | +01° 57' | Fe/ND | 14 (14) |
| 47504F | FOCUS TEST FOR G-12 | | | | | | | Fe/- | 24-24 |

Spectr. Temp. 300F Dome Temp./Hum. 240F 64% Transparency Conditions good 238

Focus 518

Spectr. Temp. Dome Temp./Hum. 180F 81% 40/24

| Companso Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---------------------------|-----------|--------|--------------|----------------|-------|------------------|------|----------|------|----------|------------------|---------|
| 1-24-2 | | | | | B.C. | 830/.68 | B.S. | IIAD | A | | | |
| ND + 3 3 1 0 4 0 | 400/400 | 3" | 8.8 | MK-MK | B.C. | 830/.68 | B.S. | IIAD-E | B | GW-MIRAS | EXP = 183m | Fine |
| 00 14- - 3-3 1- 8-8 | 400/400 | 3" | 8.4 | MSe-M6 | " | " | " | " | A | " | T = 28°F F = 519 | Fine |
| 1- 8-8 | 40/80 | 2-3 | 5.08 | A70 G55TIVE | B.C. | 1200/.025 | B.S. | IIAD-E | B | dy | T = 27°F F = 516 | |
| 1- 8-8 | 40/100 | | 4.9 | F51 | B.C. | 1200/.025 | B.S. | IIAD-E | A | dy | | Fine |
| 1- 8-8 | 40/60 | | 5.6 | F81U | B.C. | 1200/.025 | B.S. | IIAD-E | B | SD UQ | | Fine |
| 1- 8-8 | 80/120 | | 6.22 | dFB | B.C. | 1200/.025 | B.S. | IIAD-E | A | SB L/B/L | | Fine |
| 1- 8-8 | | | | | B.C. | 1200/.025 | B.S. | IIAD-E | B | | T = 25°F F = 516 | |
| 1- 8-8 | 80/70 | 3 | 6.15 | G95II | B.C. | 830/.68 | B.S. | IIAD-E | A | | T = 25°F F = 520 | Fine |
| 1- 8-8 | | | | | B.C. | 830/.68 | B.S. | IIAD | B | | T = 25°F F = 520 | Fine |

Emulsion Batches:

Ma. Lab. C9023-1903233
 Ia. O-E 08102-30033

Thurs - Fri
 Date Mar 31 - Apr 1, 1953 Observers Tn..... Bois in the woodwork

| 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. |
|-----------|------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| 47505 | HD 37468 | 05 337 | -2 37 | 19 19 | 20 01 | 2 40 W | -2 33 | Fe/- | 14-14 |
| 47505T | Spot Coll | for 47505 | 508 | 15 min @ D4 | | 17.5V 3700 | 15V +200 | 15V AEB | |
| 47506 | HD 63887 | 07 46.1 | +71 57 | 20 11 | 23 13 | 3 36 W | +71 44 | Fe/- | 4-4 |
| 47506T | Spot Coll | for 47506-07 | | 15 min @ 15V | | D4 3700 | 15V +200 | 15V AEB | |
| 47507 | HD 86021/2 | 10 03.8 | +20 49 | 23 19 | 01 50 | 4 00 W | +20 28 | Fe/- | 4-4 |
| 47508 | HD 141513 | 15 44.4 | -3 07 | 01 59 | 02 16 | 1 13 E | -3 19 | " | 16-16 |

Spectr. Temp. ... + 37°F

Dome Temp./Hum. +30°/68%

Transparency Conditions Fine - S1 Hazy 240

Focus ... 5.16

Spectr. Temp. ... 34°F

Dome Temp./Hum. 28°/85%

Comparison
of Filter Ext

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------------|-------|--------------|------|----------|------|---------|---|------------------------|
| 40/120 | 2.4" | 3.51 | 095V | BC | 830/68 | BS | IIIc-Jeb | A | SB-Bln | comp | vwk? Fine |
| | | | | | | | " | | | | |
| 400/175 | 1.2" | 7.52 | H0 | BC | 830/68 | BS | IIc-DE | B | SB-Bln | reversed | Fine |
| | | | | | | | " | | | | |
| 40/120 | 1.2" | 7.20 | 965 + A2 | BC | 830/68 | BS | " | A | VB-Bln | T=35°F | Fine |
| 40/120 | " | 3.50 | AOV | " | 1200/025 | BS | IIIc-Jeb | B | SB-Bln | T=34°F Set 5/4 | ? dust on Slit Fine |
| | | | | | | | | | | No 2nd half shown Good Sky lost probably | |

Spectr. Temp. $+41^{\circ}\text{F}$Dome Temp./Hum. $+34^{\circ}\text{F}/60\%$ Transparency Conditions *hazy - cloudy*..... 242Focus *512*.....Spectr. Temp. $+37^{\circ}\text{F}$Dome Temp./Hum. $+31^{\circ}\text{F}/65\%$

| Compansor Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------------|-----------|--------|--------------|--------|-------|------------------|------|----------|------|----------|--------------------|-----------------------|
| 1-16 | 10/128 | 2-4 | 3.50 | A0V | BC | 1200/025 | BS | IIIa-Sub | A | SB-Bl/n | cloud | Fine |
| | | | | | | | | " | | | | |
| 1-66 | 700/317 | 2" | 6.22 | JF8 | BC | 1200/025 | BS | IIIa-OE | B | SB-Bl/n | | Fine |
| | | | | | | | | " | | | | |
| 4-4 | 700/161 | 2" | 6.15 | 09.5II | BC | 830/68 | BS | " | A | Var-Bl/n | 158°F Set 5/6 | Comp vs 1 str Fine |
| 1-12 | 70/120 | 2-3 | 4.82 | B3Ve | " | " | " | IIIa-Sub | B | SB-Bl/n | | comp 1 str Str |
| 6-1 | 70/40 | 2" | 3.9 | K2II | " | " | " | IIIa-OE | A | SB-Bl/n | | Comp 1 str Fine |
| | | | | | | | | | | | Real cloud by dawn | |

245

Emulsion Batches:

5^m 6^s ~~11766~~ 09023-01043 23 206
 8^m 6^s 1100-08102-29033 16 195

Date Fri. Sat. APRIL 8-9 Observers Byt-Ri

| 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 |
|--------------------|----------------------------|--------------|---------------------|-------------------------|-----------------------|---------------------------------------|-------------|---------------------------|------|
| 47514 | HD 37968 | 05 33.2 | -02° 39' | 20:29 | 21:44 | 4 55W | -02° 36' | Fe/- | 14 K |
| 47514 ^v | SPOT CAL FOR PLATES 47514- | | | 15 MIN @ 24 | | ① 17.50 ② 150 ③ 150 3900 4300 4810 | | | |
| 47515 | HD 63887 | 07 46.1 | +71° 57' | 21:58 | 02 20 | 07 15W-1710 | | Fe/- | 4.4 |
| 47515 ^v | SPOT CAL FOR PLATE 47515- | | | 15 MIN @ 19 VOLTS | | ① 24 ② 23 ③ 24 3900 4300 4810 | | | |
| 47516 | HD 191513 | 15 44.4 | -03° 07' | 02 33 | 02 58 | 00 01W | -03° 22' | Fe/- | 16 K |
| 47517 | HD 157482 | 17 18.5 | +40° 04' | 03 03 | 04 11 | 0 19E | +40° 01' | Fe/- | 8.9 |
| 47518 | HD 186547 | 19 39.9 | +13° 04' | 04 20 | 05 14 | 1 39E | +13° 17' | Fe/- | 4.9 |

Spectr. Temp. ... 470°F

Dome Temp./Hum. ... 400°F 89%

Transparency Conditions ... good 244

Focus ... 518

Spectr. Temp. ... 39°F

Dome Temp./Hum. ... 32°F 95%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|-----------|---------------|---------|
| 90/73 | 4-5 | 3.51 | 095 | B.C. | 830/.68 | B.S. | TriTab | A | SB-B12 | tele Reversed | good |
| | | | | | | | TriTab | | | | |
| 400/226 | 3-4 | 7.52 | AD | B.C. | 830/.68 | B.S. | IIao-E | B | SB-B12 | - - | flexure |
| | | | | | | | IIao-E | | | | |
| 40/120 | | 3.50 | AOI | B.C. | 1200/.025 | B.S. | IIaJE | A | SB-B12 | T=40°F F=513 | |
| 30/120 | 3 | 6.2 | dFB | B.C. | 1200/.025 | B.S. | IIao-E | B | SB-B12/Ly | | fine |
| 80/55 | | 6.1 | B8I | B.C. | 830/.680 | B.S. | IIao-E | A | | T=40°F F=515 | fine |

Spectr. Temp. $+48.5^{\circ}\text{F}$Dome Temp./Hum. $+43^{\circ}\text{F}/63\%$.Transparency Conditions *sl. hazy*.....

248

Focus *513*.....Spectr. Temp. *4.0*.....Dome Temp./Hum. *132^{\circ}/92%*

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------------------|--------------------------|-------|--------------|------|-------------------|------|------------------------------------|-----------------------------|----------------|
| | | | | BC | 830/68 | BS | II ₀₀ | A | | | ok |
| 40/38 | 1-2" | 5.3 | F ₃ <u>IV</u> | " | " | " | II _{00E} | B | std vel | | fine |
| 80/49 | 2-3" | 5.3 6.6 | A2 <u>V</u> | " | " | " | " | A | Var Sch | | exp ok dust |
| | | | | | | | II | | | | |
| 80/50 | 2-3" | 5.3 6.6 | A2 <u>V</u> | BC | 830/68 | BS | " | B | Var Sch | slight haze | good |
| 80/46 | 3" | " | " | " | " | " | " | A | " | some cloud | good |
| 80/42 | 4" | " | " | " | " | " | " | B | " | | good |
| 00/65 | 3-4" | " | " | " | " | " | " | A | " | very hazy | sl weak |
| 40/65 | 3" | 3.93 | F ₀ | " | 1200/65 | " | " | B | II ₀₀ F ₀ RT | $+43^{\circ}\text{F}$ 513 | |
| 40/65 | 3" | 3.2 | F | " | " | " | " | A | " | | |
| 00/200? | 3" | 6.17 | F ₂ | " | 830/68 | " | " | B | Ceph-Rm | | |

Emulsion Batches:

IAD-E 08102-30033

IAD-E 09023-01043

Date SAT 50N APR 16-17 Observers Byt-Ri

| 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. |
|-----------|-------------------------------|--------------|---------------------|-------------------------|-----------------------|---------------------|----------------|---------------------------|-------|
| 47529 ✓ | HD 63887 | 07 46.1 | +71° 57' | 02:12 | 02:22 | 7 50 W | +71° 44' | Fe/- | 5-44 |
| 47529T | SPOT CAL FOR PLATES 47529-30, | | | 32,33 | 15MIN @ 15VOLTS | | ① D4 ② P3 ③ D2 | | 4810 |
| 47530 | HD 138749 | 15 28.9 | +31° 42' | 02 30 | 02 40 | 0 31 W | +31° 22' | Fe/- | 6-6 |
| 47531 ✓ | HD 141513 | 15 44.4 | -03° 07' | 02 49 | 03 26 | 1 00 W | -03° 20' | Fe/- | 16-16 |
| 47531T | SPOT CAL FOR PLATES 47531 | | | | 15MIN @ D4 | ① 17.5U ② 15U ③ 15U | | | 4810 |
| 47532 | HD 157482 | 17 18.5 | +40° 04' | 03 30 | 04 51 | 0 52 W | +39° 58' | Fe/- | 8-8 |
| 47533 | HD 161096 | 17 38.5 | +04° 37' | 04 54 | 05 10 | 0 50 W | +4° 37' | Fe/- | 12 |
| 47533F | FOCUS TEST | | | | | | | Fe/- | 30-30 |

Spectr. Temp. ... 41°F

Dome Temp./Hum. ... 32°F 64%

Transparency Conditions ... sl. haze 250

Focus ... 515

Spectr. Temp. ... 34°F

Dome Temp./Hum. ... 28°F 65%

| Comp. Type Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------|-----------|--------|-----------|-------|-------|--------------|------|----------|------|-----------|------------------|------------|
| 1- 302 48.0 | 400/215 | 3-4 | 7.52 | A0 | B.C. | 830/68 | B.S. | IIao-E | A | SB-B1h | | fine |
| | | | | | | | | IIao-E | | | | |
| | 40/35 | | 4.1 | B7c | B.C. | 830/68 | B.S. | IIao-E | B | PERCY * | g = 35°F F = 517 | sl. strong |
| 1- 4910 | 40/120 | 4 | 3.5 | A0II | B.C. | 1200/-025 | B.S. | IIaTeB | A | SB-B1h | g = 35°F F = 514 | fine |
| | | | | | | | | IIaTeB | | | | |
| 1- 85 | 30/120 | 3 | 6.22 | dFB | B.C. | 1200/-025 | B.S. | IIao-E | B | SB-B1h/Ly | | fine |
| 1- 2 | 20/1 | | 3.9 | K2III | B.C. | 1200/-025 | B.S. | IIao-E | A | Std-VL | | fine |
| 1- 3 | | | | | B.C. | 1200/-025 | B.S. | IIao-E | B | | g = 34°F F = 514 | vs/Blue |

253

Thurs-Fri

Date Apr. 21-22/83..... Observers T_n - Bois.....
 Emulsion Batches:
 5^m 68° IDa-Jeb 09023 -13043
 8^m 68° Ua-Oe 08102 -13043

| 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. |
|-----------|-------------------------|--------------------|---------------------|-------------------------|-----------------------|------------------------|-------------|---------------------------|-------|
| 47534 ✓ | HD 138749 | 15 28.9 | +31 42 | 00 40 | 01 39 | 0 12 E | +31 27 | Fel- | 7-5-7 |
| 47534T | Spot Cal'n for 47534-36 | | | 15 min @ D4 | | 17.5V 15V 3900 4300 | 15V 4810 | | |
| 47535 | HD 137909 | 15 23.7 | +29 27 | 01 42 | 02 31 | 0 45W | +29 11 | Fel- | 15-15 |
| 47536 | HD 141513 | 15 44.4 | -3 07 | 02 35 | 03 11 | 1 04W | -3 21 | " | 15-15 |
| 47537 | HD 157482 | 17 18.5 | +40 04 | 03 15 | 04 10 | 0 33W | + | " | 7-7-7 |
| 47537T ✓ | Spot Cal'n for 47537-38 | | | 15 min @ 15V | | D4 D3 3900 4300 | D2 4810 | | |
| | HD 161096 | 17 38.5 | +4 37 | | | W | + | Fel- | |
| 47537E | Focus test | | | | | " | +40° | Fel- | 17-17 |

Spectr. Temp. ... 73.8°F

Dome Temp./Hum. ... 73°F/99%

Transparency Conditions ... some cloud again 254

Focus ... 514

Spectr. Temp. ... 36°F

Dome Temp./Hum. ... 128/97%

| Comparison No. Filter Exp. | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------------------|----------------|----------------|------------------|---------------|----------------------|------------------|--------------|--------------|--------------|-------------------|------------------------|--------------------------------------|
| 1-15-7 | 40/180 | 2-3" | 4.10 | B7m | BC | 1200/.025 | BS | IIaJ-eb | A | Partly * | some cloud | fine |
| | | | | | | | | " | | | | |
| 2-15-7 | 40/210 | 2" | 3.93 | Fop | BC | 1200/.025 | BS | IIIaJ-eb | B | Asm Sp KK | * a 2cm braten off end | exp fine sl. foggy at blue end |
| 1-15-7 | 40/150 | 3" | 3.50 | AOV | " | " | " | " | A | SB-Blm | T=37.8 | fine |
| 1-7-7 | 80/103 | 1-2" | 6.22 | df8 | " | " | " | IIa-Oe | B | SB-Blm/ly | | |
| | | | | | | | | IIa-Oe | | | | |
| | 40/ | 3.9 | 4.214 | BC | 1200/.025 | BS | " | " | A | SB-Blm | cloud | |
| 1-15-7 | | | | | BC | 1200/.025 | BS | IIIa-Oe | B | Set 514 | T 36°F | OK |

255

Reticon Lathier (part cloudy)

Emulsion Batches:

8^m68°

...IIa.P.E. 08102-13093

Fri - Sat

Date Apr. 22-23/83..... Observers ... Bois - 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. |
| 47538 | FOVIA HD 117362 | 13 972 | +1° 21 | 23 03 | 23:44 | 0 01W | +1 14 | Fel- | 6-6 |
| 47539 | " correct | 13 1124.7 | +1° 36 | 23 52 | 00 33 | 0 50W | +1 14 | " | 6-6 |
| 47540 | " | " | " | 00 42 | 01 21 | 1 38W | " | " | 7-7 |
| 47541 | " | " | " | 01 22 | 02 05 | 2 22W | " | " | 7-7 |
| 47542 | " | " | " | 02 08 | 03 05 | 3 22W | " | " | 7-7 |
| 47542 [✓] | Spot Calcs | for 47538-45 | | | 15min @ 15V | 3900 | D3 4300 | D3 4810 | |
| 47543 | HD 203156 | 21 154 | +37 49 | 03 13 | 03 51 | 3 43E | +38 11 | Fel- | 7-7 |
| 47544 | HD 165174 | 17 596 | +1 55 | 03 57 | 04 37 | 0 18W | +1 57 | " | 7-7 |
| 47545 | HD 161096 | 17 365 | +4 37 | 04 37 | 04 45 | 0 48W | + | " | 7-7 |
| 47545 F | Focus Test | | | | | " | " | " | 17-17 |

Spectr. Temp. *75°F*Dome Temp./Hum. *38°F/60%*Transparency Conditions *semi cloudy-hazy* 256Focus *5.4*Spectr. Temp. *40.5°F*Dome Temp./Hum. *32°F/60%*

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---------------|-------------|-------------|--------------|-----------|---------------|-----------|--------------|----------|-----------------|---------------------|-------------|
| <i>6-6-60</i> | <i>2"</i> | <i>1/8"</i> | <i>A2V</i> | <i>BC</i> | <i>830/18</i> | <i>B5</i> | <i>LiO-E</i> | <i>A</i> | <i>Sch str</i> | | <i>fine</i> |
| <i>7-6-60</i> | <i>1.2"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>B</i> | <i>"</i> | <i>43°F</i> | |
| <i>7-7-60</i> | <i>"</i> | <i>"</i> | <i>3</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>A</i> | <i>"</i> | | |
| <i>7-7-60</i> | <i>2"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>B</i> | <i>"</i> | | |
| <i>7-7-60</i> | <i>3"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>A</i> | <i>"</i> | | |
| <i>7-7-60</i> | <i>2"</i> | <i>6/7</i> | <i>F2</i> | <i>BC</i> | <i>830/18</i> | <i>B5</i> | <i>"</i> | <i>B</i> | <i>Ceph-Pan</i> | <i>41°F set 515</i> | |
| <i>7-7-60</i> | <i>2"</i> | <i>6/5</i> | <i>09511</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>A</i> | <i>Ver Ph</i> | | <i>fine</i> |
| <i>7-7-60</i> | <i>1"</i> | <i>39</i> | <i>K211</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>B</i> | <i>Std Vol</i> | | |
| <i>11-3</i> | | | | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>A</i> | | <i>T=405°F</i> | <i>OK</i> |

Spectr. Temp. ... 49.5°F

Dome Temp./Hum. 40°F/54%

Transparency Conditions some streaks - cloud free ²⁶⁰

Focus ... 512

Spectr. Temp. ... 43.5°F

Dome Temp./Hum. ... /54%

SSE unusual

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------|--------------|------|----------|------|-----------|-----------------------------|---------|
| 10/106 | 2" | 3.3 | A5 | BC | 830/.68 | BS | III Jfg | B | Asm Sp KK | | slst |
| | | | | " | " | " | IIaO | A | | | OK |
| 10/160 | 5" | 7.0 | df8 | " | 1200/.025 | BS | IIaO-E | A | Asm Sp KK | clouds reversed T=48° F=511 | good |
| | | | | | | | IIaJfg | | | | |
| | | | | | | | IIaO-E | | | | |
| 10/110 | | 4.3 | F2IV | BC | 1200/.025 | BS | IIaJc | B | Asm Sp KK | cloud | fine |
| 10/103 | | var = 3 | F | BC | " | " | " | B | Asm Sp/KK | thru cloud | fine |
| 10/60 | | 129 | KO | " | " | " | " | A | sl/100 | d Boo | fine |

Spectr. Temp. $+64^{\circ}\text{F}$Dome Temp./Hum. $60^{\circ}\text{F}/62\%$ Transparency Conditions *sl. hazy - sl. cloudy*..... 26AFocus $507-509$Spectr. Temp. $+56.5^{\circ}\text{F}$Dome Temp./Hum. $49^{\circ}\text{F}/73\%$ Companion
type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------|-------|--------------|------|----------|------|-----------|----------------|---------------------|
| 20/60 | 2.4" | 26.5 | A2V | BC | 830/68 | BS | IIaD-E | A | Sch prog | | slwk |
| 30/45 | 2.3" | " | " | " | " | " | " | B | " | adjusted focus | Fast slwk v slwk |
| 30/45 | 3.4" | " | " | " | " | " | " | A | " | | Fast slwk v slwk |
| 30/44 | 3.7" | " | " | " | " | " | " | B | " | T=63°F | v slwk |
| 30/36 | 3.6" | " | " | " | " | " | " | A | " | thin cloud | v slwk |
| | | | | | | | " | | | | |
| 40/120 | 3" | 410 | RTnn | BC | 830/68 | BS | IIaD-E | B | Prog Prog | Set 509 T=61°F | slstr |
| | | | | | | | " | | | | |
| 40/167 | 4" | 350 | A0V | BC | 100/605 | BS | " | A | SB-Rh | T=60°F Set 509 | Fin C |
| 40/42 | 4" | 39 | K2III | " | " | " | IIaD-E | B | std vel | cloudy | v slwk |
| 00/2130 | 3" | 617 | F2 | " | 830/68 | " | " | A | Ceph-Rm | cloudy | v slwk |
| | | | | " | " | | IIaD | B | | Set 509 T=56°F | ceat/slwk |

265

THROS-FE1

Date MAY 5-6 1983

Observers Byt-R

New D-19

8^m 68°5^m 68°

Emulsion Batches:

Kod-E. 08102.-25043

Karteb. 09.223.-29043 20L

| 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. |
|----------------------|----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|-------|
| 47563 | HD 88021/2 | 10 03.8 | +20°49 | 20 00 | 0 00 | 4 30W | +20°27 | Fe/- | 44-4 |
| 47563 ^v T | SPOT CAL FOR PLATES 47563- | | | | 15MIN @ 150VOLTS | D4 | D3 | D2 | |
| 47564 | HD 138749 | 15 28.9 | +31°42 | 0 07 | 0 36 | 0 19E | +31°27' | Fe/- | A 1A |
| 47564T | SPOT CAL FOR PLATES 47564- | | | | 15MIN @ D4 | 0 17.5U | 0 15U | 0 15U | |
| 47565 | HD 141513 | 15 44.4 | -03°07 | 0 42 | 1 03 | 0 09E | -03°22' | Fe/- | 17-17 |
| 47566 | HD 157482 | 17 18.5 | +40°04 | 1 09 | 02:38 | 0 06E | +40°02 | Fe/- | 6-6 |
| 47566F | FOCUS TEST | | | | | | | Fe/- | 26-26 |
| 47567 | HD 203156 | 21 15.4 | +37°49 | 2 48 | 04:09 | 2°33 E | +38°10 | Fe/- | 44-4 |
| 47568 | HD 186791 | 19 41.5 | +10°22 | 04:15 | 04:23 | 0 46E | +10° | Fe/- | 6-6 |
| 47568F | FOCUS TEST | | | | | | | Fe/- | 20-20 |

Spectr. Temp. 51°F Dome Temp./Hum. 42°F 85% Transparency Conditions *Good* 266Focus 512

Spectr. Temp.

Dome Temp./Hum. 39°F 87% Comparison
Type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----------------|-------|--------------|------|---------------------|------|------------------------|--------------|---------|
| 200/230 | 4-5 | 7.20 | 945 A2 | B.C. | 830/1.68 | B.S. | II ₀₀ -E | A | VB-31 _L | | flexure |
| | | | | | | | II ₀₀ -E | | | | |
| 40/120 | 4 | 4.10 | B7 _L | B.C. | 830/1.68 | B.S. | II ₀₀ -E | B | PERCY* | T=450F F=513 | fine |
| | | | | | | | " | | | | |
| 40/20 | | 3.5 | A0J | B.C. | 1200/-.025 | B.S. | II ₀₀ -E | A | SB-31 _L | T=450F F=512 | |
| 200/304 | 4 | 6.22 | dFB | B.C. | 1200/-.025 | B.S. | II ₀₀ -E | B | SB-31 _L /Ly | | fine |
| | | | | B.C. | 1200/-.025 | B.S. | II ₀₀ -E | A | | T=430F F=512 | |
| 200/200 | 4 | 6.17 | F2 | B.C. | 830/1.68 | B.S. | II ₀₀ -E | B | CEPH-Rm | T=430F F=514 | |
| 20/30 | | 4.1 | A3II | B.C. | 830/1.68 | B.S. | II ₀₀ -E | A | Sid Vel | | |
| | | | | B.C. | 830/1.68 | B.S. | II ₀₀ -E | B | | T=410F F=514 | fine |

Date Sep. Nov. May 8-9 1983 Observers Sec. 4 - R

5^m 68^o

Emulsion Batches:

IITao-E. 08102-28043
IITao-E. 09023-29043 2040

| 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. |
|-----------|-----------------------------|---------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| 47569 | FO VIR HD 117362 | 13 27.2 | +10° 21.3 | 20 03 | 21 13 | 1 28 E | | Fe/- | 444 |
| 47569F | FOCUS TEST | | | 21 15 | | | | Fe/- | 2020 |
| 47570 | HD 117362 | 13 27.2 | +10° 21 | 21:15 | 22:15 | 0 26 E | +10° 12 | Fe/ | 4-44 |
| 47570T | SPOT CAL FOR PLATES 47570 - | | | 15 MIN @ 1500 LTS | | | | | |
| 47571 | HD 117362 | 13 27.2 | +10° 21 | 22:17 | 23:10 | 0 30 W | +10° 12 | Fe/- | 4-44 |
| 47572 | " | " | " | 23:12 | 00:11 | 1 30 W | " | Fe/- | 4-44 |
| 47573 | " | " | " | 00:12 | 01:19 | 2 39 W | " | Fe/- | 4-44 |
| 47574 | HD 138749 | 15 28.9 | +31° 42 | 01:24 | 01:48 | 1 05 W | +31° 27 | Fe/- | A-4 |
| 47574T | SPOT CAL FOR PLATE 47574 | | | 15 MIN @ D4 | | | | | |
| 47575 | HD 161096 | 17 38.5 | +09° 37 | 01:54 | 02:02 | 0 52 E | +09° | Fe/- | 6-6 |
| 47576 | HD 203156 | 21 15.4 | +37° 49 | 02:07 | 03:17 | 03 4.4 E | +38° 12' | Fe/- | 4-44 |
| 47577 | HD 165174 | 17 59.6 | +1° 55 | 03:22 | 04:17 | 01 00 W | +01° 55 | Fe/- | 4-4 |
| 47577F | FOCUS TEST | | | | | | | Fe/- | 2020 |

Spectr. Temp. 48°F Dome Temp./Hum. 41°F 70% Transparency Conditions good 268

Focus 512

Spectr. Temp. Dome Temp./Hum. 32°F 78% 4/30

| Comp. of Filter | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------|-----------|--------|-----------|--------|-------|--------------|------|----------|------|---------|--------------|---------|
| 1-4-20 | 200/80 | 4-5 | 6.5 | A2I | B.C. | 830/.68 | B.S. | Ilav-E | B | Var-Sel | | good |
| 1-20 | | | | | B.C. | 830/.68 | B.S. | Ilav | A | | | |
| 1-4-20 | 200/88 | | 6.5 | A2I | B.C. | 830/.68 | B.S. | Ilav-E | A | Var-Sel | T=47°F F=513 | fine |
| 1-4-20 | 200/90 | | 6.5 | A2I | B.C. | 830/.68 | B.S. | Ilav-E | B | Var-Sel | T=46°F F=513 | fine |
| 1-4-20 | 200/70 | | - | - | - | - | - | - | A | - | T=45°F F=513 | fine |
| 1-4-20 | 200/80 | | - | - | - | - | - | - | B | - | T=44°F F=513 | |
| 1-4-20 | 40/100 | 3-4 | 4.10 | B7m | B.C. | 830/.68 | B.S. | Ilav-E | A | Percy* | T=43°F F=514 | fine |
| | | | | | | | | Ilav-E | | | | |
| 1-4-20 | 20/30 | | 3.9 | K2III | B.C. | 830/.68 | B.S. | Ilav-E | B | Std Var | T=42°F F=514 | fine |
| 1-4-20 | 200/200 | | 6.17 | F2 | B.C. | 830/.68 | B.S. | Ilav-E | A | Cap/Rm | T=42°F F=514 | fine |
| 1-4-20 | 200/175 | 4 | 6.15 | O9-5TH | B.C. | 830/.68 | B.S. | Ilav-E | B | Var-B/L | T=41°F F=515 | |
| 1-20 | | | | | B.C. | 830/.68 | B.S. | Ilav | A | | T=40°F F=515 | |

269

Date MON. TUE. MAY 9.-10. 83 Observers S.L. - R.

Emulsion Batches:

~~Thos~~ 08102-28043

Thos 08102-08053

Wateb 09023-29093

| 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. |
|-----------|--------------------------------|--------------|---------------------|-------------------------|-----------------------|----------------------|--------------------------------------|---------------------------|-------|
| 47578F | FOCUS TEST | | | | | | | Fel- | 20-20 |
| 47578 | ✓ HD 117362 | 13 27.2 | +01° 21 | 20:00 | 20:58 | 0140 E | +01° 13 | Fel- | 4-4-4 |
| 47578T | SPOT CAL FOR PLATES 47578- | | | | 15MIN @ 1500LTS | | ① D4 ② D3 ③ D2 3900 4300 4810 | | |
| 47579 | HD 117362 | 13 27.2 | +01° 21 | 20:59 | 21:59 | 0 37 E | +01° 13 | Fel- | 4-4-4 |
| 47580 | HD 117362 | 13 27.2 | +01° 21 | 22:00 | 23:00 | 0 24 W | +01° 13 | Fel- | 4-4-4 |
| 47581 | HD 117362 | 13 27.2 | +01° 21 | 23:02 | 00:02 | 01 25 W | | Fel- | 4-4-4 |
| 47582 | HD 117362 | 13 27.2 | +01° 21 | 00:04 | 01:04 | 02 28 W | | Fel- | 4-4-4 |
| 47583 | HD 8890 | 01 22.6 | +88 46 | 01:21 | 01:24 | 10 ^h 03 E | 85° 10 | Fel- | 9-9 |
| 47584 | HD 141513 | 15 44.4 | -03° 07 | 01:38 | 01:59 | 1 04 W | -03° 20 | Fel- | 17-17 |
| 47584T | ✓ SPOT CAL FOR PLATES 47584-85 | | | | 15MIN @ 124 | | ① 175U ② 15U ③ 15U 3900 4300 4810 | | |
| 47584F | | | | | | | | Fel- | 25-25 |
| 47585 | HD 138749 | 15 28.9 | +31° 42 | 02:10 | 02:30 | 01 51 W | +31° 28 | Fel- | 14-14 |
| 47586 | HD 203156 | 21 15.4 | +37° 49 | 02:37 | 03:20 | 03 06 E | +38° 11 | Fel- | 4-4-4 |
| 47587 | HD 182572 | 19 20.2 | +11° 44 | 03:26 | 03:53 | 00 38 E | +11° 55 | Fel- | 4-4-4 |
| 47588 | HD 182640 | 19 20.5 | +02° 55 | 03:57 | 04:15 | 00 16 W ^x | +03° 07 | Fel- | 14-14 |
| 47588F | FOCUS TEST | | | | | | | Fel- | 20-20 |

Spectr. Temp. 49°F Dome Temp./Hum. 40°F 60% Transparency Conditions good 270

Focus 513

Spectr. Temp. Dome Temp./Hum. 36°F 70% 40/32

Comparison
Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality | |
|-----------|--------|-----------|------|-------|--------------|------|----------|------|------------|---|---------|-----------|
| | | | | B.C. | 830/.68 | B.S. | IIAD-E* | A | | | | |
| 80/60 | 3 | 6.5 | A2V | B.C. | 830/.68 | B.S. | IIAD-E | B | VAR-SEL | | good | |
| | | | | | | | IIAD-E | | | | | |
| 30/55 | 3-4 | 6.5 | A2V | B.C. | 830/.68 | B.S. | IIAD-E | A | VAR-SEL | } both numbered '79' ids which are marked as the of or less than 1000 | | |
| 30/47 | 4 | 6.5 | A2V | BC | 830/.68 | B.S. | IIAD-E | B | VAR-Sch | | | |
| 200/85 | | 6.5 | A2V | B.C. | 830/.68 | B.S. | IIAD-E | A | VAR-SEL | T=450F | F=513 | |
| 200/80 | | 6.5 | A2V | B.C. | 830/.68 | B.S. | IIAD-E | B | VAR-SEL | | | |
| 20/32 | | ~2 | F | B.C. | 1200/.025 | B.S. | IIAD-E | A | Ceph - Rm | T=430F | F=512 | |
| 20/60 | | 3.50 | A0V | B.C. | 1200/.025 | B.S. | IIAD-E | B | SB-B/L | | good | |
| | | | | | | | IIAD-E | | | | | |
| | | | | B.C. | 1200/.025 | B.S. | IIAD-E* | A | | T=420F | F=512 | |
| 70/120 | 3-4 | 4.1 | B7na | B.C. | 830/.68 | B.S. | IIAD-E | B | PERCY * | T=420F | F=514 | sl strong |
| 30/50 | 4 | 6.7 | F2 | B.C. | 830/.68 | B.S. | IIAD-E | A | Ceph. - Rm | | fine | |
| 40/40 | | 5.2 | G8IV | B.C. | 830/.68 | B.S. | IIAD-E | B | STD. VEL. | | fine | |
| 20/65 | | 3.68 | F0IV | B.C. | 830/.68 | B.S. | IIAD-E | A | Asm Sp/Atk | | fine | |
| | | | | B.C. | 830/.68 | B.S. | IIAD-E | B | | T=410F | F=514 | fine |

Spectr. Temp. 52°F Dome Temp./Hum. 49°F 52% Transparency Conditions SCATTERED CLOUDS 272

Focus 511

Spectr. Temp. Dome Temp./Hum. 43°F 68% 40/31

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|-------|--------------|------|----------|------|-----------|-------------------------------------|----------|
| | | | | B.C. | 830/68 | B.S. | IIAO-E | A | | | |
| 30/73 | 3 | 6.5 | A2V | B.C. | 830/68 | B.S. | IIAO-E | B | Var-Scl | CLOUDS | fine |
| | | | | | | | IIAO-E | | | | |
| 30/100 | | 5.0 | M2V | B.C. | 830/68 | B.S. | IIAO-E | A | STD UFL | CLOUDS | |
| 200/34 | | 6.5 | A2V | B.C. | 830/68 | B.S. | IIAO-E | B | Var-Scl | CLOUDS IN AGAIN T = 52°F F = 511 | weak |
| 200/115 | 3 | 6.5 | A2V | B.C. | 830/68 | B.S. | IIAO-E | A | Var-Scl | T = 51°F F = 512 | good |
| 200/40 | 2 | 2.2 | F | B.C. | 1200/68 | B.S. | IIAO-E | B | Ceph-Rm | T = 51°F F = 510 | fine |
| 30/120 | 1-2 | 6.22 | DF8 | B.C. | 1200/025 | B.S. | IIAO-E | A | S13-B1/4y | T = 50°F F = 510 | fine |
| | | | | | | | IIAO-E | | | | |
| 30/60 | 2 | 5.2 | G8IV | B.C. | 1000/025 | B.S. | IIAO-E | B | STD UFL | | fine |
| 30/80 | | 6.17 | F2 | B.C. | 830/68 | B.S. | IIAO-E | A | Ceph-Rm | T = 50°F F = 512 | fine |
| 200/85 | | 6.15 | O9.5IV | B.C. | 830/68 | B.S. | IIAO-E | B | Var-Blu | clouds T = 49°F | good |
| | | | | RC | 830/9 | RS | G98 | B | | T = 51°F F = 512 | very red |

11053

Spectr. Temp. $+57^{\circ}F$

Dome Temp./Hum. $+54F/54.2$

Transparency Conditions *sl. hazy*..... 274

Focus $510-512$

Spectr. Temp. $49^{\circ}F$

Dome Temp./Hum. $+47/99.6$

Comparison
e/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------------|--------------|-------|--------------|------|----------|------|----------|--|---------|
| 20/50 | 1" | 5.0 | M2149 | BC | 830/68 | BS | II-DE | A | Star Vel | | good |
| | | | | | | | " | | | | |
| 20/50 | 1-2" | 6.5 | A2V | BC | 830/68 | BS | " | B | Var Sch | | good |
| 20/50 | " | " | " | " | " | " | " | A | " | | good |
| 20/50 | 2-3" | " | " | " | " | " | " | B | " | | good |
| 20/50 | 3" | " | " | " | " | " | " | A | " | $+55^{\circ}F$ | |
| 20/46 | 3-4" | " | " | " | " | " | " | B | " | | |
| 20/45 | 2-3" | " | " | " | " | " | " | A | " | | |
| 20/220 | " | 7.9 9.4 | F5I-I -G3 | " | " | " | " | B | C94 film | $+50^{\circ}F$ <i>Prob 2 May 80</i> <i>broken</i> | |

275

Visitor Group 1 hr G15 (M3 very good)

 Emulsion Batches:
 8^m 68° IIa0-E 08102 -11053
 4^m 70° 09802 05031 - 03053

Date Thurs. Fri. May 12-13 Observers Sch-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. |
|-----------|-------------------------------|--------------------------------------|-----------------------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|----------------|
| 47606 | HD 117362 | 13 ²¹⁰⁷ 222 | +1 ³⁶ 21 | 21 14 | 21 49 | 0 36 E | +1 13 | Fe/- | 4-8 |
| 47606T | Spot Calc | For 47606, 08-11 | | 15 min - 0.1EV | | V4 3900 | P3 4300 | P3 4700 | |
| 47607 | HD 114519 | 13 060 | +36 28 | 22 02 | 02 01 | 03 57 W | +36 02 | P/ND No filter | 7-6-1 7-6-6 |
| 47607T | Spot Calc for 47607 | | | 15 min - e | | 15V D3 1800 | 7V D1 HX | 7V D3 5450 | |
| 47608F | Focus test | | | | | 0400 W | +36 02 | Fe/- Ne/- | 8-8 8-8 |
| 47608 | HD 157982 | 17 185 | +40 04 | 02 15 | 03 41 | 00 25 W | +40 02 | Fe/- | 8-8 |
| 47609 | HD 165174 | 17 59.6 | +1 55 | 02 48 | 03 11 | 00 11 W | +1 58 | Fe/- | 6-6 |
| 47610 | HD 203156 | 21 15.4 | +37 49 | 03 14 | 03 45 | 02 29 E | +38 12 | " | 6-6 |
| 47611 | ^{Polaris} HD 8890 | 1 226 | +88 46 | 03 53 | 03 56 | 0700 E | | " | 9-9 |
| | | | | lost | | | | | |

Spectr. Temp. $+57^{\circ}\text{F}$ Dome Temp./Hum. $? / 64\%$ Transparency Conditions S / hazy 276

Focus 510

Spectr. Temp. $+52^{\circ}\text{F}$ Dome Temp./Hum. $+48^{\circ}\text{F} / 80\%$

Fair Aurora, 2nd night

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|----------|-------|--------------|------|----------|------|-----------|------------------|------------------|
| 80/53 | 1" | 6.5 | A2V | BC | 830/68 | BS | T140-E | A | Var Sch | | good |
| | | | | | | | " | | | | |
| 200/200 | 1-2" | 8.4-9.9 | F4 IV | BC | 1200/1.7 | RS | 098 | B | SB-Pln | T=55.5 Set 510 | good some fog |
| | | | | | | | " | | | | |
| | | | | BC | 1200/1.7 | RS | " | A | | T=53.5 F Set 510 | slightly blue |
| 80/120 | 1-2" | 6.22 | dF8 | BC | 1200/1.025 | BS | T140-E | B | SB-Pln/Ly | Set 510 | |
| 80/73 | 1" | 6.15 | 09.5 III | " | 830/68 | BS | " | A | Var Pln | Set 511 | |
| 80/100 | 1" | 6.17 | F2 | " | " | " | " | B | Capt. Mem | | |
| 80/48 | 1" | 5.2 | F | " | 1200/1.025 | " | " | A | | Very rough | lost |

09053

Spectr. Temp. ... + 63°F

Dome Temp./Hum. 60°F/60%

Transparency Conditions ... 5/1 hazy 278

Focus 508

Spectr. Temp. ... 58°F

Dome Temp./Hum. 52/78%

| Compensator Type/Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|--------------------------------|-----------|--------|--------------|------|-------|------------------|------|----------|------|------------|---------|---------|
| 9-99 | 10/86 | 1" | 4.34 | F21D | PC | 1700/00 | BS | 1700E | A | Asm Sp + K | | fine |
| 9-1 | 20/113 | 1" | 6.45 | G8VI | " | " | " | " | B | " | | good |
| 9-44 | 10/84 | 2" | 6.8 | G8V | PC | 820/08 | BS | " | A | Asm Sp + K | | |
| 9-100 | 10/180 | 2" | 6.84 | dk1 | " | " | " | " | B | " | | |
| 9-140 | 10/145 | 1.5" | 7.76 | F053 | " | " | " | " | A | Running | | |
| 9-160 | 10/95 | " | 6.17 | F2 | " | " | " | " | B | Good Run | | |
| 9-180 | 10/38 | " | 2 | F | " | 1200/025 | " | " | A | Running | | |

Spectr. Temp. 56°F Dome Temp./Hum. $47^{\circ}\text{F}/69.8$ Transparency Conditions \dots Fine \dots 40 starting \dots 280Focus 509 Spectr. Temp. 49 Dome Temp./Hum. $40/92.6$

| Comparison pe/Filter/ Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------------------|-----------|--------|--------------|------|-------|------------------|------|----------|------|------------|----------------|---------|
| 9-3 | 0/55 | 3-5" | 5.0 | M200 | BC | 1200/-025 | BS | II-0-E | A | std vel | same e/oud | fine |
| | | | | | | | | " | | | | |
| 4-1 | 40/55 | 5" | 2.8 | G0 | PC | 1200/-025 | BS | II-0-E | B | Asm Sp KK | | fine |
| 1-1 | 200/245 | 3-6" | 5.92 | d62 | " | " | " | " | A | " | | fine |
| 12-3 | 20/60 | 5" | 3.50 | A0V | " | " | " | II-0-E | B | SB-Pln | | |
| | | | | | | | | " | | | | |
| 4-1 | 40/120 | 5" | 4.10 | B7m | PC | 830/68 | BS | II-0-E | A | Peris prog | T=50°F Set 512 | |
| 6-3 | 40/50 | 5" | 5.58 | G2V | " | " | " | II-0-E | B | Asm Sp KK | | fine |

08102 - 13053
 09802E 05031 - 03053^{25 22}

Date May 17-18/53 Observers Rai-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. |
|-----------|-------------------------|--------------------------------------|---------------------|----------------------|--------------------|----------------------|---------------------|------------------------|------|
| 47635F | Focus test | | | | | | | Fel- 16-1 | |
| 47635 | HD 37797 | 9 ^h 22.7 | -8 ^o 14 | 20 07 | 20 11 | 2 ^h 6 W | -8 ^o 34 | Fel- 6-6 | |
| 47626 | HD 17362 = F4hr | 13 ^h ^{24.7} 12.2 | 10 ^o 36 | 20 15 | 21 01 | 1 ^h 4 E | +0 ^o 12 | " 6-6 | |
| 47627 | " | " | " | 21 02 | 21 52 | 0 13 E | " | " 6-6 | |
| 47628 | " | " | " | 22 02 | 22 52 | 0 47 W | " | " 6-6 | |
| 47628T | Spot for 47635-29,34,35 | | | 15 min @ 15 | 15 | D= 2900 | 63 | 63 | |
| 47629 | HD 5000 = 2UPH | 1 ^h 22.6 | +88 ^o 4 | 23 07 | 23 10 | 11 ^h 42 E | +57 ^o 11 | Fel- 6-6 | |
| 47630 | " | " | " | 23 21 | 23 24 | 11 ^h 30 E | " | " 6-6 | |
| 47631 | HD 162714 = 70ph | 17 ^h 47.3 | -6 ^o 07 | 23 33 | 00 41 | 1 ^h 47 E | -06 ^o 07 | " 6-6 | |
| 47631T | Spot Calc for 47630-33 | | | 15 min @ | 15V D3 4810 | 7V D1 HD | 7V D2 | 54V D | |
| 47632 | HD 187727 = S Sp | 19 51.5 | +16 22 | 00 51 | 01 21 | 3 ^h 10 E | +16 ^o 25 | Fel- 6-6 | |
| 47633 | HD 187088 = 20UG | 19 ^h 40.8 | 139 ^o 01 | 01 55 | 2 53 | 1 ^h 26 E | +21 ^o 10 | Fel- 6-6 | |
| 47634 | HD 185344 = UPH | 19 ^h 29.0 | -7 ^o 15 | 3 00 | 3 44 | 0 30 E | -7 ^o 04 | " 6-6 | |
| 47635 | HD 303183 = HD 1857 | 21 15.4 | +37 ^o 49 | 3 47 | 4 14 | 1 41 E | +37 ^o 12 | " 6-6 | |

Spectr. Temp. 52.5 F

Dome Temp./Hum. 49 F / 60%

Transparency Conditions Fine vsl haze

Focus 512

1st use of New Aluminized

Spectr. Temp.

Dome Temp./Hum. 90 / 70%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------|-------|--------------|------|----------|------|---------|---------------------|---------|
| | | | | BC | 230/.68 | B | II OE | A | | | |
| 10/50 | 2-3" | 2.2 | K31E | " | " | " | " | B | Sch | | |
| 10/50 | " | 6.5 | A2V | " | " | " | " | A | Sch | | |
| 10/50 | 2" | " | " | " | " | " | " | B | Sch | | |
| 10/50 | 1-2" | " | " | " | " | " | " | A | Sch | | |
| | | | | | | | TOOE | | | | |
| 10/50 | 1-2" | 2.5 | 27 | " | 1200/.75 | " | " | B | Capt/Rm | | uneven |
| 10/50 | 1-2" | " | " | " | 1200/.7 | RS | 098-OE | A | " | (No filter over RS) | good |
| 10/50 | 1-2" | 7.2 | 2F9B | " | " | " | " | B | " | 50 F set 512 | good |
| | | | | | | | " | | | | |
| 10/50 | 1" | 6.5 | 260 | BC | 1200/.7 | RS | " | A | Capt-Rm | | good |
| 10/50 | 2" | 7.7 | G1 | " | " | " | " | B | " | | good |
| 10/70 | 1" | 4.2 | 260 | BC | 530/.8 | BS | II OE | A | Capt/Rm | 47 F | fine |
| 10/80 | 1" | 6.2 | F2 | " | " | " | " | B | " | | vsl str |

Emulsion Batches:

UAE 0802-17053
 UAE 09023-13053

Date ^{Wind Tails} MAY 18-19/83... Observers ^{KH} KH-CK-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. |
|--|------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|--------|
| 47636 | HD 137909 | 15 23.7 | +29 27 | 22 25 | 22 42 | 1 18E | | Fel- 9-9 | 80/21 |
| 47637 | HD 8890A | 1 22.6 | +88 46 | 22 51 | 22 58 | 11 51E | | Fel- 9-9 | 20/40 |
| 47638 | HD 150014 | 17 10.1 | 114 30 | 23 13 | 23 24 | 2 22E | | Fel- 9-9 | 80/200 |
| 47639 | HD 159501 | 17 30.3 | +12 38 | 23 31 | 00 8 | 1 58E | | Fel- 18-18 | 40/120 |
| 47638T | Spot Calc for 47636-38 | | | 15min@15V | | D4 3900 | D3 4300 | D2 4810 | |
| 47639T | Spot Calc for 47639 | | | 15min@D4 | | 175V 3900 | 15V 4300 | 15V 4810 | |
| 47639F1 | Focus Test | | | | | 0 | | Fel- 20-20 | |
| Focus Tests May 20-21 After Exp meter changes. | | | | | | | | | |
| 47639F2 | | | | | | 0 | +9°30 | Fel- 17-17 | |
| | F3 | | | | | 0 | " | " " | |
| | F4 | | | | | 0 | " | " 20-20 | |

Spectr. Temp. Dome Temp./Hum. *47°F / 70%* Transparency Conditions *cloudy surface*
 Focus *509*
 Spectr. Temp. *52°F* Dome Temp./Hum. *45°F / 75%*

Comparison
 ps/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---|---------|-----------|-----|-------|--------------|-----------|---------------------|--------------------|----------------------|---------------------------|---------|
| 9-9 | 10/2120 | 1.2" | 3.9 | FOP | BC | 1200/.025 | BS | II ₀ -E | A | Asm. Sp/KK | |
| 1-2 | 20/40 | " | var | F | " | " | " | B | " | | |
| 9-9 | 20/290 | " | 3.9 | M | " | " | " | A | std/Vel | | |
| 1-2 | 10/120 | 1.3" | 2.2 | H5III | " | " | III ₀ -E | B | Asm. Sp/KK | cloud | |
| | | | | | | | II ₀ -E | | | | |
| | | | | | | | III ₀ -E | | | | |
| | | | | BC | 1200/.025 | BS | II ₀ | A | | | |
| <p>The new beam splitter installed May 20</p> | | | | | | | | | | | |
| | | T=59.5°F | | BC | 1200/.025 | BS | II ₀ -E | A | Set 514 | Telescope Kaverage | |
| | | " | | " | " | " | " | A | set 511 | (Normal would be 508-509) | |
| | | " | | " | " | " | " | A | set 507 | | |
| | | | | | | | | | <u>T₄</u> | | |

287

Date May 27-28 Observers Flu - R.

Emulsion Batches:

$\Pi_{0.2} - E. 09102 - 17053$ 22 192
 $\Pi_{0.0} - E. 08102 - 27053$ (FOAT 36) 21 171

| 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. |
|-----------|------------------------------|-----------------------------------|---------------------|-------------------------|-----------------------|-----------------------------------|-------------|---------------------------|-------|
| 47640 | HD 165174 | 17 ^h 59.6 ^m | +1° 55' | 21:39 | 22:28 | 03 ^h 32 ^m E | +01° 57' | Fe/- | 4-4-4 |
| 47641 | HD 165174 | 17 ^h 59.6 ^m | +1° 55' | 22:30 | 23:10 | 02 ^h 51 ^m E | +01° 57' | Fe/- | 4-4-4 |
| 47642 | SPOT CAL FOR PLATES 47640-46 | | | | | 15 MIN @ 150 VOLTS | 3900 | 0320 | 4810 |
| 47642 | HD 165174 | 17 ^h 59.6 ^m | +1° 55' | 23:11 | 23:41 | 2 ^h 20 ^m E | +01° 57' | Fe/- | 4-4-4 |
| 47643 | HD 165174 | 17 ^h 59.6 ^m | +1° 55' | 23:43 | 00:03 | 1 ^h 59 ^m E | +01° 57' | Fe/- | 4-4-4 |
| 47644 | HD 165174 | 17 ^h 59.6 ^m | +1° 55' | 00:05 | 00:35 | 1 ^h 25 ^m E | +01° 57' | Fe/- | 4-4-4 |
| 47645 | HD 165174 | 17 ^h 59.6 ^m | +1° 55' | 00:36 | 01:07 | 0 ^h 54 ^m E | +01° 57' | Fe/- | 4-4-4 |
| 47646 | HD 165174 | 17 ^h 59.6 ^m | +1° 55' | 01:09 | 01:49 | 0 ^h 11 ^m E | +01° 57' | Fe/- | 4-4-4 |
| 47647 | HD 165174 | 17 ^h 59.6 ^m | +1° 55' | 01:50 | 02:30 | 0 ^h 30 ^m W | +01° 57' | Fe/- | 4-4-4 |
| 47647T | SPOT CAL FOR PLATES 47647- | | | | | 15 MIN @ 150 VOLTS | 3900 4300 | 0320 | 4810 |
| 47648 | HD 165174 | 17 ^h 59.6 ^m | +1° 55' | 02:33 | 03:28 | 1 ^h 27 ^m W | +01° 57' | Fe/- | 4-4-4 |
| 47649 | HD 186791 | 19 ^h 41.5 ^m | +10° 22' | 03:34 | 03:49 | 0 ^h 07 ^m W | +10° 36' | Fe/- | 5-10 |
| 47649F | FOCUS TEST | | | | | 0 ^h 08 ^m W | +10° 36' | Fe/- | 16-16 |

Spectr. Temp. ... 54°F

Dome Temp./Hum. 48°F./64%

Transparency Conditions

288

Focus ... 5.13

Spectr. Temp. ... 48°F

Dome Temp./Hum. 41°F./64%

NEW FOR KTR

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|-------|--------------|------|----------|------|---------|---------------------------|----------------------------|
| 30/300 | 3-4 | 6.5 | 035II | BC | 830/68 | BS | IaO-E | A | Var-Bin | | sl weak |
| 30/245 | | " | " | " | " / " | " | " | B | " | | good + |
| | | | | | | | IaO-E | | | | |
| 30/240 | 3-3 | 6.5 | 035III | BC | 830/68 | BS | IaO-E | A | Var-Bin | clouds | fine - |
| 30/182 | | " | " | " | " / " | " | " | B | " | T=51°F; F=518; some cloud | fine - |
| 30/151 | | " | " | " | " / " | " | " | A | " | | v sl. strong |
| 30/150 | | " | " | " | " / " | " | " | B | " | | v sl strong |
| 30/220 | 1 | " | " | " | " / " | " | " | A | " | T=50°F; F=514 | sl strong |
| 30/206 | | " | " | " | " / " | " | *IaO-E | B | " | CLOUDS NEAR | v sl strong |
| | | | | | | | *IaO-E | | | | |
| 30/128 | | 6.15 | 035III | BC | 830/68 | BS | *IaO-E | A | Var-Bin | CLOUDS; talk of end | good sl weak |
| 4/34 | 1-2 | 4.1 | K3II | " | " / " | " | " | B | STDVEL | Clouds; sl + 1st end. | good |
| | | | | | | | " | A | | F=514 T=48°F | very slightly red |

293

Wed-Thu

Emulsion Batches:

II-O-E 08102 - 30053

Date June 1-2/83... Observers Rgt-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 |
|-----------|------------|--------------|---------------------|-------------------------|-----------------------|--------------------|--------------------|---------------------------|------|
| 47653F | Focus Test | | | | | ≈ 0° 0W | -8 | fe/- | 16-6 |
| 47653 | HD 89449 | 10 14.3 | 719 59 | 20 137 | 21:02 | 3 ^h 06W | +19° 37 | " | 6-6 |
| 47653T | Spot Calc | for 47653-63 | | | 15 min @ 15V | D4 3900 | D3 D2 4300 4800 | | |
| 47654 | HD 165174 | 17 596 | +1 55 | 21 08 | 22 14 | 3 ^h 28E | +1 58 | fe/- | 444 |
| 47655 | " | " | " | 22 15 | 23 04 | 2 ^h 37E | " | " | 6-6 |
| 47656 | " | " | " | 23 05 | 23 42 | 1 ^h 59E | " | " | 6-6 |
| 47657 | " | " | " | 23 44 | 0 26 | 1 ^h 15E | " | " | 6-6 |
| 47658 | " | " | " | 0:27 | 1:05 | 0 ^h 36E | " | " | 6-6 |
| 47659 | " | " | " | 1:06 | 1:38 | 0 ^h 02E | " | " | 6-6 |
| 47660 | " | " | " | 1:40 | 2:19 | 0 ^h 38W | " | " | 6-6 |
| 47661 | " | " | " | 2:20 | 2:56 | 1 ^h 16W | " | " | 6-6 |
| 47662 | " | " | " | 2:57 | 3 20 | 1 ^h 40W | " | " | 6-6 |
| 47663 | " | " | " | 3 21 | 4 01 | 2 21W | " | " | 6-6 |

20053

Spectr. Temp. 57.5 F

Dome Temp./Hum. +54°F/77%

Transparency Conditions... Fine - slant 294

Focus 512

Spectr. Temp. 53

Dome Temp./Hum. +49°F/83%

Total 8 filter on HD 89449 before taking exposure

| Companson Type/Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---------------------------|-----------|--------|-----------|------|-------|--------------|------|----------|------|-----------|------------------------------------|------------|
| | | | | | BC | 830/68 | BS | Ilford | A | | | cond/slant |
| 6-5 | 80/69 | 1.2" | 5.3 | FGTV | " | " | " | " | B | slant | | strong |
| | | | | | | | | " | | | | |
| 444 | 80/262 | 3-2 | 6150 | 50 | BC | 830/68 | BS | Ilford | A | Var - Blm | 1st 1/3 Exp slow hazy down here | good + |
| 6-5 | 80/69 | 2" | " | " | " | " | " | " | B | " | | fine |
| 6-5 | 80/60 | 2-3 | " | " | " | " | " | " | A | " | | v slant |
| 6-5 | 80/71 | 3" | " | " | " | " | " | " | B | " | T = 56°F | fine |
| 6-5 | 80/69 | 3" | " | " | " | " | " | " | A | " | | fine |
| 6-5 | 80/75 | 2" | " | " | " | " | " | " | B | " | | fine |
| 6-6 | 80/87 | | " | " | " | " | " | " | A | " | | |
| 6-5 | 80/69 | | " | " | " | " | " | " | B | " | | |
| 6-5 | 80/50 | 3" | " | " | " | " | " | " | " | " | | good + |
| 6-5 | 80/50 | 3-5" | " | " | " | " | " | " | B | " | | slant |

205-1

Date

June 2-3/53

Observers

RM-TL

8^m 68°4^m 68°

Emulsion Batches:

J.A.O.E. 08107 - 01063

078E - 25053 A 188

| 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. |
|------------------|----------------------|---|---------------------------------|-------------------------|-----------------------|--|---------------|---------------------------|---------------|
| 47664 | Focus Test | | | | | 0 ^h 0 ^m 0 ^s | -2° | F/- | 16-16 |
| 47665 | FO Vir = HD 17362 | 13 ^h 22 ^{24.7} | +1° 36 ³⁶ | 20:30 | 21:19 | 0 ^h 12 ^m W | +1° 12' | F/- | 6-6 |
| 47665 | " | " | " | 21:20 | 22:16 | 1 ^h 3 ^m W | " | F/- | 8 |
| 47665 | Spot Calc | for 47669 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| 47666 | HD 8710 = X Vir | 1 ^h 22 ^m 6 | +35° 46' | 22:31 | 22:33 | 1 ^h 17 ^m E | +9° 08' | F/- | 9-13 |
| 47667 | " | " | " | 22:53 | 22:55 | 10 ^h 57 ^m E | " | F/- | 10-10 |
| 47668 | " | " | " | 22:57 | 23:00 | 10 ^h 52 ^m E | " | F/- | 10-10 |
| 47669 | HD 162114 = Y Ori | 17 ^h 47.3 | -02° 07' | 23:10 | 23:45 | 1 ^h 40 ^m E | -6° 08' | F/- | 10-10 |
| 47669 T1 | Spot Calc | for 47667-74 | | | 15 min | 15 VDS 4810 | 017V Hz | D37V 5450 | |
| 47670 | HD 17831 = T Vir | 19 ^h 52 | +01° 00' | 23:50 | 00:53 | 1 ^h 46 ^m E | +1° 15' | F/- | 10-10 |
| 47670 | Spot Calc | for 47664-66 | | 15 min | 15 min | D3 4300 | 5450 | | |
| 47671 | HD 171635 = X Ori | 13 ^h 30.9 | +30° 58' | 01:00 | 1 ^h 12 | 0 ^h 54 ^m E | +37° 01' | F/- | 10-10 |
| 47672 | HD 18583 = X Ori | 19 120 | +27 45 | 1 ^h 15 | 1 ^h 50 | 0 ^h 58 ^m E | +27 54 | F/- | 10-10 |
| 47673 | HD 17615 = F Vir | 18 538 | +17 14 | 1 ^h 56 | 2:12 | 1 ^h 14 ^m W | 17 32 | F/- | 10-10 |
| 47674 | HD 17372 = X Ori | 23 ^h 39.5 | +35° 14' | 2:16 | 2:48 | 1 ^h 24 ^m E | +35 20 | F/- | 10-10 |

Spectr. Temp. 66°F

Dome Temp./Hum. 62°F/62%

Transparency Conditions *getting heavy clouds* 296

Focus 508

Spectr. Temp.

Dome Temp./Hum.

*B for I₂O₅
what filters? "Clear" for O₂O₃
of course*

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|-------|--------------|------|---------------------------------|------|----------------|--|---------|
| | | | | BC | 330/4 | RS | I ₂ O ₅ | B | | | used |
| 30/50 | 2.3" | 65 | H2O | " | " | " | I ₂ O ₅ | A | Sch star | | |
| 30/60 | 2" | " | " | " | " | " | " | B | " | | fine |
| | | | | | | | 4 | | <i>spoiled</i> | | |
| 30/20 | | 2.5 | F70B | | 1200/7.05 | " | " | A | Ceph/Evans | T=63°F Focused | fine |
| 30/50 | 1" | " | " | BC | 1200/.7 | RS | O ₂ O ₃ E | B | Ceph/Evans | (No filter used over RS. Should have used GG13 | fine |
| 30/100 | 2" | " | " | " | " | " | " | B | Ceph/Evans | (UV minus) Filter | good |
| 30/150 | 2.3" | 7.0 | F70B | " | " | " | " | B | Ceph/Evans | | |
| 30/305 | 3" | 73 | F8 | " | " | " | " | A | Ceph/Evans | <i>note - slice missing off end</i> | |
| 30/32 | 2" | 55 | F70B | BC | 1200/.7 | RS | O ₂ O ₃ E | B | Ceph/Evans | 517 | |
| 30/160 | 2" | 67 | F62-76 | " | " | " | " | A | " | | |
| 30/160 | 2" | 51 | F70B | " | " | " | " | B | " | | good |
| 30/160 | 2" | 65 | F70B | " | " | " | " | A | " | | good |

Spectr. Temp. ... 66.5°F ...

Dome Temp./Hum. 46°F/82%

Transparency Conditions *Sudden cloud... after 300 Sundoubt*

Focus ... 5.08 ...

Used "B" filter on Exp. 100

Spectr. Temp. ... 64 ...

Dome Temp./Hum. 46°F/93%

Comparison
Type/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|---------|--------------------------------------|---------|
| | | | | BC | 830/68 | BS | | A | | | |
| 40/40 | 1.5" | 4.3A | F2V | BC | 830/68 | BS | Duo-E | B | Asm Sp | some cloud | fine |
| 200/28 | 3" | 6.8 | G8V | " | " | " | " | A | " | much cloud ^(+ Exp Ematic) | were |
| | | | | | | | " | | | Shuttered - discarded | |

301

Tour 1000h of Saturn = 15 h before clearing

Mon-Tue

JD 24459126

8^m 68^o

Emulsion Batches:

... Du. 0-E 08102 ... - 03053

Date June 6-7/83 ... Observers Rm-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. |
| 47678 | HD 17352 * FOV in | 13 ^h 24.7 27.2 | 10 [°] 36 27 | 20 35 | 21:56 | 1 ^h 09 W | +1 ^o 11 | Fe/- | 6-6 |
| 47678T | Spot Cal for 47678 | | | 15 min @ 15V | D ¹ 3900 | D3 4300 | D2 4310 | Fe/- | 8-8 |
| 47678F | Focus Test | | | | | 1 ^h 00 W | 1 ^o 11 | He/- | 8-8 |
| 47679 | HD 136202 | 15 ^h 14.2 | 2 ^o 09 | 22 17 | 22 34 | 0 ^h 1 W | +1 ^o 52 | Fe/ND | 8-8 |
| 47679F | Focus Test | | | 22:36 | | 0 ^h 1 W | | Ne/ND | 8-8 |
| | | | | | | | | Fe/- | 8-8 |
| | | | | | | | | Ne/- | 8-8 |

Tues-Wed

Date June 7-8-183 Observers T. H.

 Emulsion Batches:
 4^m 69° ... IIIa-E 09023-13053
 4^m 69° ... IIa0-E 02102-03063
 4^m 69° ... 098-E -04063

| 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. |
|-----------|----------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|-------------|---------------------------|------|
| 47680 | HD 138749 | 15 28.9 | +31 42 | 20 29 | 20 57 | 1 49 E | + | Fel- 17-17 | |
| 47681 | ^{B Cr Ber} HD 137909 | 15 23.7 | +29 27 | 21 05 | 21 47 | 0 54 E | + 2909 | " 20-20 | |
| 47682 | HD 159561 | 17 30.3 | +12 38 | 21 53 | 22 02 | 2 46 E | + | " 20-2 | |
| 47682F | Focus test | | | | | 0 20 E | + 1° 50 | " 18-8 | |
| 47682T | Spot Caln for 47680-82 | | | 15 min @ D4 | | 17.5V 3900 | 15V 4300 | 15V 4810 | |
| 47683 | HD 136202 | 15 14.2 | +2 09 | 22 15 | 22 45 | 0 14 W | + 1° 52 | Fel- 8-8 | |
| 47684 | " | " | " | 22 50 | 23 09 | 0 38 W | " | Fel- 4-4 Nel- 4-4 | |
| 47684F | Focus test | | | | | " | " | Fel- 14-14 Nel- 14-14 | |
| 47685 | HD 162714 | 17 47.3 | -6 07 | 23 20 | 00 31 | 0 33 E | - 6 07 | Fel- 3-3 Nel- 3-3 | |
| 47685T | Spot Caln for 47684-86 | | | 15 min @ | | 15V D3 4810 | 01 7V Hα | 02 7V 5450 | |
| 47686 | HD 176155 | 18 53.8 | +17 14 | 00 34 | 01 12 | 1 00 E | + 17 19 | Fel- 4-4 Nel- 4-4 | |

Spectr. Temp. +62°F

Dome Temp./Hum. +54°F/60%

Transparency Conditions *Fine* 304

Focus 510

Exp meter "B" filter used for 098s

Spectr. Temp. +59°F

Dome Temp./Hum. +44°/73%

Exp meter "Clear", blank holder in for 098s

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-------------------------|-----------------|-------|--------------|------|----------|------|----------------|------------------------------|------------------------|
| 17/72 | 2" | 4.1 | B7 _m | BC | 830/68 | BS | U40-E | A | Py Prog | | |
| 20/110 | 2-3" | | | " | 1210/-025 | " | " | B | Asa Sp KK | Set 510 still | |
| 21/20 | 3" | 2.2 | A51II | " | " | " | " | A | " | | |
| | | | | " | " | " | U40 | B | Set 510 T=58°F | | red |
| | | | | | | " | U40-E | | | | |
| 20/19 | 2-3" | 5.6 | F8U-V | BC | 1200/1025 | BS | U40-E | A | std vel | * | good |
| 21/65 | " | " | " | BC | 1200/1.7 | RS* | 098-E | B | " | GG13 filter used for 098s | v sl waste |
| | | | | " | " | " | " | B | Set 510 | T=57°F | |
| 20/80 | 3-5" | 7.0 ⁺ 7.8 | F8- G3 | BC | " | " | " | A | Ceph-Rm | Prob 7.0 mag Set 511 | some blotches exp good |
| 20/100 | 3-5" | 5.9 6.4 | CF5 CF9 | BC | 1200/1.7 | RS* | " | B | Ceph-Rm | | No Fe, exp good |
| | | | | | | | | | | (close) early in the morning | |

Spectr. Temp. +59

Dome Temp./Hum. +53°F/58%

Transparency Conditions Fine... some thin cloud 306
Exp. more filter "B" for ICo eyes

Focus 511

Spectr. Temp. +52.5

Dome Temp./Hum. +46°F/83%

| Companson pe/Filter | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------------|-----------|--------|--------------|-------------|-------|------------------|------|----------|------|-----------|---------|-----------|
| 6- | 20/22 | 2" | 5.24 | Ap | BC | 830/66 | BS | Uo-E | A | Ap+Am | | sl strong |
| " | 20/25 | " | 5.51 | Hp | " | " | " | " | B | ' | | sl strong |
| " | 40/42 | " | 6.97 | A7V | " | " | " | " | A | " | | fine |
| " | | | | | | | | " | | | | |
| 6- | 30/31 | 2.3" | 6.85 | A6/A7 | BC | 830/66 | BS | " | B | 1/ps film | | fine |
| " | 40/40 | 3" | 6.40 | A3/A7 A7 | " | " | " | " | A | " | | fine |
| " | 40/80 | 1.2" | 7.59 | B6V | " | " | " | " | B | " | | fine |
| " | 40/65 | 2" | 8.07 | B6Vp | " | " | " | " | A | " | | good |
| " | 40/40 | 3" | 6.81 | Am | " | " | " | " | B | " | | fine |
| " | 60/16 | 2" | 4.1 | B3D | " | " | " | " | A | sl/10/ | | sl strong |
| " | | | | | " | " | " | " | B | | | sl red |

Fri - Sat

Emulsion Batches:

JON 13 R. 8mm 690 J. 90-E 08/02 -0806300

Date June 10-11/83... Observers Pok - 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 | Ext |
|-----------|-------------|--------------|---------------------|-------------------------|-----------------------|--------------------|--------------------|---------------------------|-----|
| 47696F | Focus test | | | | | 0 0 | +2 20 | Fel- 16-16 | |
| 47696 | HD 124675 | 14 09.9 | +52 16 | 20 34 | 20 45 | 0 30 E | +51 54 | Fel- 6-6 | |
| 47697 | HD 124674 | 14 09.9 | +52 16 | 20 48 | 22 06 | 0 50 W | +51 54 | " 6-6 | |
| 47698 | HD 135364 | 15 09.6 | +46 57 | 22 10 | 00 34 | 2 20 W | +48 40 | " 4-4 | |
| 47698T | Spat. Colln | for 47698 | -47703 | | 15 min @ 15V | ^{D4} 3900 | ^{D3} 4300 | ^{D2} 4200 | |
| 47699 | HD 161096 | 17 38.5 | +4 37 | 0 38 | 0 50 | 0 05 W | +4 36 | Fel- 6-6 | |
| 47700 | HD 171586 | 18 30.6 | +4 51 | 0 54 | 2 33 | 0 56 W | +4 57 | Fel- 4-4 | |
| 47701 | HD 185194 | 19 32.2 | +16 14 | 2 38 | 3 22 | 0 45 W | +16 25 | Fel- 4-4 | |
| 47702 | HD 187013 | 19 42.6 | +33 30 | 3 25 | 3 39 | 0 52 W | +33 44 | " 6-6 | |
| 47703 | HD 194093 | 20 18.6 | +39 56 | 3 41 | 3 44 | 0 21 W | +40 12 | " 6-6 | |

Spectr. Temp. 70°F

Dome Temp./Hum. 66°F/73%

Transparency Conditions Fine - val. hazg. 308

Focus 507

Spectr. Temp. 60

Dome Temp./Hum. 54°F/86%

"B" filter for Exp meter

| Comparison Type Filter | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---|-----------|--------|-----------|-------|-------|--------------|------|----------|------|----------|---|-----------|
| | | | | | BC | 830/68 | BS | IIaD-E | A | | | sl red |
| | 20/20 | 2" | 4.74 | A7II | " | " | " | " | A | Waterloo | | sl strong |
| | 30/65 | 2-3" | 7.08 | F2V | " | " | " | " | B | " | * Exp meter rate erratic | |
| | 20/216 | 2" | 8.7 | K2III | " | " | " | " | A | " | * Exp meter rate dependent upon intensity of position | |
| | | | | | | | | " | | | | |
| | 20/16 | 2" | 3.9 | K2II | BC | 830/68 | BS | " | B | stiller | | |
| | 20/180 | 2" | 6.5 | A2II | " | " | " | " | A | Waterloo | set 509 T-64°F | |
| | 30/50 | 2-3" | 6.7 | F4III | " | " | " | " | B | " | | |
| | 20/40 | 2" | 5.5 | F5V | " | " | " | " | A | " | | |
| | 20/17 | 2" | 2.9 | F8Ib | " | " | " | " | B | " | | |
| <p>Note. All exps until #47701 were affected by decenter adjustment <u>too far in.</u> ie not all the light that should reach Exp meter was. Presumably by not reaching plate either.</p> | | | | | | | | | | | | |

0203

Spectr. Temp. +71.0°F

Dome Temp./Hum. +70°F/69%

Transparency Conditions Hazy - cloudy 310

Focus 507

"B" filter for eye water

Spectr. Temp. +67.5°F

Dome Temp./Hum. 165°F/88%

Comparison Type/Filter

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------|--------|-----------|-----|-------|--------------|------|----------|------|-----------|---------------------|---------|
| 6-50/46 | 1" | 6.5 | A2V | BC | 830/68 | BS | Ilud-E | A | Var Sch | | good |
| | | | | | | | " | | | | |
| 8-30/18 | <1" | 3.93 | F0p | BC | 1200f.025 | BS | Ilud-E | B | Asm Sp Kk | T=70°F set 507 s/N1 | fine |
| 6-50/58 | <1" | 6.22 | dF8 | " | " | " | " | A | SB-Bl/Ly | | fine |
| 8-100/200* | 2" | 6.17 | F2 | " | 830/68 | " | " | B | Ceph-Ro | cloud eye water | fine |
| | | | | " | " | " | Ilud | A | | | vsl red |

Spectr. Temp. ... 80°F

Dome Temp./Hum. 75°F/69%

Transparency Conditions V.Hazy

Focus ... 506

Spectr. Temp. ... 79°F

Dome Temp./Hum. 67°F/88%

Spectacular Aurora by 22hrs
visible south of Jupiter E-W

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|----------------|--------|-----------|------|-------|--------------|------|-----------|------|---------|---|---------|
| | | | | BC | 1200/-025 | BS | II a 0 | A | | | red |
| 1997-10-12/130 | <1" | 3.93 | F0p | BC | " | " | III a 1-E | B | Asa spk | | fine |
| 1997-10-10/95 | 1" | 6.8 | G8U | " | " | " | II a 0-E | A | " | | good |
| | | | | | | | III a 1-E | | | | |
| 1997-10-10/110 | <1" | 2.2 | H5II | BC | 1200/-025 | BS | III a 1-E | B | Asa spk | | fine |
| 1997-10-10/26 | 1" | 3.9 | H2II | " | " | " | II a 0-E | A | std bol | | fine |
| | | | | | | | " | | | | |
| 1997-10-10/130 | 1"-4" | 6.22 | d18 | BC | 1200/-025 | BS | " | B | std bol | Seein. 2nd end v Brl Aurora w/ 01 hr | |
| 1997-10-10/110 | 2"-3" | 3.68 | F0IX | " | " | " | III a 1-E | A | Asa spk | | good |
| | | | | | | | | | | completer clear lost no 26 | |

Mon - Tues

JD 2445499.6

Emulsion Batches:

Date June 13-14/53

Observers

Rm/Tr

 JUNE 14R. 3min @ 8F. D90E 08102 - 0806
 JUNE 14R. 4 1/2 min @ 68F. D98E 05031 - 0631

| 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 |
| 47714 | HD 8890 = Q UMi | 17 ^h 22.6 | +88 ^o 46 | 20:55 | 20:53 | 11 47W | +89 ^o 10 | F/- | 4-9 |
| 47715 | " | " | " | 21:02 | 21:07 | 11 59 W | " | F/- | 4-4 |
| 47716 | HD 161096 | 17 ^h 38.5 | +4 ^o 37 | 21:19 | 21:26 | 3 ^h 65 | +4 ^o 35 | F/- | 4-4 |
| 47716F | Focus test | | | | | " | " | F/- | 12-2 |
| 47717F | Focus test | | | | | | " | F/- | 12-2 |
| 47717 | HD 161096 | 17 ^h 38.5 | +4 ^o 37 | 21:39 | 21:44 | 2 47E | " | F/- | 4-4 |
| 47718 | HD 161096 | " | " | 21:47 | 21:49 | 2 46E | " | F/- | 4-4 |
| 47719 | HD 162719 = Y Cen | 17 ^h 45.3 | -06 ^o 07 | 22:01 | 23:28 | 10 14E | -06 06 | F/ND | 8-8 |
| 47719 ^x | Spot Cal for 47719 | 17 42.2 | 15 min @ 15V | 15V D3 | 3900 | D3 | D2 | F/ND | 8-8 |
| 47720 | HD 157921 = SV Vul | 17 ^h 47.4 | +27 ^o 12 | 23:34 | 01:57 | 0 ^h 43E | +27 ^o 27 | F/- | 8-8 |
| 47720T | Spot Cal for 47720 | 17 47.5-21 | 15 min @ | 15V D3 | 4810 | 7 D1 | 7V D2 | F/ND | 8-8 |
| 47721 | HD 153089 = U Vul | 17 ^h 52.2 | +20 ^o 07 | 2:02 | 3:14 | 0 ^h 49 W | +20 20 | F/ND | 8-8 |
| 47722 | HD 20315E = HD 157 | 21 ^h 15.9 | +13 ^o 41 | 3:26 | 3:55 | 0 ^h 3 E | +13 ^o 15 | F/- | 6-6 |

Spectr. Temp. 82°F

Dome Temp./Hum. 78°F/68%

Transparency Conditions hazy 314

Focus 506

Spectr. Temp. 76°F

Dome Temp./Hum. 71°F/80%

Exp meter 'B' filter for blue plates
" " Clear filter for red plates

| Comp. Type/Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------------------|-----------|--------|-----------|------|-------|--------------|------|----------|------|------------|-------------------------|-----------|
| | 20/26 | 1" | 2.5 | F30 | BC | 1200/-025 | BS | II00E | A | Ceph/Rim | | |
| | 20/20 | 1" | " | " | " | 1200/1.7 | RS* | 0980E | B | " | * GG13 above RS | |
| | 20/21 | 1" | 3.9 | K100 | " | " | RS* | 098 E | A | Std Vel | | |
| | | | | | " | " | " | 098 | B | | | |
| | | | | | " | 150/-5 | RS* | 098 | B | | Focus 506 GG13 above RS | |
| | 20/30 | 1" | 3.9 | K100 | " | " | " | " | A | | NB not evacuated GG13 | fine |
| | 20/30 | 1" | " | " | " | " | RS* | 098-E | B | Std Vel | * V filter for 010 RS | sl strong |
| | 20/100 | 1" | 7.8 | G30 | " | 1200/1.7 | RS* | 098-E | A | Ceph/Expos | T spectrograph 81°F | good |
| | | | | | | | | II00E | | | | |
| | 20/120 | 1.2" | 7.9 | F70 | BC | 1200/1.7 | RS* | 018E | B | Ceph/Expos | | |
| | | | | | | | | " | | | | |
| | 20/100 | 1.3" | 7.8 | F8 | BC | 1200/1.7 | RS* | " | A | Ceph/Expos | 77°F | good |
| | 20/29 | <1" | 2.2 | F4 | BC | 830/1.68 | RS | II00-E | B | " | 1" broken off | |

Spectr. Temp. 82°FDome Temp./Hum. $+77^{\circ}\text{F}/62\%$ Transparency Conditions *hazy*.....Focus 506Spectr. Temp. 77°FDome Temp./Hum. $+70^{\circ}\text{F}/86\%$

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------|--------|-------------------|-----|-------|--------------|------|--------------------|------|----------|---------------------------|---------|
| | | | | BC | 230/168 | BS | II ₀ -E | A | | | |
| 1-6-100/37 | 1.2" | 7.0? MLE -M9Te | | " | " | " | " | B | Cru prog | | v. weak |
| 1-6-100/135 | 2.3" | 8.5? MLE -M9Te | | " | " | " | " | A | " | | weak |
| | | | | | | | | | | no 2nd half obs (lost) | |

Spectr. Temp. 83°FDome Temp./Hum. 78°F 74%Transparency Conditions VERY HAZY

318

Focus 506

CLOUDS BY DAWN

Spectr. Temp. 79°FDome Temp./Hum. 69°F 97%

| Companson pe/Filter Exp | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|----------------------------|--------------|--------|--------------|-------|-------|------------------|------|----------|------|----------|----------------|---------|
| | | | | | | 1200/ -.025 | B.S. | Iad | A | | | red |
| | 3 | | | | | | | | | | | |
| | 90/80 BFT | 3 | 5.6 | FBIW | B.C. | 1200/ -.025 | B.S. | Iad-E | B | STD UFL. | | fine |
| | 100/200 | 3.4 | 6.8 | GSI | B.C. | 1200/ -.025 | B.S. | Iad-E | A | KK prog | | vs/weak |
| | | | | | | | | Iad-E | | | | |
| | 40/50 | 3 | 3.9 | FOP | B.C. | 1200/.025 | B.S. | Iad-E | B | " | T = 77°F (507) | fine |
| | 20/120 | 2-3 | 2.2 | ASIII | B.C. | 1200/-025 | B.S. | Iad-E | A | " | T = 76°F (11) | fine |
| | 20/120 | 2-3 | 3.7 | FOIV | B.C. | 1200/ -.025 | B.S. | Iad-E | B | " | T = 75°F (11) | fine |
| | | | | | | | | Iad-E | | | | |
| | 20/120 | 2.4 | 5.0 | FSIV | B.C. | 1200/ -.025 | B.S. | Iad-E | A | " | CLOUDS | weak |
| | | | | | | 1200/ -.025 | B.S. | Iad-E | B | " | T = 74° (507) | vs/red |

Date Fri. Sat. June 17-18. 83 Observers BK-RiEmulsion Batches:
F 68 Ilco-E. D. 102-13063. 21 1B

| 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. |
|-----------|----------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|----------------|---------------------------|-------|
| 47731F | FOCUS 9 EST | | | | | | | Fe/- | 16-16 |
| 47731 | HD 112033 | 12 48.4 | +21 48 | 20 52 | 22 14 | 2 46 W | +21 21 | Fe/- | 4-4- |
| 47731T | SPOT CAL FOR PLATES 47731- | | | | | 15 MIN @ 15 VOLTS | 3900 4300 4810 | | |
| 47732 | HD 137391 | 15 20.7 | +37 41 | 22 20 | 22 34 | 0 36 W | +37° 29' | Fe/- | 4-4- |
| 47733 | HD 137392 | 15 20.7 | +37 41 | 22 36 | 0 42 | 2 44 W | +37° 28' | Fe/- | 4-4- |
| 47734 | HD 137393 | 15 20.7 | +37 41 | 0 44 | 1 00 | 3 00 W | +37° 29' | Fe/- | 4-4- |
| 47735 | HD 147638 | 19 45.9 | +38 28 | 1 08 | 2 58 | 0 35 W | +38 44 | Fe/- | 4-4- |
| 47736 | HD 203504 | 21 17.5 | +19 23 | 3 04 | 3 24 | 0 30 E | +19 45 | Fe/- | 4-4- |
| 47737 | HD 211073 | 22 09.6 | +39 13 | 3 28 | 3 54 | 0 50 E | +39 26 | Fe/- | 4-4- |
| 47737F | FOCUS 9 EST | | | | | | | Fe/- | 16-16 |

Spectr. Temp. 78°F

Dome Temp./Hum. 70°F 80%

Transparency Conditions . *fine with some clouds* 320
around

Focus 507

Spectr. Temp.

Dome Temp./Hum. 62°F 89%

| Exp. Mtr / Filter | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------|--------|-----------|--------|-------|--------------|------|---------------------|------|-----------|-----------------------------------|-----------|
| | | | | B.C. | 830/.68 | B.S. | I ₁₀₀ -E | A | | | sl med |
| 40/80 | 3-4 | 5.86 | K0 | B.C. | 830/.68 | B.S. | I ₁₀₀ -E | B | Waterford | | |
| | | | | | | | I ₁₀₀ -E | | | | |
| 50/40 | | 4.65 | F0V | B.C. | 830/.68 | B.S. | I ₁₀₀ -E | A | 4 | | sl strong |
| 70/300 | | 7.11 | G0 | B.C. | 830/.68 | B.S. | I ₁₀₀ -E | B | - | 7:750F 7 = 507 | |
| 80/40 | 4 | 4.65 | F0V | B.C. | 830/.68 | B.S. | I ₁₀₀ -E | A | " | | |
| 90/300 | 3-4 | 7.0 | G5B | B.C. | 830/.68 | B.S. | I ₁₀₀ -E | B | " | <i>clouds</i> 9 = 700F F = 508 | |
| 20 | | 5.2 | K1 III | B.C. | 830/.68 | B.S. | I ₁₀₀ -E | A | " | | |
| 20 | 3-4 | 5.5 | K2 IV | B.C. | 830/.68 | B.S. | I ₁₀₀ -E | B | " | <i>clouds</i> | |
| | | | | B.C. | 830/.68 | B.S. | I ₁₀₀ -E | A | | 9 = 64P F = 508 | |

Spectr. Temp. ... 73°F Dome Temp./Hum. ... 65°F 85% Transparency Conditions ... haze + some clouds 322

Focus 508

Spectr. Temp. Dome Temp./Hum. 88%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------------|--------|-----------|------|-------|----------------|------|----------|------|----------|------------------|----------------------|
| BF 1101 40/250 | 3 | 6.8 | G8I | B.C. | 1200/ -.025 | 13.5 | I100-E | A | KK prog. | | s/wedge |
| | | | | | | | I100-E | | | | |
| 40/50 | 4 | 3.93 | Fop | B.C. | 1200/ -.025 | 13.5 | I100-E | B | | clouds | blotches exp fine |
| 40/150 | 4 | 5.2 | G8II | B.C. | 1200/ -.025 | 13.5 | I100-E | A | Std Vel | " | good |
| | | | | | 1200/ -.025 | 13.5 | I100 | B | | 9 = 68°F F = 508 | |

Emulsion Batches:

H.D.-E. 08102-17063

H.D.-E. 09023-11063. A 216

Date Mon. - Tue. Jun 20-21/83 Observers ... Kly. - Ri.

1 1/2" 68°

| 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 | Ex |
|-----------|-----------------------------------|------------------------------------|---------------------|-------------------------|-----------------------|-----------------------------------|-------------|--|-------|
| 47742F | Focus Test | | | | | | | Fe/- | 20-2 |
| 47742 | HD 8890A Polaris A | 1 ^h 22 ^m 6 | +88° 46' | 20:42 | 20:45 | 11 ^h 54 ^m E | +89° 08' | Fe/- | 10-1 |
| 47743 | HD 8890B Polaris B | 1 ^h 22.6 | +88° 46' | 21:20 | 23:50 | 8 ^h 50 E | +89° 07' | Fe/- | 4-4 |
| 47743T | SPOT CAL FOR PLATES | 47742- | | | 15 MIN @ 1500 TS | | | 3900 4300 4810 | |
| 47744 | HD 161096 | 17 38.5 | +24° 37' | 00:02 | 00:10 | 00 25 ^m W | +4° 34' | Fe/- | 6-6 |
| 47745 | HD 137909 | 15 23.7 | +29 27 | 00:18 | 00:26 | 2 21 ^m W | +29° 10' | Fe/- | 9-9 |
| 47746 | HD 159561 | 17 30.3 | +12 38 | 00:29 | 00:38 | 00 27 ^m W | +12 35 | Fe/- | 14-14 |
| 47747 | HD 182640 | 19 20.5 | +12 55 | 00:41 | 01:29 | 00 16 ^m E | +03° 06' | Fe/- | 14-14 |
| 47747T | SPOT CAL FOR PLATES 47746 + 47747 | | | | 15 MIN @ D4 | | | 0 1500 2 1500 3 1500 3900 4300 4810 | |
| 47748 | HD 196524 | 20 ^{32.9} 33.9 | +14 15 | 1:35 | 1:46 | 1 13 ^m E | +14° 34' | Fe/- | 9-9 |
| 47749 | HD 206901 | 21 40.1 | +25 11 | 1:50 | 2:06 | 2 15 ^m E | +25° 33' | Fe/- | 9-9 |
| 47750 | HD 186791 | 19 41.5 | +10 22 | 2:11 | 2:23 | 0 16 ^m W | +10° 33' | Fe/- | 9-9 |
| 47751 | HD 217782 | 22 58.0 | +42 13 | 02:30 | 2:54 | 2 29 ^m E | +42° 41' | Fe/- | 6-6 |
| 47752 | HD 217675 | 22 57.3 | +41 47 | 03:04 | 3:33 | 1 50 ^m E | +42° 14' | Fe/- | 14-14 |
| 47752F | FOCUS TEST | | | | | | | Fe/- | 16-16 |

Spectr. Temp. ... 79°F

Dome Temp./Hum. ... 75°F 59%

Transparency Conditions ... good with some clouds by dawn 326

Focus ... 505

Spectr. Temp. ...

Dome Temp./Hum. ... 69°F 71%

| Type/Filter | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-------------|-----------|--------|-----------|-------|-------|---------------------------|------|-----------|------|----------------|-------------------|-------------------|
| | | | | | B.C. | 1200/.025 | B.S. | II00-E A | | | T = 79°F | |
| B FILTER | | | | | | | | | | | | |
| | 20/25 | 2" | ~2 | F | B.C. | 1200/.025 | B.S. | II00-E B | | KK Asm sp | | fine |
| | 300/300 | 2-3 | 5.6 | F | B.C. | 830/.680 ^{250/3} | | II00-E A | | KK Asm-sp | T = 79°F F = 503 | fine |
| | | | | | | | | II00-E | | | | |
| | 40/40 | 2-3 | 3.9 | K | B.C. | 830/.680 | B.S. | II00-E B | | std vel | T = 76° F = (505) | |
| | 10/50 | 2-3 | 3.9 | F | B.C. | 1200/.025 | B.S. | II00-E A | | KK Asm Sp | T = 76° F = (506) | fine |
| | 20/120 | 2-3 | 2.2 | ASTIV | B.C. | 1200/.025 | B.S. | III00-E B | | KK Asm Sp | | fine |
| | 20/120 | 2-3 | 2.7 | FOTV | B.C. | 1200/.025 | B.S. | III00-E B | | KK Asm Sp | T = 74° " | fine |
| | | | | | | | | III00-E B | | | | |
| | 40/50 | 2-3 | 3.8 | FSIV | B.C. | 1200/.025 | B.S. | II00-E B | | KK Asm Sp | | fine |
| | 20/50 | 1" | 4.4 | FSTIV | B.C. | 1200/.025 | B.S. | II00-E A | | KK Asm Sp | | |
| | 40/50 | " | 4.1 | K3 | B.C. | 1200/.025 | B.S. | II00-E B | | std vel | | fine |
| | 80/150 | 3-4 | 5.2 | A | B.C. | 1200/.025 | B.S. | II00-E A | | Hk Asm Sp | T = 73° F (507) | |
| | 20/120 | 3-4 | 3.6 | 667 | B.C. | 830/.68 | B.S. | III00-E B | | KK Asm Sp | " F (506) | strong |
| | | | | | B.C. | 830/.68 | B.S. | II00-E A | | | T = 506 | very slightly red |
| | | | | | | | | | | READJUSTED ARC | | |

63 19 183

Spectr. Temp. Dome Temp./Hum. 74°F 65% Transparency Conditions Lazy 328

Focus
Spectr. Temp. Dome Temp./Hum. 71°F 75%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------------------------|--------|-----------|------------------|-------|--------------|------|----------|------|-----------|----------------------|---------|
| 66x3mm ON 4" FINDER B Filter | | | | | | | | | | | |
| Feb-6-400/400 | 2 | 7.71 | B6T _p | B.C. | 830/680 | 3.5 | IND-E | A | AmvAp-TBL | T=80°F F=503 | |
| | | | | | | | IND-E | | | | |
| Feb-6-40/40 | 2-3 | 3.9 | K2III | B.C. | 830/680 | 3.5 | IND-E | B | STD UEL | | |
| Feb-16 | | | | B.C. | 830/680 | 3.5 | IND-E | A | | 9 = 77°F F = 503 | good |
| | | | | | | | | | | No 2nd half OK | |
| | | | | | | | | | | Clear remainder last | |

329

Emulsion Batches:

FD-E 08102-20063

Date WED: THURS: JUNE 20-21 Observers R.

| 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 | Ex |
|-----------|--------------------------|--------------|---------------------|-------------------------|-----------------------|-----------------------------------|----------------|---------------------------|-------|
| 47755F | FOCUS TEST | | | | | | | Fe/- | 16-16 |
| 47755 | HD 103095 | 11 47.2 | +38°26 | 20:50 | 22:48 | 04 ^h 36 ^m W | +37°52 | Fe/- | 44 |
| 47755T | SPOT CAL FOR PLAYS 47755 | | | | | 15 MIN @ 150 VOLTS | 3900 4300 4810 | | |
| 47756 | HD 154417 | 17 0.2 | +0°51 | 22:50 | 23:38 | 00 ^h 18 ^m W | +0°45 | Fe/- | 44 |
| 47756F | FOCUS TEST | | | | | | | Fe/- | 16-16 |

Spectr. Temp. 81°F Dome Temp./Hum. 76°F 67% Transparency Conditions *good* 330

Focus 502

Spectr. Temp. Dome Temp./Hum. 71°F 77%

| Comparison Type/Filter | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|------------------------|-----------|--------|-----------|------|-------|--------------|------|----------------------|------|-----------|----------------------------------|---------|
| Fe- B FILTER | | | | | B.C. | $830/1.680$ | B.S. | II ₁₀₀ -E | A | | T = 84°F F = 502 | |
| Fe- 100/250 | 2-3 | 7.2 | G8 VI | B.C. | | $830/1.680$ | B.S. | II ₁₀₀ -E | B | Asm Sp KK | | |
| | | | | | | | | II ₁₀₀ -E | | | | |
| Fe- 100/80 | 2-3 | 5.9 | G0 V | B.C. | | $830/1.68$ | B.S. | II ₁₀₀ -E | A | STD. VEL | T = 80°F F = 503 | |
| Fe- 100/80 | | | | B.C. | | $830/1.68$ | B.S. | II ₁₀₀ -E | B | | T = 79°F F = 503 | |
| | | | | | | | | | | | No 2nd half obs | |
| | | | | | | | | | | | <u>Clear night!</u> | |

Spectr. Temp. $+82^{\circ}\text{F}$Dome Temp./Hum. $+76^{\circ}\text{F}/68\%$ Transparency Conditions \dots v. s. / haze.....

332

Focus \dots 503.....Spectr. Temp. \dots $+77^{\circ}\text{F}$Dome Temp./Hum. \dots $+68^{\circ}\text{F}/80\%$

| Comparison Type Filter | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---------------------------|-----------|---------------------|--------------|-------|-------|------------------|------|-------------------|------|---------------------|--|---------|
| | B Filter | | | | | | | | | | | |
| Ed-16 | 10/186 | 2 ⁴ 4.10 | | B7nm | BC | 830/68 | BS | IIa-eb IIIa-eb | A | P ₃ prog | broken 2pcs ^{saved} | |
| Ed-19 | 1120 | 3-5 3.93 | | Fop | BC | 1200/68 | BS | IIa-eb | B | Asm Spk'k | still set 503 | |
| " | 1102 | " 2.2 | | ASIII | " | " | " | " | A | " | | |
| " | 1120 | 4-6 3.68 | | FoIV | " | " | " | " | B | " | | |
| " | | | | " | " | " | " | IIa0 | A | | | |
| | | | | | | | | | | | rest of clear night/ lost (no observer) | |

Emulsion Batches:

JUNE 27: 8 min @ 68°F. Dev. E. 09102 - 22063
 JUNE 27: 8 min @ 68°F. 098. 09231 - 11063. 1726

Fri-Sat
 Date June 24-25/83... Observers ... Hy-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. |
|--------------------|-------------------------------|--------------|---------------------|-------------------------|-----------------------|-------------------|---------------|---------------------------|------|
| 47761F | Focus Test | | | | | | | Fe/- | 4-4 |
| 47761 | HD 118216 | 13 30.3 | +137 42 | 20:33 | 21:06 | 01 46W | +137 17 | Fe/- | 9- |
| 47762 | " | " | " | 21:27 | 22:27 | 02 46W | " | " | 6-6 |
| 47763 | HD 8890 A | 01 22.6 | +88 46 | 22:35 | 22:40 | 09 45E | +89 09 | Fe/- | 9-9 |
| 47764 _X | HD 8890 A | " | " | 22:47 | 22:50 | 09 34E | " | Fe/- | 4-4 |
| 47764 _T | Spot Cal. for 47764 | | | 15 min @ | 15V D3 4810 | 7V D1 H+ | 7V D2 5950 | | |
| 47765 | HD 153751 | 16 56.2 | +82 12 | 23:05 | 00 18 | 01 23W | +82 04 | Fe/- | 6-6 |
| 47765 _T | Spot Cal. for 47761-63, 47765 | | | | 15 min @ 15V | D4 3900 | D3 4300 | D2 4810 | |
| 47766 | HD 157482 | 17 18.5 | +46 04 | 00 25 | 01 29 | 02 01W | +46 00 | Fe/- | 6-6 |
| 47767 | HD 174403 | 18 45.2 | -20 25 | 01 39 | 02 21 | 01 25W | -20 20 | Fe/- | 4-4 |
| 47768 | HD 175426 | 18 50.2 | +36 51 | 02 25 | 02 58 | 01 59W | +36 51 | Fe/- | 6-6 |
| 47769 | HD 203156 | 21 15.4 | +37 49 | 03 02 | 03 47 | 00 24W | +38 11 | Fe/- | 6-5 |
| 47769F | Focus | | | | | " | " | Fe/- | 16- |

Spectr. Temp. 79.5°F

Dome Temp./Hum. +73°F/69%

Transparency Conditions ... Good to sl. cloud 334'

Focus 503

Spectr. Temp. 58°F

Dome Temp./Hum. +62°F/90%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|--------|-------|--------------|------|----------|------|---|--|---------------|
| | | | | BC | 1200/-0.05 | BS | Ind O | B | | | cont. sl. Red |
| 0/50 | 2-3 | 4.9 | F2J | BC | 1200/-0.05 | BS | Ind O | A | H+K-Ly | | |
| 0/50 | 2-4 | " | " | " | " | " | " | B | " | | |
| 0/26 | " | 2.5 | F2IB | " | " | " | " | A | Polaris | | |
| 0/90 | " | " | " | " | 1200/7 | RS | O98C | B | " | 74°F set 504 GG13 on 125 clean filter or Exp. meter fogged but fine | |
| | | | | | | | " | | 4x5 for O98 were w. with the IND PLATES EXPOSED Box cloud | | |
| 0/47 | 3" | 4.3 | O48-65 | BC | 1200/-0.05 | BS | Ind Oe | A | H+K-Ly | set 504 B filter | |
| | | | | | | | " | | | | |
| 0/54 | 3" | 6.22 | dF8 | BC | 1200/-0.05 | BS | " | B | SB-Ly | 72°F set 506 cloud | |
| 0/70 | 3" | 7.5 | B8 | " | 830/.66 | " | " | A | SB-Tnr | 70°F set 506 | |
| 0/25 | 2-3 | 5.2 | B33 | " | " | " | " | B | SB-Ly | | |
| 10/35 | | 6.12 | F2 | " | " | " | " | A | Ceph-EV | | |
| | | | | | 830/.66 | BS | " | B | | 68°F set 506 | |

2003

Spectr. Temp. 82.0

Dome Temp./Hum +82F/69%

Transparency Conditions hazy cloudy 336

Focus 503

Spectr. Temp. 81.0F

Dome Temp./Hum +77F/80%

Comparison Type/Filter

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|---------|------------|---------|
| | 1.2 | 22 | E | BC | 1200 | BS | Ilford | A | 100 | | |
| 10/137 | 1.2 | 78 | F | BC | 1200/68 | BS | Ilford | B | 100 | some cloud | |
| | | | | BC | 1200/68 | BS | Ilford | A | | | OK |

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Wed-Thurs

Emulsion Batches:

JUNE 30 8MIN @ 68°F R.I. II 40-E... 08102... 29063

Date June 29-30/83 Observers T.A. - Ly.....

| 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 |
|-----------|-------------------------|--------------|---------------------|-------------------------|-----------------------|--|-------------|---------------------------|-------|
| 47774 | HD 118216 | 13 30.3 | +37 42 | 20 38 | 21 42 | 2 20 W | +37 16 | Fel/- | 9-9 |
| 47775 | HD 8890 A | 01 22.6 | +88 46 | 22 58 | 23 07 | 9 00 E | +89 10 | Fel/- | 9-9 |
| 47776 | HD 153751 | 16 56.2 | +82 12 | 23 14 | 23 51 | 1 16 W | +82 04 | Fel/- | 9-9 |
| 47777 | HD 181391 | 19 15.2 | -05 36 | 00 00 | 02 33 | 1 26 W | -05 27 | Fel/- | 6-6 |
| 47777T | Spot Cal'n for 47774-80 | | | 15 min @ 15V | | ^{D4} 3900 ^{D3} 4300 ^{D2} 4810 | | | |
| 47778 | HD 175426 | 18 50.2 | +36 51 | 02 37 | 03 00 | 2 21 W | +36 57 | Fel/- | 9-9 |
| 47779 | HD 186791 | 19 41.5 | +10 22 | 03 03 | 03 14 | 1 43 W | +10 35 | Fel/- | 9-9 |
| 47780 | HD 203156 | 21 15.4 | +37 49 | 03 20 | 03 54 | 0 49 W | +38 10 | Fel/- | 6-6 |
| 47780F | focus | | | | | " | " | Fel/- | 16-16 |

Spectr. Temp. ... 73°F

Dome Temp./Hum. 70°F / 68%

Transparency Conditions ... 9.4 ... cloudiness 340

Focus ... 5.06

clear by 2.00

Spectr. Temp. ... 64

Dome Temp./Hum. 58 / 90%

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|----------------|-----------|-------|-------|--------------|------|----------|------|-----------|---------------|---------|
| 20/51 | 4 ^h | 4.9 | F2V | BC | 1200/.025 | BS | Iluo-E | A | RSCVh-Ly | cloud | |
| 20/27 | 3 | 2.2 | F | " | " | " | " | A | Asm - KIK | T=71°F | |
| 20/48 | 2-3 | 4.3 | F+GS | " | " | " | " | B | RSCVh-Ly | | |
| 20/120 | 2-4 | 5.3 | G2III | " | " | " | " | A | SpBii-Ly | | |
| 20/25 | 2-4 | 5.2 | B3 | BC | 1200/.025 | BS | Iluo-E | B | SB-Ly | T=65° set 507 | |
| 20/25 | 2-4 | 4.1 | K3II | " | " | " | " | A | Std Vel | | |
| 20/30 | 2-4 | 6.2 | F2 | " | 820/.68 | " | " | B | Cph-E0 | set 507 | |
| | | | | " | " | " | " | A | T=64 - | set 507 | |

Spectr. Temp. ... 79°F

Dome Temp./Hum. 77°F/90%

Transparency Conditions ... hazy - cloudy 342

Focus ... 503

Spectr. Temp. ... 77°F

Dome Temp./Hum. /

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|---------|---------|--------------|
| 4-20/27 | 2" | 22 | F | BC | 1200/.015 | BS | Udo | A | km-kk | | fingerprints |
| 4-20/52 | 1.3" | 5.2 | B3 | " | " | " | " | B | SB-Ly | cloud | fingerprints |
| | | | | BC | 200/.025 | BS | Udo | B | | | |

343

Sed. Sim.

Date July 2/3 83 Observers Ly-Tu

Emulsion Batches:
5^h 6^m D.D.E. 08102-30063
4^h 1^h 2^m 6^s 09802E05031-24063 37 140

| 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. |
| 47783F | focus | | | | | 0 | 7° | Fe/- | 19-5 |
| 47783 | HD118216 | 13 30.3 | +37 42 | 20 40 | 21 32 | 02 22 W | +37 17 | Fe/- | 6-6 |
| 47784 | " | " | " | 21 34 | 23 23 | 04 14 W | " | " | 6-6 |
| 47784T | Spot Cal'n | for 47783-87. | | | 15 min @ | 15V 3900 | D3 4300 | D2 4800 | |
| 47785 | HD8890A | 01 22.6 | +88 46 | 23 29 | 23 35 | 8 20 E | 89° 11 | Fe/- | 9-9 |
| 47786 | HD175426 | 18 50.2 | +36 51 | 23 44 | 00 23 | 0 05 E | +36 56 | Fe/- | 6-6 |
| 47787 | HD161096 | 17 38.5 | +04 37 | 00 27 | 00 44 | 1 25 W | +4 34 | Fe/- | 9-9 |
| 47788 | " | " | " | 00 47 | 00 52 | 1 35 W | " | Fe/- Ne/- | 4-4 4-4 |
| 47789 | HD185059 | 19 32.2 | +20° 07' | 00 57 | 02 37 | 1 26 W | +20 17 | Fe/- Ne/- | 4-4 4-4 |
| 47789T | Spot Cal'n | for 47788-92 | | | 15 min @ | 15V D3 4810 | D3 5450 | D2 5450 | |
| 47790 | HD187929 | 19 47.4 | 00 44.9 | 02 45 | 02 57 | 1 30 W | +10 0 | Fe/- Ne/- | 4-4 4-4 |
| 47791 | HD182835 | 19 21.4 | 0 08 | 02 59 | 03 20 | 2 19 W | +0 20 | Fe/- Ne/- | 4-4 4-4 |
| 47792 | HD198726 | 20 47.2 | +27 52 | 03 24 | 03 53 | 1 27 W | +28 10 | Fe/- Ne/- | 4 4 4 4 |

Spectr. Temp. 81.5

Dome Temp./Hum. 77F/79%

Transparency Conditions el. haze 344

Focus 503

Spectr. Temp. 74

Dome Temp./Hum. 70F/93%

| Comparison type/Filter | Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|---|-----------|--------|---------------|---------------|-------|------------------|------|--------------------|------|------------------------|--|---------|
| Fe-19 | | | | | BC | 1200/ -.025 | BS | U ₂ O | A | | | |
| Fe-6 | 0/55 | 1" | 4.9 | F2IV | " | " | " | U ₂ O-E | B | RSCV ₂ -Ly | | |
| Fe-6 | 0/55 | 2" | " | " | " | " | " | " | A | " | cloud | |
| Fe-6 | 0/29 | 0.4 | 2 | F | RC | 1200/.025 | BS | " | B | Asm Sp. K ₂ | | |
| Fe-6 | 0/25 | 1-2 | 5.2 | B3 | " | " | " | " | A | SB-Ly | | |
| Fe-9 | 0/45 | 2 | 3.9 | K2III | " | " | " | " | B | std vel | | |
| Fe-6 | 0/180 | | | | " | 1200/.7 | RS* | OPURE | A | " | * Broken * Clear Exp. filter * SS13 mounted 77°F | fine |
| Fe-6 | 0/145 | 2" | 7.8 -9.0 | FE -K0 | BC | " | " | " | B | Ceph-Eu | broken - 1pc sand | sl weak |
| Fe-6 | 0/160 | | 4.08 -5.30 | F6Ib -G4Ib | BC | 1200/.7 | RS | " | B | Ceph-Eu | | fine |
| Fe-6 | 0/160 | 2" | 5.2 | F2Ib | " | " | " | " | A | Ceph-std-Eu | broken 2pcs | fine |
| Fe-6 | 0/160 | 2" | 5.9 -6.4 | F5Ib -G0Ib | " | " | " | " | B | Ceph-Eu | | sl weak |
| Note PH A field curve screws were loose This was cause of breakages. | | | | | | | | | | | | |

Emulsion Batches:

4 1/2" 68° 09207E 05031 - 24053

8" 68° 1140E 08102 - 30063

4 1/2" 68° 1140E 09023 - 23063¹⁹³

Date July 31/9/83 Observers Kly-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. |
|--------------------|---------------------------|------------------------------------|---------------------|-------------------------|-----------------------|---------------------|-------------|---------------------------|------------|
| 47793 | HD 8890A | 01 ^h 22 ^m .6 | +88° 46' | 20:40 | 20:59 | 10 49 E | +89 07 | Net- Fe/- | 4-2 4-4 |
| 47794 | " | " | " | 21:03 | 21:10 | E | " | Fe/- | 9-7 |
| 47794 ^X | Spot Calc for 47794 | -98 | | 15 min | 15V | D4 3900 | D3 4300 | W 4810 | |
| 47795 | HD 124897 | 14.11.1 | +19 42 | 21:45 | 21:47 | 12 ^h 01W | +19 17 | Fe/- | 9-5 |
| 47796 | HD 122792 | 1358.6 | +11° 16' | 21:56 | 23:23 | 0350W | +10 55 | Fe/- | 4-4 |
| 47797 | HD 137909 | 15 23.7 | +29 27 | 23:27 | 23:37 | 0210 ^X W | +29 27 | Fe/- | 9-7 |
| 47798 | HD 158033 | 17 25.3 | +61° 24' | 23:48 | 01:47 | 0751W | +67 21 | Fe/- | 4-4 |
| 47799 | HD 159561 | 17 30.3 | +12 38 | 01 58 | 02:15 | 0312W | +12 36 | " | 18-12 |
| 47799 ^X | Spot Calc for 47799-47800 | | | 15 min | @D4 | 175V 3900 | 15V 4300 | 15V 4810 | |
| 47800 | HD 182640 | 19 20.5 | +255 | 02:20 | 03:37 | 0241W | +3 05 | Fe/- | 17-19 |
| 47800 ^F | | | | | | 1 35W | +19 30 | Fe/- | 14-14 |

Spectr. Temp. $+83^{\circ}\text{F}$ Dome Temp./Hum. $79^{\circ}\text{F}/80\%$ Transparency Conditions *Hazy - cloudy* 346Focus 503 Spectr. Temp. $+78^{\circ}\text{F}$ Dome Temp./Hum. $77^{\circ}\text{F}/95\%$ *This strip put in with last night's 0983*

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-----|-------|--------------|------|----------|------|-----------|---|-----------|
| 0/90* | 2" | 2 | F | B.C. | 1200/-7 | RS | 098-E | A | Ceph-Ev | * Clear Exp. water filter * EG/3 over RS. light distribution odd | exp good |
| 0/30* | 1" | " | " | B.C. | 1200/-025 | BS | 1140-E | B | Asm Sp KK | B filter for Exp. water | sl strong |
| 0/77 | " | 1 | K | BC | 1200/-025 | BS | " | A | Std Vel | 5.5 min? over focus we just noticed! | strong |
| 00/91 | 2" | 6.8 | G8V | " | " | " | " | A | KK Asm Sp | some cloud | weak |
| 0/56 | 1.5" | 3.93 | Fop | " | " | " | " | B | " | " | fine |
| 0/508 | 2" | 7.1 | K1 | " | 830/6.00 | " | " | A | " | set 503 | |
| 0/217 | 1" | 2.2 | A5M | " | 1200/-025 | " | 1140-fg | B | " | set 503 T=207 | |
| 0/240 | 2.3" | 3.7 | F0V | " | 1200/-025 | BS | " | A | Asm sp | cloud | |
| | | | | " | " | " | 1140-E | B | | set 503 still T=269 | |

1983

JD 455225

8^h 6^m

Emulsion Batches:

Fico-E 09102-03-13

098-02E 05031-24063

Date Wed/Thurs July 17 Observers Pa-Ri

| 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. |
|-------------------------------------|----------------------------|----------------------|----------------------|-------------------------|-----------------------|--------------------|---------------------------------|---------------------------|-------|
| 47801F | Focus Test | | | | | | | Fe/- | 20-20 |
| 47801 | HD 16274 = 40 ₂ | 17 ^h 47.3 | -06 ^o 07 | 20 39 | 23 36 | 0 ^h 25 | -6 ^o 07 | Fe/- | 6-6- |
| 47802 | HD 176165 = F7AL | 13 ^h 53.8 | 17 ^o 19 | 23 52 | 00 13 | 0 04E | +17 ^o 20 | Fe/ | 8-9-0 |
| 47802 T | Spot Cal. | 15.1 | 15V D3 4810 | 7V D1 HX | 1/4 52 5-50 | | | | |
| 47803 | HD 171635 = 45Dra | 18 ^h 30.9 | +56 ^o 08 | 00 19 | 00 30 | 0 38W | +57 ^o 00 | Fe/ | 11-11 |
| 47804 | HD 172155 = 7 Acl | 19 ^h 21.4 | 0 ^o 08 | 00 35 | 00 51 | 0 6W | +0 ^o 20 | Fe/ | 11-11 |
| 47805 | HD 178387 = TT Acl | 19 ^h 03.2 | +01 ^o 08 | 00 55 | 02 38 | 2 ^h 13W | +1 ^o 16 ^o | Fe/ | 8-8- |
| 47806 | HD 187924 = 7 Acl | 19 ^h 47.4 | 00 ^o 44.9 | 02 42 | 02 50 | 1 ^h 40W | 1 ^o 00 | Fe/ | 11-11 |
| 47807 | HD 195715 = 5 Vul | 20 ^h 47.2 | +27 ^o 52 | 02 55 | 03 28 | 1 ^h 18W | 27 ^o 10 | Fe/ | 11-11 |
| 47808 | HD 203152 = 18 Dra | 21 ^h 15.9 | +37 ^o 49 | 03 30 | 03 56 | 1 ^h 19W | 37 ^o 11 | Fe/- | 8-8- |
| 47811F | Focus AFT | | | | | | | Fe/- | 16-16 |
| Note - Someone mislabelled tonight. | | | | | | | | | |

Spectr. Temp. 68°F Dome Temp./Hum. 62°F 70% Transparency Conditions *Good* 349Focus *5.2*

Spectr. Temp.

Dome Temp./Hum. 54°F 89% Comparison
per/Filter Ext.

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|------------|------|-------|---------------|------|----------|------|-----------|--|---------|
| | | | | BC | 1200/ -025 | BS | TIRO | A | | Batter & exposure meter back in equal parts | |
| 20/150 | 34 | -70 | F800 | " | " | " | TIRO E | B | Cyph/Evan | | |
| 1/150 | | ~6.7 | CF9 | BC | 1200/ .7 | RS | ORPE | A | Cyph/Evan | GG13 operation T=61°F Focus 509 | |
| | | | | | | | DG8E | | | | |
| 6/82 | | 5.5 | F706 | " | " | " | " | B | Cyph/Evan | | |
| 1/80 | | 5.23 | F806 | " | " | " | " | A | " | | |
| 7/300 | | 7.3 9.1 | F806 | " | " | " | " | B | " | 63°F | |
| 20/30 | | 4.1 | F800 | " | " | " | " | A | " | 61°F focus 510 | |
| 20/30 | | 6.7 | B020 | " | " | " | " | B | " | 2" b d d d | |
| 1/60 | | 6.2 | F2 | " | 620/68 | BS | TIRO E | A | " | 50°F focus 510 | |
| | | | | | 830/68 | BS | TIRO | B | | F=510 G=60°F | |

Spectr. Temp. 71° F

Dome Temp./Hum. 66% / 86%

Transparency Conditions *Lazy* 356

Focus 506

Spectr. Temp.

Dome Temp./Hum. 61° F 93%

Comparison
per Filter Em

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|--------------------|-------------|------------|-----------|-------------|----------------|-------------|---------------|----------|--------------|-----------------------|---------|
| <i>B FILTER IN</i> | | | | | | | | | | | |
| <i>501710</i> | <i>7.2"</i> | <i>6.8</i> | <i>Am</i> | <i>B.C.</i> | <i>830/.68</i> | <i>B.S.</i> | <i>IIa0-E</i> | <i>A</i> | <i>Am+Ap</i> | | |
| | | | | | | | <i>IIa0-E</i> | | | | |
| <i>05/405</i> | <i>2</i> | <i>7.7</i> | <i>Am</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | <i>B</i> | <i>Am+Ap</i> | <i>T=68 F=507</i> | |
| | | | | <i>B.C.</i> | <i>830/.68</i> | <i>B.S.</i> | <i>IIa0</i> | <i>A</i> | | <i>T=66° F T=507</i> | |
| | | | | | | | | | | <i>BROKEN 2 PIPES</i> | |

Spectr. Temp. ... 71°F

Dome Temp./Hum. 65°F/H=75%

Transparency Conditions ... *scattered* 352

Focus ... 507

Spectr. Temp. ... 64°F

Dome Temp./Hum. 56°F/H=95%

Comparison
pe/Filter Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/ Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|-------------|-------|------------------|------|----------|------|-----------|---------------|---------|
| 30/80 | 34 | 6.15 | 09.5 II | BC | 830/.68 | BS | IIa0-B | A | Var - Blw | | |
| 30/80 | | " | " | " | " / " | " | " | B | " | | |
| 30/80 | | " | " | " | " / " | " | " | A | " | T=70°F | good |
| 80/80 | | " | " | " | " / " | " | " | B | " | T=68°F | good |
| 80/80 | | " | " | " | " / " | " | " | A | " | T=67°F, F=508 | |
| | | | | | | | IIa0-E | | | | |
| 30/77 | | 6.15 | 09.5 II | BC | 830/.68 | BS | " | B | Var - Blw | | |
| 80/70 | | " | " | " | " / " | " | " | A | " | | |
| 40/50 | | 5.9 | KO II-II | " | " / " | " | " | B | STDVEL | T=65°F | |
| | | | | " | " / " | " | IIa0 | A | | T=64°F F=508 | |

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Date July 10 1953 Observers W. J. P. K. K.

Emulsion Batches:

5^m 69°
H. A. T. E. b. 09.023 - 23063 BREN 23
H. A. T. E. b. 09.023 - 06073 v 27

| 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. |
|-----------|-----------------------------------|----------------------|---------------------|-------------------------|-----------------------|-------------------|-----------------|---------------------------|---------------|
| 47822 | MD 10788 | 16° 55.4 | 141° 22' | 21:00 | 21:16 | 00 25 E | +141° 22' | | |
| 47823 | MD 11112 | 17° 22.6 | -88° 40' | 21:44 | 21:53 | 09 28 E | +89° 08' | Fe/- | 20-2 |
| 47824 | MD 137909 | 15 ^h 23.7 | +29° 27' | 22:02 | 22:29 | 01 59 W | +29° 10' | Fe/- | 20- |
| 47824T | SPOT CAL FOR PLATES 47823 - 47826 | | | | | 15 MIN @ D4 | ① 17.50 3900 | ② 15U 515 4300 4910 | |
| 47825 | MD 159561 | 17 30.3 | +12° 38' | 22:34 | 22:39 | 00 00 E | +12° 33' | Fe/- | 20- |
| 47826 | MD 182640 | 19 20.5 | +3° 42' | 22:43 | 23:02 | 01 26 E | +03° 04' | Fe/- | 20-2 |
| 47827 | MD 183912 | 19 26.7 | +27° 45' | 23:18 | 01:25 | 00 52 W | +27° 55' | Fe/- | 20-2 |
| 47827T | SPOT CAL FOR PLATES 47827 - | | | | | 15 MIN @ D4 | ① 17.50 3600 | ② 17.50 3900 | ③ 15U 4300 |
| 47828 | MD 196524 | 20 32.9 | +14° 15' | 01:34 | 02:09 | 00 30 W | +14° 32' | Fe/- | 20-2 |
| 47829 | MD 217782 | 22 58.0 | +42° 13' | 02:14 | 03:43 | 00 15 E | +42° 40' | Fe/- | 20-2 |
| 47830 | MD 3712 | 6 39.4 | +56° 26' | 03:55 | 04:06 | 01 35 E | +56° 25' | Fe/- | 20- |
| 47830F | FOCUS TEST | 0 34.8 | +55° 59' | | | | | Fe/- | 40-9 |

Spectr. Temp. 71°

Dome Temp./Hum. 66°/59%

Transparency Conditions excellent UNTIL 354

Focus 507

THE CIRRUS SHOWED UP

Spectr. Temp. 65°

Dome Temp./Hum. 60°F 82%

Comparison
pe/Filted Exp

| Exp. Mtr. | Seeing | Ptg. Mag. | Sp. | Inst. | Grating/Tilt | Slit | Emulsion | P.H. | Program | Remarks | Quality |
|-----------|--------|-----------|------------------------|--------|-----------------|-------|-----------------------|------|------------|--|---------------------|
| ts | Fair | 2.0 | K2 | Torrey | V01-41 0.025 | | II G | | KK- P.S. | | A ² good |
| 0/126 | 3 | 2 | F | B.C. | 1200/ 0.025 | B.C. | IIIa-1eh ^x | A | KK Astm 10 | | 2.0 good |
| 1/126 | 1 1/2 | 4 | FOP | " | " | " | " ⁺ | B | " | 70° | 2.0 good |
| 4/24 | 2" | 2 | AST | " | " | " | IIIc-1eb ⁺ | A | " | | fine |
| 3/48 | " | 3.7 | FO II | " | " | " | " ^x | B | " | | fine |
| 2/240 | " | 4 | *54? B ⁺ | BC. | 1200/ .200 | 150/5 | IIIa-1eb | A | | T: 69°F SOME CIRRUS clouds 3000 ft | fine |
| 0/120 | 1" | 4 | FSTV | BC | 1200/ 0.025 | B.S. | " | B | " | SOME CIRRUS CLOUDS (70°F (F=508)) | fine |
| 0/240 | 1" | 5 | A2 | " | " | " | " | A | " | SOME CIRRUS CLOUDS | fine |
| 4/24 | 1" | 2 | AST | " | " | " | " | B | Std Vel | | slightly |
| | | | | " | " | " | " | A | | 9= 9=508 | fine |

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use of hypo clearing agent discontinued for III 25's 4/83 — 1^{hr} wash instead