



03

Dorrit Hoffleit  
August 1953



## Index

|         |   |    |
|---------|---|----|
|         | index to magnitudes                           | 2  |
| MWF 193 | Magnitude Estimates                           | 10 |
|         | Sequences                                     | 36 |
|         | All sequence locations are marked on MF 19582 |    |
|         | Comparison stars for indiv. vars              | 48 |

Index of Magnitude Estimator. HA90 has only the  
ones for which  
periods were found 15 DH

| Var No | 0     | 1    | 2     | 3              | 4    | 5   | 6   | 7   | 8    | 9 |
|--------|-------|------|-------|----------------|------|-----|-----|-----|------|---|
| 1      | X     |      |       |                |      |     |     |     |      |   |
| 10     |       |      |       |                |      |     | VD  |     |      |   |
| 20     |       |      | V26   |                | V26  |     |     |     | V26  |   |
| 30     |       |      |       |                | HA90 |     |     |     |      |   |
| 40     |       |      | V64   |                | GMS  |     |     |     |      |   |
| 50     |       |      | HA90  |                |      |     |     |     |      |   |
| 60     |       |      |       |                |      |     |     |     | V64  |   |
| 70     |       |      |       |                | V26  |     |     |     | HA90 |   |
| 80     |       |      |       |                |      |     |     |     |      |   |
| 90     |       |      | VD    |                |      | GMS |     |     | V11  |   |
| 100    | V26   | V26  |       |                |      |     |     |     | GW   |   |
| 110    | HA90  |      |       |                |      |     |     | V64 | V64  |   |
| 120    |       |      |       |                |      |     |     |     | HA90 |   |
| 130    | VD    | VD   |       | <del>V26</del> |      |     |     |     | VD   |   |
| 140    | VD    |      |       |                |      |     |     |     |      |   |
| 150    |       | V27  | V26   | V26            |      |     |     |     | VD   |   |
| 160    |       | HA90 | HB890 |                |      |     |     |     |      |   |
| 170    |       |      |       |                |      |     |     | VD  |      |   |
| 180    | GMS   |      | X 14  |                |      |     |     |     |      |   |
| 190    |       |      |       | V64            | V26x |     |     |     | V27  |   |
| 200    |       |      |       | HA90           | HA90 |     |     |     | HA90 |   |
| 210    |       |      | V64   |                |      |     |     |     |      |   |
| 220    |       |      |       |                |      |     |     |     |      |   |
| 230    | VD    |      |       |                |      | VD  |     |     |      |   |
| 240    |       |      |       |                |      |     |     |     |      |   |
| 250    |       |      | VD    |                |      |     | GMS |     |      |   |
| 260    |       |      |       |                |      |     |     |     |      |   |
| 270    | * V26 | V26  | V64   | V64            | V64  |     |     |     |      |   |
| 280    |       | HA90 |       |                |      |     |     |     |      |   |

\* new obs  
desired

\* 270a V26  
HA90

|     | 0   | 1    | 2           | 3  | 4  | 5    | 6    | 7    | 8            | 9           |
|-----|-----|------|-------------|----|----|------|------|------|--------------|-------------|
| 290 |     |      |             |    | VD | X 14 |      |      |              | V64<br>H490 |
| 300 | V27 |      | V27<br>H490 |    |    |      |      |      |              |             |
|     |     | VD   |             |    | VD | VD   | VD   | VD   | VD           | VD          |
| 310 |     | X 14 | X 14        | VD |    |      |      |      |              |             |
| 320 |     | VD   | VD          | VD | VD | VD   | VD   |      |              |             |
| 330 |     |      |             |    |    |      |      |      |              |             |
| 340 |     |      |             |    |    |      |      |      | GMS          |             |
| 350 |     |      |             |    |    |      |      |      |              |             |
| 360 |     |      |             |    |    | V27  |      |      |              |             |
|     |     |      |             |    |    |      |      | VD   | VD           | VD          |
| 370 |     |      |             |    |    |      |      |      |              |             |
| 380 | VD  |      | VD          | VD | VD | VD   | X 14 | X 14 |              |             |
| 390 |     |      |             |    | VD |      |      |      |              |             |
| 400 |     |      |             |    |    |      |      |      |              |             |
| 410 |     |      |             |    |    |      |      |      | V27*<br>H490 | V27<br>VD   |
| 420 | VD  | VD   | VD          | VD | VD |      |      |      |              |             |
| 430 |     |      | GMS         |    | VD | X 14 |      |      |              |             |
| 440 |     |      |             |    |    |      |      |      | VD           | X 14        |
| 450 |     |      |             |    |    |      |      |      |              |             |
| 460 |     |      |             |    |    | GMS  |      |      |              |             |









MWF193

8x10 A-Plates on M22

|         |           | 445             | 321   | 459  | 182  | 295  | 387     | 322  | 386  | 305  | 303 | 1942 | 1942 |  |
|---------|-----------|-----------------|-------|------|------|------|---------|------|------|------|-----|------|------|--|
| A 11894 | 22541.609 | using center    |       |      |      |      |         |      |      |      |     |      |      |  |
| A 11895 | 22544.643 | 12.2            | 14.4  | 14.4 | 13.6 | 14.1 | ns 15.5 | 13.8 | 14.3 | 69   | 59  | 954  | 632  |  |
| 979     | 23191.675 | 12.1            | 14.2  | 14.4 | 13.6 | 14.4 | 15.5    | 14.1 | 14.4 | 106  | 100 | 504  | 260  |  |
| 12019   | 213.626   | 12.6            | 13.8  | 14.4 | 13.8 | 14.5 | 15.5    | 14.3 | 14.5 | 128  | 122 | 523  | 219  |  |
| 061     | 238.505   | 12.7/8          | 14.2  | 14.2 | 13.6 | 14.2 | 15.5    | 13.6 | 14.2 | 183  | 147 | 104  | 813  |  |
| 062     | .563      | 12.7            | 14.4  | 14.0 | 13.6 | 14.4 | 15.5    | 13.6 | 14.2 |      |     | 257  | 954  |  |
| ✓ 063   | .646      | lost            |       |      |      |      |         |      |      |      |     |      |      |  |
| ✓ 064   | .718      | 12              |       |      |      |      |         |      |      |      |     |      |      |  |
| 065     | .804      | 12.7            | 14.0  | 14.0 | 13.9 | 14.6 | 15.5    | 13.9 | 14.3 |      |     | 719  | 416  |  |
| 066     | .852      | 12.8            | 14.4  | 14.3 | 13.7 | 14.4 | 15.4    | 13.9 | 14.3 | ✓    |     | 810  | 508  |  |
| 12325   | 528.717   | lost            |       |      |      |      |         |      |      |      |     |      |      |  |
| 349     | 535.711   | 12.4            | 13.8  | 14.0 | 13.8 | 14.1 | 14.7    | 13.7 | 14.4 | 145  | 141 | 058  | 764  |  |
| 352     | 536.851   | 12.4            | 14.4  | 14.3 | 13.8 | 13.6 | 14.6    | 13.9 | 14.2 | 146  | 142 | 240  | 416  |  |
| 369     | 548.702   | 12.3            | 14.0  | 14.4 | 13.6 | 13.5 | 14.7    | 14.0 | 14.6 | 158  | 154 | 925  | 632  |  |
| 392     | 566.677   | 12.6            | 14.4  | 14.3 | 13.6 | 14.6 | 15.0    | 13.9 | 14.6 | 176  | 172 | 333  | 040  |  |
| ✓ 439   | 586.641   | out for contact |       |      |      |      |         |      |      |      |     |      |      |  |
| 471     | 593.687   | 12.7            | 14.2  | 14.2 | 13.6 | 13.6 | 15.5    | 13.5 | 14.6 | 203  | 199 | 036  | 743  |  |
| 507     | 610.774   | 12.2            | 14.0  | 14.5 | 13.5 | 14.5 | 15.0    | 14.0 | 14.6 | 220  | 216 | 744  | 452  |  |
| 551     | 631.632   | 12.6            | 14.3  | 13.9 | 13.5 | 14.5 | 15.5    | 13.8 | 14.6 | 241  | 237 | 670  | 379  |  |
| 553     | .695      | 12.7            | 14.4  | 14.2 | 13.5 | 14.4 | 15.5    | 13.7 | 14.6 | "    | "   | 791  | 500  |  |
|         |           | max             | 12.2  | 13.8 | 14.0 | 13.5 | 13.6    | 14.7 | 13.6 | 14.2 |     |      |      |  |
|         |           | min             | -12.7 | 14.4 | 14.4 | 13.8 | -14.6   | 15.5 | 14.1 | 14.6 |     |      |      |  |
|         |           | range           | .5    | .6   | .4   | .3   | 1.0     | 10.8 | 0.5  | 0.4  |     |      |      |  |
|         |           | at Discovery    |       |      |      |      |         |      |      |      |     |      |      |  |
|         |           | doubtful        |       |      |      |      |         |      |      |      |     |      |      |  |
|         |           | doubtful        |       |      |      |      |         |      |      |      |     |      |      |  |
|         |           | doubtful        |       |      |      |      |         |      |      |      |     |      |      |  |
|         |           | ✓               |       |      |      |      |         |      |      |      |     |      |      |  |
|         |           | for mag         |       |      |      |      |         |      |      |      |     |      |      |  |
|         |           | ✓               |       |      |      |      |         |      |      |      |     |      |      |  |
|         |           | for mag         |       |      |      |      |         |      |      |      |     |      |      |  |
| A 18597 | 28334.    |                 |       |      |      |      |         |      |      |      |     |      |      |  |
| 600     |           |                 |       |      |      |      |         |      |      |      |     |      |      |  |

|            |               |                  |          |          |
|------------|---------------|------------------|----------|----------|
| 1.60118401 | 286<br>(1966) | 850 <sup>d</sup> | 3.077302 | 3.080015 |
| 122        | b1 19.4       | 594              | 675      | 794      |
| 139        | a7 14.4       | 391              | 788      | 660      |
| 287        | a5 14.2       | 413              | 338      | 270      |
| 122        | a5 14.2       | 438              | 898      | 898      |
| 215        | a7 14.4       |                  | 076      | 076      |
| -          | a7 14.4       |                  | 332      | -        |
| -          | a7 14.4       |                  | 553      | -        |
| 601        | a7 14.1       |                  | 818      | 818      |
| 678        | a5 14.2       |                  | 966      | 966      |
| -          | -             |                  | -        | -        |
| 004        | c2 15.0       | 735              | 491      | 296      |
| 829        | c5 15.1       | 736              | 999      | 807      |
| 805        | c8 15.1       | 748              | 468      | 308      |
| 586        | c8 15.1       | 766              | 782      | 672      |
| -          | d3 15.3       | 786              | -        | -        |
| 834        | d2 15.3       | 793              | 900      | 863      |
| 146        | d2 15.3       | 810              | 482      | 491      |
| 591        | d6 15.4       | 831              | 668      | 734      |
| 692        | ff            |                  | 862      | 928      |

14.5  
29 .434

ff

Recent day-runs

OMIT

repeat - too much  
talk, wrong  
eye piece  
etc

|          |            | 445             | 321  | 459  | 182  | 295  | 387  | 322  | 386  |
|----------|------------|-----------------|------|------|------|------|------|------|------|
| MF 39617 | 33836.3333 | 12.6            | 14.2 | 13.7 | 13.4 | 12.3 | 14.9 | 13.6 | 14.4 |
| 18       | .3659      | 12.0            | 14.0 | 13.5 | 13.1 | 13.1 | 14.8 | 13.6 | 14.2 |
| 19       | .3984      | 13.1            | 13.5 | 13.5 | 13.3 | 13.1 | 14.9 | 13.3 | 14.4 |
| 39625    | 33858.2301 | out for contact |      |      |      |      |      |      |      |
| 26       | .2620      | 13.0            | 13.3 | 13.5 | 13.1 | 13.1 | 14.7 | 13.5 | 14.3 |
| 27       | .2939      | 13.0            | 13.5 | 13.6 | 13.3 | 13.1 | 14.7 | 13.5 | 14.0 |
| 28       | .3257      | 12.9            | 13.3 | 13.3 | 13.3 | 13.1 | ft   | 13.5 | 14.4 |
| 29       | .3603      | 13.1            | 13.5 | 13.5 | 13.3 | 13.1 | ft   | 13.4 | 14.0 |
| 30       | .3922      | 13.1            | 13.5 | 13.5 | 13.1 | 13.1 | ft   | 13.1 | 13.8 |
| 31       | .4240      | 13.0            | 13.5 | 13.5 | 13.3 | 13.0 | ft   | 13.1 | 13.7 |
| 32       | .4559      | 12.9            | 13.6 | 14.0 | 13.3 | 13.0 | 14.9 | 13.2 | 14.0 |
| 33       | .4878      | 13.0            | 13.7 | 14.0 | 13.5 | 13.1 | 15.0 | 13.5 | 14.0 |
| 34       | .5196      | 12.9            | 13.5 | 13.6 | 13.5 | 13.1 | 15.0 | 13.5 | 14.0 |

Most of these with magni-focuser T 4-100



X Plates on M22 = NGC 6656

1953pnae: p

|            |  |                   |                      |                 |                   |                      |         |                   |       |                    |     |                    |           |
|------------|--|-------------------|----------------------|-----------------|-------------------|----------------------|---------|-------------------|-------|--------------------|-----|--------------------|-----------|
|            | JD   | 445               | 321                  | 459             | 182               | 295                  | 387     | 522               | 386   | 305 <sup>obs</sup> |     |                    | 1.6011840 |
| X 4914     | <del>24</del> 12656.612                            | 12.7 <sup>5</sup> | 14.4                 | 14.4            | 13.4 <sup>8</sup> | 14.7 <sup>14.7</sup> | ns<15.0 | 13.6 <sup>8</sup> | 14.9: | 246                | 170 | 565                |           |
| 5317       | 12742.572  | 12.4              | 13.9                 | 14.6            | 13.5              | 14.5 <sup>14.5</sup> | ns<14.8 | 13.8              | 14.7: | 27                 | 256 | 202 Oct            |           |
| 5332       | 12744.537  | 12.4 <sup>3</sup> | 14.1                 | <del>13.8</del> | 13.8              |                      |         |                   |       |                    |     | -                  |           |
| 5349       | 12751.540  | 12.4              | 14.5                 | 14.6            | 13.7              | 14.8                 | ns<14.8 | 13.8              | 14.6  | 36                 | 265 | 562 Oct            |           |
| 6789       | 133 <sup>21</sup> <del>66</del> .800               | 12.9              | 13.8                 | 14.6:           | off               |                      |         |                   |       |                    |     | -                  |           |
| 6793       | 13372.622  | 12.3              | 14.2                 | 14.0            | 13.6              | 14.4                 | ns<15.5 | 14.0              | 14.6  | 47                 | 280 | 028                |           |
| 6800       | 373.615  | 12.9              | 14.3                 | 14.6            | 13.8              | 14.6                 | ns<15.5 | 14.0              | 14.6  | 48                 | 281 | 618                |           |
| 6891       | 392.580  | 12.2              | 13.9                 | 14.5            | 13.7              | 14.4                 | ns<15.5 | 13.6              | 14.6  | 67                 | 300 | 985                |           |
| 6855       | <u>13384</u> .599                                  | 12.7              | 14.2                 | 14.3            | 13.8              | 14.5                 | ns<15.0 | 14.0              | 14.5  | 59                 | 292 | 206                |           |
| 6975       | 13411.650  | 12.7              | 14.4                 | 14.4            | 14.0              | 14.6                 | ns<15   | 14.0              | 14.6  | 86                 | 6   | 519                |           |
| 7026       | 13420.532  | 12.3              | 13.9                 | 14.4            | 14.1              | 14.1                 | ns<15   | 14.4              | 14.6  | 95                 | 25  | 741                |           |
| 7141       | 13453.575  | 12.7              | 14.4                 | 14.2            | 14.1              | ns<14.6              | ns "    | 13.6              | 14.6: | 128                | 58  | 649                |           |
| ← 640 7161 | 13455.5 <sup>21</sup> <del>68</del> <sup>640</sup> | 12.7              | 13.9                 | 14.1            | 14.0              | 14.6                 | ns "    | 13.9              | 14.6  | 130                | 60  | <del>848</del> 955 |           |
| 7662       | 13748.637  | 12.4              | 14.0                 | 14.4            | 13.5              | 14.4                 | "       |                   |       | 118                | 50  | 098                |           |
| 7791       | 13775.654  | 12.9              | 14.0                 | 14.6            | 13.7              | 14.6                 | 15.2:   | 14.1              | 14.7  | 145                | 77  | 357                |           |
| 7995       | 13821.559  | 12.4              | 14.4                 | 14.6            | 13.5:             | 13.6                 | 15.4    | 13.8              | 15.0  | 191                | 123 | 889                |           |
| 8031       | 13839.549  | 12.4              | 14.0                 | -               | 14.0:             | ns<14.2              |         |                   |       |                    |     | 644 Oct            |           |
| 8644       | 14083.679  | 12.7              | 14.4                 | 14.2            | 14.0              | 14.6                 | ns<15   | 13.8              | 14.6  | 148                | 82  | 553                |           |
| 8663       | 086.661  | 12.6              | 14.2                 | 14.4            | 13.9              | 14.6                 | 15.5    | 13.8:             | 14.6  | 151                | 85  | 336                |           |
| 8704       | 092.653  | 12.5              | 14.2                 | -               | -                 | -                    |         |                   | 14.6  |                    |     | -                  |           |
| 8708       | 093.651  | 12.8              | 14.2 <sup>14.2</sup> | 14.6            | 14.2              | 14.6                 | 15.5:   | 14.0              | 14.6  | 158                | 92  | 528                |           |
| ← 8711     | 093.811  | 12.7              |                      |                 |                   |                      |         |                   |       |                    |     | -                  |           |
| 8716       | 094.854  | 12.7              | 14.2                 | 14.5            | 13.9              | 14.6                 | ns<15   | 14.0              | 14.8  | 159                | 93  | 455                |           |
| 8717       | 097.684  | 12.7              | 14.5                 | 14.2            | 14.0              | 14.1                 | ns<15   | 14.1              | 14.7  | 162                | 96  | 986                |           |
| 8756       | 133.558  | 12.6              | 14.0                 | 14.6            | 13.9              | 14.6                 | ns<14.8 | 14.4              | 14.9  | 198                | 132 | 427                |           |
| 8758       | 135.682  | 12.4              | 14.4                 | 14.3            | 14.0              | 14.1                 | ns<15   | 13.8              | 15.0: | 200                | 134 | 828                |           |
| 8839       | 156.642  | 12.6              | 14.0                 | 14.4            | 13.6              | 14.6                 | ns<14.6 | 13.7              | 14.6  | 221                | 155 | 389                |           |
| 8876       | 203.521  | 12.4              | 14.3:                | 14.1            | 13.6              | 14.5                 | 15.5:   | 14.0              | 14.6  | 268                | 202 | 451 Oct            |           |
| 8892       | 205.524  | 12.4              | 14.4                 | 14.4:           | 14.0:             | 14.5 <sup>14.5</sup> | -       | -                 | -     |                    |     | 658 "              |           |
| 8893       | 205.532  |                   |                      |                 |                   |                      |         |                   |       |                    |     | -                  |           |

|         |                                      | var 295<br>1.601851 | var 322<br>1.5984501 | 2.917059 | 1.914309 | 3.097302 | 3.080013 |
|---------|--------------------------------------|---------------------|----------------------|----------|----------|----------|----------|
| 2.91707 | 1.91423                              |                     |                      |          |          |          |          |
| 0.223.  | 7.666                                | 579                 | 963                  | 084      | 641      | 217      | 529      |
| 0.975.  | 2.214                                | 216                 | 365                  | 834      | 195      | 742      | 287      |
| 0.707.  | 5.975                                | 363                 | 506                  | 566      | 956      | 789      | 340      |
| 0.135.  | 9.380                                | 576                 | 700                  | 995      | 362      | 340      | 909      |
| 0.476.  | 6.701                                | 727                 | 155                  | 330      | 730      | 067      | 318      |
| 0.874.  | 8.274                                | 043                 | 469                  | 727      | 304      | 596      | 850      |
| 0.771.  | 0.175                                | 633                 | 056                  | 624      | 205      | 652      | 908      |
| 0.093.  | <sup>478</sup><br><del>6.068</del>   | 000                 | 371                  | 946      | 510      | 013      | 321      |
| 0.812.  | <sup>1.201</sup><br><del>0.591</del> | 220                 | 614                  | 665      | 232      | 453      | 739      |
| 0.721.  | 2.983                                | 534                 | 853                  | 574      | 015      | 697      | 056      |
| 0.631.  | 9.985                                | 756                 | 051                  | 484      | 018      | 030      | 413      |
| 0.020.  | 3.236                                | 664                 | 868                  | 872      | 273      | 713      | 186      |
| 0.043.  | 7.189                                | 970                 | 169                  | 896      | 224      | 068      | 546      |
| 0.736.  | 8.053                                | 113                 | 510                  | 585      | 112      | 708      | 981      |
| 0.547.  | 9.770                                | 372                 | 696                  | 395      | 83       | 848      | 193      |
| 8.455.  | 7.642                                | 874                 | 072                  | 303      | 707      | 111      | 581      |
| 0.933.  | 2.079                                | 680                 | 828                  | 781      | 146      | 472      | 991      |
| 0.077.  | 9.400                                | 577                 | 058                  | 923      | 485      | 734      | 914      |
| 0.776.  | 5.109                                | 352                 | 825                  | 621      | 194      | 910      | 099      |
| 0.255.  | 6.579                                | 946                 | 403                  | 100      | 664      | 349      | 554      |
| 0.166.  | 8.486                                | 544                 | 999                  | 011      | 575      | 420      | 283      |
|         |                                      |                     |                      |          |          |          |          |
| 0.675.  | 0.792                                | 470                 | 921                  | 521      | 495      | 122      | 334      |
| 0.931.  | 4.509                                | 002                 | 444                  | 776      | 295      | 837      | 050      |
| 0.578.  | 4.880                                | 442                 | 787                  | 423      | 969      | 226      | 542      |
| 0.773.  | 8.946                                | 843                 | 182                  | 618      | 035      | 762      | 084      |
| 0.915.  | 9.068                                | 404                 | 686                  | 760      | 159      | 263      | 641      |
| 0.665.  | 8.806                                | 466                 | 620                  | 509      | 900      | 524      | 029      |
| 0.507.  | 2.640                                | 673                 | 390                  | 352      | -        | 687      | 199      |
| 0.531.  | 2.655                                | 686                 | 834                  | 395      | -        | -        | -        |

|        |                | 445  | 321  | 459  | 182  | 295  | 387     | 322  | 386  | 16011840      |
|--------|----------------|------|------|------|------|------|---------|------|------|---------------|
| x 8904 | 24 14209.520   | 12.7 | 13.9 | 14.6 | 13.9 | 14.3 | 15.5    | 14.0 | 14.6 | 274 208 65600 |
| 8919   | 212.517        | 12.4 | 14.0 | 14.5 | 13.6 | 13.5 | ns<15   | 13.6 | 14.6 | 277 211 85500 |
| 9308   | 519.609        | 12.6 | 14.4 | 14.5 | 14.1 | 14.8 | ns<15   | 13.9 | 14.8 | 279 215 566   |
| 9343   | 578.539        | 12.7 | 14.0 | 14.6 | 13.9 | 14.0 | "       | 14.0 | 14.8 | 33 274 92300  |
| 9578   | 811.644        | 12.6 | 14.3 | 14.4 | 14.0 | 14.6 | ns<14.6 | 13.9 | 14.7 | 266 204 199   |
| 9604   | 815.646        | 12.8 | 13.9 | 14.6 | 14.0 | 14.6 | "       | 14.4 | 14.6 | 270 208 576   |
| 9611   | 816.620        | 12.4 | 14.1 | 14.4 | 14.0 | 14.5 | "       | 14.4 | 14.8 | 271 209 135   |
| 9612   | 816.703        | 12.5 | 13.9 | 14.1 | 14.0 | 14.6 | "       | 14.3 | 14.8 | 271 268       |
| 9613   | 816.771        | 12.6 | 14.4 | 14.4 | 14.0 | 14.6 | ns<15   | 14.0 | 14.8 | 277           |
| 9614   | 816.834        | 12.6 | 14.4 | 14.6 | 14.1 | 14.7 | ns<14.7 | 13.9 | 14.8 | 478           |
| 9621   | 818.615        | 12.6 | 13.9 | 14.6 | 13.8 | 14.6 | "       | 14.1 | 14.6 | 273 211 329   |
| 9622   | 818.696        | 12.7 | 14.4 | 14.4 | 14.1 | 14.7 | "       | 14.1 | 14.6 | 459           |
| 9623   | 818.766        | def  | 14.4 | 14.1 | 14.2 | 14.7 | "       | 14.3 | 15.0 | 571           |
| 9624   | 818.829        | 12.7 | 14.1 | 14.3 | 14.0 | 14.6 | "       | 14.0 | 14.7 | ns< 672       |
| 9914   | 875.562        | 12.3 | 14.4 | 14.6 | 14.0 | 14.6 | "       | 14.0 | 14.8 | 25 268 512    |
| 10047  | 944.523        | 12.3 | 14.0 | 14.3 | 14.2 | 14.0 | ns<15   | 14.1 | 14.7 | 94 34 93100   |
| 10575  | 15931.656      | 12.2 | 14.4 | 14.6 | 14.3 | 14.6 | "       | 13.8 | 14.8 | 166 112 513   |
| 10579  | 932.644        | 12.2 | 14.4 | 14.2 | 14.3 | 14.4 | 15.5    | 14.0 | 14.6 | 167 113 095   |
| 10584  | 933.638        | 12.3 | 14.1 | 14.1 | 14.1 | 14.6 | ns<15   | 14.0 | 14.8 | 168 114 686   |
| 10823  | 16638.681      | 12.4 | 14.3 | 14.1 | 14.1 | 14.7 | "       | 14.5 | 14.6 | 263 213 547   |
| 10828  | 639.635        | 12.5 | 14.4 | 14.4 | 14.0 | 14.4 | "       | 14.2 | 14.6 | 264 214 117   |
| 10838  | 641.604<br>655 | 12.3 | 14.4 | 14.3 | 14.3 | 14.6 | "       | 13.6 | 14.6 | 266 216 270   |
| 10839  | 641.655        | 12.5 | 14.0 | 14.1 | 14.0 | 14.6 | "       | 14.0 | 14.6 | 352           |
| 10858  | 645.599        | 12.3 | 14.0 | 14.2 | 14.0 | 14.6 | "       | 14.1 | 14.7 | 270 220 667   |
| 10859  | 645.658        | 12.4 | 14.1 | 14.2 | 14.2 | 14.0 | "       | 13.8 | 14.6 | 761           |
| 10863  | 646.551        | 12.6 | 14.0 | 14.2 | 14.0 | 14.4 | "       | 14.4 | 14.6 | 271 221 191   |
| 10864  | " .613         | 12.4 | 14.0 | 14.2 | 14.2 | 14.6 | "       | 14.4 | 14.7 | 290           |
| 10865  | " .686         | 12.5 | 14.3 | 14.4 | 14.2 | 14.6 | "       | 14.0 | 14.7 | 407           |
| 10866  | " .788         | 12.7 | 14.4 | 14.4 | 14.3 | 14.7 | "       | 14.0 | 14.7 | 591           |
| 10867  | " .885         | 12.7 | 14.1 | 14.3 | 14.0 | 14.2 | "       | 14.2 | 14.8 | 726           |

|                       |     |     |     |     |     |     |
|-----------------------|-----|-----|-----|-----|-----|-----|
| 0.164. 0289 ✓         | 072 | 209 | 008 | 384 | 984 | 506 |
| 0.906. 6026           | 870 | 999 | 751 | 121 | 207 | 737 |
| 0.715. 3871           | 582 | 870 | 556 | 697 | 799 | 584 |
| 0.618. 6676           | 939 | 067 | 458 | 799 | 567 | 090 |
| 0.669. 2931           | 216 | 706 | 498 | 072 | 963 | 118 |
| 0.276. 0554           | 592 | 071 | 114 | 695 | 217 | 382 |
| 0.117. 2418           | 151 | 628 | 955 | 559 | 214 | 382 |
| 0.359. 2577           | 284 | 760 | 197 | 718 | 470 | 638 |
| 0.558. 2707           | 393 | 869 | 395 | 848 | 679 | 847 |
| 0.741. 2828           | 494 | 970 | 579 | 969 | 876 | 041 |
| 0.937. 6237           | 346 | 817 | 774 | 378 | 354 | 627 |
| 0.173. 6392           | 475 | 746 | 011 | 533 | 603 | 776 |
| 0.377. 6526           | 587 | 058 | 215 | 667 | 818 | 992 |
| 0.561. 6647           | 688 | 159 | 399 | 788 | 012 | 186 |
| 0.055. 5247           | 528 | 844 | 892 | 392 | 597 | 924 |
| 0.219. 7254           | 948 | 074 | 055 | 405 | 105 | 325 |
| 0.755. 6853 ✓         | 530 | 957 | 581 | 081 | 517 | 400 |
| 0.637. 8745           | 112 | 536 | 463 | 972 | 557 | 751 |
| 0.537. 0647           | 704 | 125 | 362 | 875 | 616 | 812 |
| 0.118. 0210 ✓         | 565 | 058 | 735 | 492 | 163 | 271 |
| 0.980. 2088           | 136 | 626 | 797 | 370 | 182 | 292 |
| 0.723. 5857           | 288 | 774 | 541 | 139 | 241 | 357 |
| 0.872. 5955           | 370 | 835 | 689 | 237 | 398 | 514 |
| 0.377. 3504           | 685 | 159 | 194 | 787 | 535 | 969 |
| 0.549. 3617           | 780 | 254 | 366 | 900 | 717 | 843 |
| 0.154. 5327 ✓         | 209 | 681 | 971 | 609 | 465 | 593 |
| 0.335. 5446 ✓         | 309 | 780 | 152 | 728 | 655 | 784 |
| 0.548. 5585 ✓         | 426 | 897 | 365 | 868 | 880 | 009 |
| 0.845. 5780 ✓         | 589 | 060 | 663 | 063 | 194 | 323 |
| 0.128. 2138<br>5.967. | 744 | 215 | 946 | 248 | 493 | 622 |

|               |                        | 445  | 321  | 459               | 182  | 295  | 287                     | 322               | 386  |     |     | 1.6011840 |
|---------------|------------------------|------|------|-------------------|------|------|-------------------------|-------------------|------|-----|-----|-----------|
| X 10869       | 24 16 647.603          | 12.4 | 14.1 | 14.6              | 14.2 | 13.9 | ns <sup>c</sup><br>15.5 | 14.4              | 14.7 | 272 | 222 | 876       |
| 10870         | " 650                  | 12.6 | 14.2 | 14.5              | 14.2 | 14.0 | "                       | 14.2              | 14.6 |     |     | 951       |
| 10878         | 648.6A                 | 12.4 | 14.2 | 14.2              | 14.1 | 14.6 | "                       | 14.4              | 14.6 | 273 | 223 | 502       |
| 10882         | 759.550                | 12.3 | 14.4 | 14.6              | 14.2 | 14.6 | "                       | 13.9              | 14.6 | 77  | 31  | 123 Oct   |
| 10888         | 760.524                | 12.2 | 14.4 | 14.5              | 14.2 | 14.6 | "                       | 14.0              | 14.6 | 80  | 32  | 683 Oct   |
| 10889         | " 574                  | 12.2 | 14.1 | 14.6              | 14.1 | 14.0 | "                       | 13.9              | 14.6 |     |     | 763 Oct   |
| 10891         | 761.513                | 12.0 | 14.4 | 14.4              | 14.3 | 14.6 | "                       | 13.9              | 14.7 | 81  | 33  | 266 Oct   |
| blurred 10892 | " 559                  | 12.2 | 13.9 | 14.0              | 14.0 | 14.6 | "                       | 13.6              | 14.6 |     |     | 340 Oct   |
| 10894         | 765.550                | 12.2 | 14.1 | 14.3              | 14.2 | 14.1 | "                       | 14.3              | 14.6 | 85  | 37  | 730 Oct   |
| 10895         | 766.507                | 12.2 | 13.9 | 14.4 <sup>4</sup> | 14.4 | 14.6 | "                       | 14.3              | 14.6 | 86  | 38  | 263 Oct   |
| 10896         | " 552                  | 12.2 | 14.0 | 14.5              | 14.4 | 14.6 | "                       | 14.4              | 14.6 |     |     | 335 Oct   |
| 10935         | 937.902                | 12.5 | 14.3 | 14.5              | 14.0 | 14.6 | "                       | 14.0              | 14.6 | 897 | 209 | 698 Apr   |
| 10984         | 17025.683              | 12.7 | 14.5 | 14.2              | 14.0 | 14.5 | "                       | 14.2              | 14.6 | 40  | 297 | 251       |
| 11357         | 17443.63 <sup>63</sup> | 12.7 | 14.0 | 14.3              | 13.9 | 14.6 | 15.3                    | 14.4              | 14.7 | 153 | 109 | 463       |
| 11795         | 815.637                | 12.5 | 14.2 | 14.5              | 13.9 | 14.3 | ns <sup>c</sup> 15      | 14.0              | 14.8 | 220 | 178 | 113       |
| 12129         | 18158.664              | 12.6 | 14.4 | 14.4              | 14.0 | 14.5 | "                       | 14.4              | 14.6 | 258 | 218 | 362       |
| 12139         | 160.662                | 12.8 | 14.4 | 14.4              | 13.8 | 14.6 | "                       | 14.0              | 14.6 | 260 | 226 | 545       |
| 12159         | 181.575                | 12.8 | 14.0 | 14.1              | 14.1 | 14.4 | "                       | 14.2              | 14.6 | 281 | 241 | 047       |
| 12168         | 185.641                | 12.8 | 14.4 | 14.4              | 14.3 | 14.7 | "                       | 14.0 <sup>2</sup> | 14.7 | 285 | 245 | 557       |

|        |                                     |     |     |     |     |     |     |
|--------|-------------------------------------|-----|-----|-----|-----|-----|-----|
| 0.223. | <sup>341</sup><br><del>7031</del>   | 894 | 363 | 040 | 623 | 702 | 834 |
| 0.360. | <del>7431</del>                     | 969 | 438 | 177 | 713 | 847 | 978 |
| 0.187. | <sup>9286</sup><br><del>8075</del>  | 521 | 987 | 004 | 568 | 829 | 963 |
| 0.780. | <del>1633</del>                     | 142 | 304 | 596 | 924 | 197 | 632 |
| 0.621. | <del>3498</del>                     | 701 | 021 | 437 | 788 | 194 | 632 |
| 0.767. | <del>3594</del>                     | 781 | 101 | 583 | 884 | 348 | 986 |
| 0.506. | <del>5391</del>                     | 285 | 442 | 322 | 682 | 237 | 678 |
| 0.640. | <del>5479</del>                     | 359 | 516 | 457 | 770 | 379 | 820 |
| 0.282. | <del>3119</del>                     | 749 | 895 | 099 | 410 | 661 | 112 |
| 0.074. | <del>4951</del>                     | 281 | 425 | 890 | 242 | 606 | 060 |
| 0.205. | <del>5037</del>                     | 353 | 497 | 021 | 328 | 744 | 198 |
| 0.045. | <del>3040</del>                     | 716 | 391 | 859 | 344 | 040 | 958 |
| 0.109. | <del>1073</del>                     | 270 | 705 | 922 | 384 | 168 | 325 |
| 0.292. | <del>1122</del>                     | 482 | 774 | 101 | 465 | 321 | 610 |
| 0.460. | <del>3227</del>                     | 153 | 407 | 264 | 599 | 095 | 394 |
| 0.093. | <del>9859</del>                     | 382 | 718 | 894 | 258 | 693 | 921 |
| 0.893. | <del>3665</del>                     | 565 | 896 | 693 | 063 | 811 | 044 |
| 0.926. | <del>3716</del>                     | 067 | 340 | 727 | 116 | 197 | 487 |
| 0.787. | <sup>11500</sup><br><del>9299</del> | 577 | 840 | 588 | 900 | 709 | 011 |

OK

1.6011840

Sequence 422 - too crowded  
use opposite page instead of these

→ 416, 152 BH 1962, 303, 385

|                          |           |     |         |       |       |       |       |       |       |          |          |    |     |    |
|--------------------------|-----------|-----|---------|-------|-------|-------|-------|-------|-------|----------|----------|----|-----|----|
| MF 8519                  | 23908.862 | 487 | 12.8:   | 14.0: | 13.8  | 13.3  | 14.4  | 15    | 13.5  | 14.5     | 16.1     | a1 | 21  | m  |
| 8638                     | 949.830   | 085 |         |       |       |       |       |       |       | NSL 16.0 |          | a6 | 252 | m  |
| 8759                     | 2409.625  | 839 | 12.9    | 13.6  | 13.8  | 13.5  | 13.3  | 15.0: | 13.5  | 14.6     | 15.4     | a7 | 19  | me |
| 8766                     | 021.574   | 960 | 12.9    | 14.4  | 14.4  | 13.8  | 13.6  | 15.0: | 13.5  | 14.6     | 15.8     | a9 | 21  | M  |
| 8770                     | 023.570   | 188 | 12.9    | 13.5  | 13.6: | 13.6  | 14.3  | 14.6  | 13.5  | 14.6     | 16.0:    | b  | 23  | -  |
| 9550                     | 352.694   | 144 | 12.9    | 13.4  | 13.6  | 13.4  | 13.8  | 15.0: | 13.4  | 14.6     | 14.7     | a5 | 49  | me |
| 65                       | 353.661   | 692 | 12.9    | 13.6  | 13.6: | 12.9  | 14.5  | 15.2: | 13.5  | 14.6     | NSL 15.8 | a3 | 50  | me |
| 89                       | 355.669   | 904 | 12.9    | 13.4  | 13.6  | 13.4  | 13.5  | 15.0: | 13.6  | 14.8:    | 16.0:    | a5 | 52  | me |
| 97                       | 357.669   | 110 | 12.9    | 13.6  | 13.7  | 13.2: | 14.0: | 15    | 13.5  | 14.8:    | NSL 15.6 | a3 | 54  | me |
| 9656                     | 371.610   | 437 | 13.0:   | 13.5  | 13.5: | 13.0: | 14.6: | 14.7: | 13.5  | 14.7:    | NSL 16.2 | a5 | 68  | M  |
| 63                       | 373.620   | 650 | 12.9    | 14.8: | 13.5: | 13.4  | 14.3: | 16.0: | 13.4  | -        | 14.7:    | a3 | 70  | me |
| 72                       | 374.588   | 200 | 12.9    | 14.0: | 13.5  | 13.3  | 14.2: | 15:   | 13.5  | -        | NSL 16.3 | a0 | 71  | -  |
| 84                       | 376.600   | 422 | 12.9    | 14.0: | 13.6  | 13.0  | 14.2: | 14.4  | 13.4  | 14.6     | NSL 15.6 | a3 | 73  | M  |
| 91                       | 377.602   | 026 | 12.8    | 13.6  | 13.6  | 13.3  | 13.5  | 14.7: | 13.5  | 14.6:    | NSL 15.6 | a0 | 74  | me |
| 9740                     | 399.525   | 129 | 12.8    | 13.6  | 13.3  | 13.1  | 13.5  | 14.4  | 13.6  | 14.6:    | NSL 15.6 | a5 | 96  | M  |
| poor 47                  | 401.542   | 359 | 11.9    | 13.7  | 13.7: | 13.1  | 14.5  | 14.6: | 13.6  | 14.6:    | NSL 15.2 | a5 | 98  | -  |
| 59                       | 402.554   | 979 | 12.7    | 14.2  | 13.9  | 13.4  | 14.0  | 14.5  | 13.5  | 14.5     | 15.6:    | a6 | 99  | M  |
| 69                       | 403.550   | 574 | 12.7    | 14.0  | 13.7  | 13.5  | 14.8  | 14.6  | 13.6  | 14.5     | 16.2:    | a4 | 100 | M  |
| 79                       | 404.544   | 165 | 12.9    | 14.0  | 13.6  | 13.4  | 13.6  | 14.8  | 13.5  | 14.6     | NSL 16.0 | a5 | 101 | M  |
| blurred 84               | 405.536   | 754 | 12.0    | 13.6  | 13.6  | 13.5  | 13.5  | 14.8: | 13.5  | 14.7     | 15.1:    | a8 | 102 | me |
| 93                       | 406.567   | 405 | 12.9    | 13.6  | 13.5  | 13.3  | 14.6  | 14.8  | 13.5  | 14.7     | 16.1:    | a5 | 103 | -  |
| avg. d? 11663            | 25383.629 | 841 | 12.7:   | 13.4  | 13.6  | 13.3  | 13.4  | 14.4  | 13.5  | 14.5     | 15.1:    | a5 | 171 | M  |
| 677                      | 384.626   | 457 | 12.8    | 13.4  | 14.2  | 13.1  | 14.5  | 14.4  | 13.4  | 14.5     | 15.6:    | a9 | 172 | -  |
| 730                      | 389.550   | 341 | blurred | 13.5: | -     | 13.4: | -     | -     | 13.5: | -        | NSL 14.8 | a6 | 177 | me |
| 759                      | 395.566   | 974 | 12.9    | 13.6  | 13.7  | 13.3  | 13.6  | 14.4  | 13.4  | 14.5:    | NSL 14.8 | b1 | 183 | M  |
| 831                      | 413.524   | 728 | 13.1    | 13.3  | 13.5  | 12.8  | 13.5  | 14.5  | 13.5  | 14.3     | 16.3     | a3 | 201 | me |
| 871                      | 417.502   | 098 | 13.1    | 13.1  | 13.7  | 12.9  | 14.0: | 14.2: | 13.2  | 14.4:    | 15.3:    | a2 | 205 | -  |
| 900                      | 419.524   | 735 | 12.9    | 13.5  | 13.5  | 13.0  | 13.8: | 14.6  | 13.3  | 14.5:    | NSL 15.0 | a4 | 207 | me |
| blurred 920              | 421.493   | 488 |         |       |       | 12.9  | 13.1  |       | 12.8: |          | blurred  | a0 | 209 | me |
| 11930<br>12070<br>median | 423.482   | 673 |         |       |       |       |       |       |       |          | 15.0:    | a1 | 211 | M  |

Repeat Measures with new sequence

Seq. a = 42201 = to-blurred

|   |      |       |              |      |      |      |              |      |       |      |      |              |      |      |      |      |      |      |
|---|------|-------|--------------|------|------|------|--------------|------|-------|------|------|--------------|------|------|------|------|------|------|
|   | 57   | 305 d | neg. d       | 445  | 321  | 459  | 182          | 295  | 387   | 322  | 386  | 288          | 3960 | 3962 | 3981 | 3982 | 3983 | 3980 |
|   | m    | 213   | 12.5<br>11.9 | 12.8 | 14.2 | 13.9 | 13.1<br>12.9 | 14.9 | 16.5  | 13.9 | 14.7 | 12.5<br>11.9 | 13.7 | M    | 14.5 | 15.2 | 13.2 |      |
| 2 | m    | 254   | 12.8         | 12.9 | 14.1 | 13.9 | 13.5         | 14.3 | 216.0 | 13.5 | 14.9 | 12.2         | "    | M    | 15.5 | 14.8 | 13.8 |      |
|   | meal | 19    | 12.4         | 12.8 | 13.8 | 14.8 | 13.8         | 12.8 | 15.5  | 14.1 | 15.2 | 12.5<br>11.9 | 13.8 | M    | 15.2 | 15.3 | 15.6 |      |
|   | M    | 21    | 12.5<br>11.9 | 12.8 | 14.1 | 14.1 | 13.8         | 13.9 | 15.4  | 13.9 | 14.9 | 12.5<br>11.9 | 13.9 | ms   | 15.2 | 15.2 | 15.7 |      |
|   | -    |       | 12.6         | 12.8 | 13.7 | 14.6 | 13.8         | 14.6 | 15.5  | 13.3 | 14.9 | 12.2         | "    | M    | 15.5 | 15.5 | 15.6 |      |
|   | meal | 47    | 12.6         | 13.0 | 14.1 | 14.7 | 13.9         | 14.4 | 15.5  | 14.0 | 15.1 | 13.0         | 15.3 | M    | 15.3 | 16.2 | 16.2 |      |
|   | meal | 48    | 12.5         | 13.1 | 13.9 | 14.2 | 13.1         | 14.6 | 15.2  | 13.6 | 14.9 | 12.9         | 14.8 | M    | 15.2 | 15.2 | 15.5 |      |
| 2 | meal | 50    | 12.5         | 12.8 | 13.5 | 14.2 | 13.4         | 13.8 | 15.6  | 13.9 | 14.7 | 13.0         | 14.9 | M    | 15.4 | "    | 15.0 |      |
| 4 | meal | 52    | 12.5         | 12.8 | 13.9 | 14.4 | 12.8         | 14.4 | 15.4  | 14.2 | 15.2 | 12.8         | 15.1 | ms   | 15.8 | 15.8 | 15.5 |      |
| 8 | M    | 66    | 12.5         | 12.8 | 14.1 | 14.1 | 12.9         | 14.7 | 15.0  | 13.4 | 15.2 | 12.8         | 14.6 | M    | 15.0 | 16.2 | 15.6 |      |
| 0 | meal | 68    | 12.5         | 12.9 | 14.4 | 14.3 | 13.1         | 14.7 | 15.0  | 13.8 | 14.9 | 12.7         | 14.6 | M    | 15.0 | 16.2 | 15.6 |      |
| 1 | -    | 69    | 12.5         | 13.1 | 14.3 | 14.2 | 13.2         | 14.6 | 15.4  | 13.7 | 15.5 | 12.7         | 13.9 | M    | 14.8 | 16.0 | 16.0 |      |
| 3 | M    | 71    | 12.4         | 12.8 | 14.6 | 14.6 | 13.1         | 14.9 | 14.9  | 13.4 | 14.9 | 12.4         | 14.6 | M    | 14.8 | 16.0 | 15.9 |      |
| 4 | meal | 72    | 12.5         | 12.6 | 14.3 | 14.1 | 13.1         | 14.1 | 15.4  | 14.0 | 15.0 | 12.3         | 14.6 | M    | 14.7 | 16.0 | 15.6 |      |
| 6 | M    | 94    | 12.5         | 12.5 | 13.9 | 13.9 | 12.8         | 14.2 | 14.6  | 14.1 | 15.0 | 12.3         | 14.3 | M    | 14.8 | 14.8 | 15.7 |      |
|   | -    | 96    | 12.8         | 12.5 | 14.4 | 14.5 | 13.3         | 14.6 | -     | 14.2 | -    | 12.2         | 14.1 | M    | 14.0 | 14.1 | 15.6 |      |
|   | M    | 99    | 12.5         | 12.7 | 14.4 | 14.1 | 13.2         | 14.1 | 15.0  | 14.1 | 15.1 | 12.4         | 13.5 | M    | 13.4 | 14.1 | 15.6 |      |
|   | M    | 98    | 12.5         | 12.7 | 14.6 | 14.2 | 13.2         | 15.0 | 15.0  | 14.1 | 14.9 | 12.3         | 13.0 | M    | 14.0 | 15.0 | 16.3 |      |
|   | M    | 99    | 12.6         | 12.7 | 14.6 | 14.6 | 13.3         | 14.3 | 15.5  | 14.0 | 14.9 | 12.3         | 12.9 | M    | 13.8 | 14.9 | 15.6 |      |
| 2 | meal | 100   | 12.5         | 12.3 | 14.6 | 14.4 | 13.3         | 13.5 | 15.4  | 13.8 | 15.0 | 12.3         | 13.1 | M    | 13.8 | 14.6 | 15.5 |      |
|   | -    | 101   | 12.4         | 12.6 | 14.7 | 13.9 | 13.3         | 15.0 | 15.3  | 13.7 | 15.3 | 12.3         | 12.5 | M    | 14.0 | 14.9 | 15.6 |      |
| 1 | M    | 163   | 12.3         | 12.8 | 13.8 | 14.1 | 13.0         | 13.7 | 14.9  | 13.8 | 14.8 | 12.7         | 13.9 | M    | 15.6 | off  | 14.8 |      |
| 2 | -    | 164   | 12.5         | 12.5 | 13.4 | 14.6 | 13.3         | 15.5 | 14.8  | 13.7 | 14.7 | 12.7         | 13.8 | M    | 16.0 | 16.0 | 15.1 |      |
| 7 | neg  | 169   | 12.3         | 12.6 | 13.4 | 14.2 | 13.5         | 14.8 | 14.7  | 13.5 | -    | 12.8         | 13.6 | M    | 15.0 | off  | 14.8 |      |
| 3 | M?   | 175   | 12.4         | 12.5 | 13.9 | 14.3 | 13.3         | 14.0 | 14.9  | 13.5 | 14.8 | 12.5         | 13.8 | M    | off  | "    | 14.5 |      |
| 1 | meal | 193   | 12.7         | 12.8 | 13.8 | 14.4 | 12.8         | 14.0 | 15.4  | 14.1 | 14.9 | 12.7         | 13.9 | M    | 14.0 | 15.4 | 14.0 |      |
| 5 | -    | 199   | 12.5         | 12.9 | 13.7 | 14.3 | 12.8         | 14.4 | 15.2  | 13.4 | 14.9 | 12.7         | 15.0 | M    | 14.2 | 15.0 | 13.8 |      |
| 7 | meal | 199   | 12.5         | 12.8 | 13.7 | 13.7 | 12.9         | 14.7 | 15.0  | 13.1 | 15.1 | 12.7         | 14.3 | off  | 14.0 | off  | 13.8 |      |
| 9 | neg  | 201   | 12.5         | -    | 13.4 | 14.1 | 12.8         | 13.5 | 14.9  | 12.9 | 14.8 | 12.7         | 14.3 | off  | 14.0 | off  | 13.8 |      |
|   | m    | 203   | 12.5         | 12.8 | 14.2 | 14.1 | 13.3         | 14.7 | 15.5  | 13.9 | 15.0 | 12.7         | 13.8 | M    | 14.0 | off  | 13.7 |      |

1953phae.proj.22

|  |  |  |  | M 22 seg. = poor for these stars and plates |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 182   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |

## New Seq. near 422

1953phae.pr

|    |      |      |      |      |                      |      |                    |                      |      |      |                   |                   |      |      |      |      |       |                     |
|----|------|------|------|------|----------------------|------|--------------------|----------------------|------|------|-------------------|-------------------|------|------|------|------|-------|---------------------|
|    | var  | 387  | 445  | 321  | 459                  | 182  | 295                | 387                  | 322  | 386  | 288 <sup>HV</sup> | 3960 <sup>m</sup> | 3962 | 3981 |      | 3983 | 3986  |                     |
| 39 | -    | 231  | 12.5 | 12.9 | 14.7                 | 14.7 | 13.7               | 14.8                 | 15.8 | 13.2 | 15.0              | 12.9              | 15.5 | 13.8 | M    | 14.7 | 16.0  | 13.8                |
| 62 | -    | 254  | 12.5 | 12.9 | 14.8                 | 13.9 | 13.5               | 13.8                 | 14.7 | 13.8 | -                 | 12.7              | 15.2 | 13.6 | M    | 15.0 | 15.6  | 15.0                |
|    | ng   |      | 12.5 | 12.7 | 14.5 <sup>only</sup> | 13.8 | 13.5               | 13.7                 | -    | 13.2 | -                 | 13.1              | 15.0 | 13.8 | M    | 15.0 | "     | 15.0                |
|    |      |      | 12.4 | 12.7 | 13.4                 | 13.9 | 13.6               | 14.1                 | 15.0 | 13.4 | 14.7              | 12.8              | 16.0 | 13.7 | M    | 15.5 | 16.2  | 15.5                |
|    | mod? |      | 12.5 | -    | 13.2                 | 13.7 | 13.4 <sup>m</sup>  | 14.4                 | 14.9 | 13.1 | -                 | 12.7              | 16.0 | 13.7 | M    | 14.8 | 16.0  | 15.2 <sup>def</sup> |
|    |      |      | 12.5 | 12.7 | 13.7                 | 14.3 | 13.4 <sup>m</sup>  | 14.4                 | 15.5 | 13.2 | 15.0              | 12.9              | 15.0 | 13.6 | M    | 15.5 | 16.0  | 15.2                |
| 8  | 260  | 12.5 | -    | 13.8 | 14.0                 | 12.9 | 14.5 <sup>ns</sup> | -                    | 13.1 | -    | 12.3              | 15.2              | 13.5 | M    | 14.8 | 15.3 | 15.1  |                     |
|    | m    |      | 12.4 | 12.7 | 14.2                 | 13.8 | 12.9               | 14.5 <sup>ns</sup>   | 14.5 | 13.5 | -                 | 12.6              | 14.3 | 13.7 | M    | 14.9 | "     | 15.1                |
|    |      | 12.4 | -    | 14.0 | Plate T - n          |      |                    |                      |      |      | 12.7              | 14.9              | 13.8 | M    | "    | "    | 14.8? |                     |
|    | ng   |      | 12.5 | 12.7 | 14.0 <sup>only</sup> | 13.9 | 13.0               | 14.8                 | -    | 13.4 | -                 | 12.7              | 15.0 | 13.7 | M    | 15.6 | 15.8  | 15.5                |
|    | ng   |      | 12.5 | -    | -                    | -    | 13.7               | -                    | -    | -    | -                 | 12.6              | 15.0 | 13.7 | M    | 15   | 15.3  | 15.5?               |
| 30 | 225  | 12.4 | 12.9 | 13.7 | 13.7                 | 13.4 | 14.7               | 15.5                 | 13.9 | 15.6 | 12.5              | off               | 13.6 | M    | 16.2 | 15.6 | 15.0  |                     |
| 34 | M    | 229  | 12.5 | 12.5 | 13.8                 | 14.2 | 13.8               | 13.8                 | 15.2 | 13.3 | 15.2              | 12.5              | -    | 13.8 | M    | 15.5 | 15.8  | 15.1                |
| 0  | M    | 250  | 12.5 | 12.5 | 13.9                 | 14.4 | 13.8               | 15.4 <sup>only</sup> | 14.1 | 15.5 | 12.6              | off               | 13.6 | m    | 15.5 | 14.8 | 13.8  |                     |
| 1  | 269  | 12.4 | 12.5 | 14.6 | 14.6                 | 13.9 | 15.4?              | 15.5                 | 13.8 | 15.4 | 12.6              | off               | 13.8 | M    | off  | off  | 13.8  |                     |
| 3  | m?   | 273  | 12.4 | 12.4 | 13.8                 | 14.6 | 14.3               | 13.8                 | 15.3 | 14.3 | 15.2              | 12.3              | off  | 14.0 | ns   | 15   | 14.9  | 13.5                |
| 1  | ng   | 281  | 12.5 | 12.5 | 14.1                 | 13.9 | 14.1               | -                    | 13.4 | 13.4 | -                 | 12.7              | off  | 13.9 | M    | 14.7 | off   | 13.8                |
| 4  | m    | 301  | 12.7 | 12.8 | 14.6                 | 14.2 | 14.1               | 14.7                 | 15.5 | 13.8 | 15.2              | 12.7              | 14.3 | 13.9 | M    | off  | off   | 14.6                |
|    | m    | 6    | 12.7 | 13.1 | 14.0 <sup>only</sup> | 14.4 | 13.8               | 14.4                 | 15.8 | 14.1 | 15.0              | 12.5              | off  | 13.8 | M    | off  | off   | 14.7                |
| 2  | m    | 20   | 12.4 | 12.5 | 14.4                 | 14.1 | 13.4               | 14.3                 | 16.0 | 13.5 | 14.7              | 12.7              | off  | 13.8 | M    | 15.6 | off   | 15.5                |
| 4  | 24   | 12.5 | 12.5 | 13.4 | 14.4                 | 13.6 | 15.1               | 16.0                 | 14.1 | 15.2 | 12.8              | off               | 13.8 | M    | 16.0 | off  | 15.0  |                     |
| 7  | m    | 25   | 12.5 | 12.8 | 13.1                 | 14.7 | 13.2               | 14.9                 | -    | 14.2 | -                 | 12.8              | off  | -    | ns   | off  | off   | 15.0                |
| 1  | m    | 32   | 12.6 | 12.8 | 14.1                 | 14.3 | 13.8               | -                    | 16.5 | 13.9 | -                 | 12.8              | 13.7 | M    | 15.2 | off  | off   | 15.6                |
| 2  | m    | 50   | 12.5 | 12.9 | 14.4                 | 14.2 | 13.8               | 14.1                 | 15.8 | 13.8 | 14.9              | 12.8              | 12.1 | 13.8 | M    | 15.6 | off   | 15.6                |
| 3  | mt   | 51   | 12.5 | 12.8 | 13.9                 | 14.3 | 13.8               | 15.0                 | 16.5 | 13.8 | 15.0              | 12.6              | 12.0 | 13.8 | M    | 16   | off   | 16                  |
|    | m?   | 57   | 12.8 | 12.9 | 14.6                 | -    | -                  | -                    | -    | -    | -                 | 12.5              | off  | -    | m?   | -    | -     | -                   |
| 4  | m    | 262  | 12.5 | 12.7 | 14.6                 | 14.4 | 13.3               | 14.5                 | 15.5 | 14.2 | 14.8              | 12.5              | 14.3 | 14.7 | M    | off  | off   | 15.6?               |
| 5  | m    | 263  | 12.8 | 12.9 | 14.5                 | 14.4 | 13.7               | 14.6                 | 16.5 | 14.1 | 15.0              | 12.7              | 14.2 | 13.7 | M    | off  | "     | 15.6                |
| 7  | -    | 265  | 12.5 | 12.5 | 14.7                 | 14.4 | 13.6               | 13.8                 | 16.0 | 14.3 | 14.9              | 12.2              | 14.8 | 13.9 | M    | 15.5 | "     | 15.5                |
|    | -    | 271  | 12.6 | -    | -                    | -    | -                  | -                    | -    | -    | -                 | 12.7              | 15.9 | -    | M    | 15   | "     | 15                  |

use this page

1953phae.

|              |            | avg. d  | 445   | 321                     | 459   | 182  | 295   | 387   | 322   | 386   | 228   | 4/6     | 182     | 3   |   |
|--------------|------------|---------|-------|-------------------------|-------|------|-------|-------|-------|-------|-------|---------|---------|-----|---|
| MF14248      | 26 102.635 | 12.5    | 12.4  | 14.0                    | 14.4  | 13.4 | 14.4  | 14.0  | 13.9  | -     | 12.4  | bluv    | a5      | m   |   |
| 253          | 103.640    | 12.5    | 12.8  | 14.2                    | 14.4  | 13.4 | 13.9  | 15    | 14.1  | 14.7  | 12.6  | NS4/6.0 | a5      | m   |   |
| 255          | 104.544    | 12.5    | 12.5  | 13.9                    | 14.4  | 13.4 | 14.6  | "     | 14.1  | 15.1  | 12.5  | 14.8:   | a6      | m   |   |
| 352          | 123.621    | 12.8    | 12.2  | 13.5                    | 14.6  | 14.0 | 13.9  | 15.5  | 13.5  | -     | 12.7  | bluv    | a5      | -   |   |
| 387          | 130.596    | 12.5    | 12.8  | 14.5:                   | 14.4: | 13.1 | 14.2  | -     | 14.3  | -     | 12.7  | NS4/5.2 | a0      | m   |   |
| 399          | 131.554    | 12.6:   | 13.1  | 14.1                    | 14.6  | 13.9 | 14.7  | 15.6  | 13.8  | 14.4  | 12.8: | 15.4    | a3:     | -   |   |
| 504          | 157.561    | 12.4    | 12.8  | 14.3                    | 14.3  | 13.1 | 14.6  | 16    | 13.7: | 14.9: | 12.9  | 14.7:   | a0      | m   |   |
| 540          | 160.490    | 12.2    | 13.0  | 13.9 <sup>overlap</sup> | 14.7  | 13.1 | 14.1  | 15.1: | 14.1  | 15.0: | 12.6  | 15.0    | a0:     | m   |   |
| 548          | 161.548    | 12.5    | 13.0  | 14.4:                   | 14.3  | 13.2 | 16.0  | 15.2: | 14.1  | 15.2: | 12.5  | 14.6    | a2:     | -   |   |
| 555          | 162.566    | 12.7    | 13.0  | 13.8                    | 14.4  | 13.3 | 14.4  | 15.6  | 14.1  | 15.0: | 12.5  | 15.8    | a1      | m   |   |
| 594          | 176.467    | 12.5    | 12.8  | 14.2:                   | 14.3  | 13.1 | 14.9: | 15.15 | 14.1  | -     | 12.4  | def?    | a-1     | m   |   |
| 723          | 190.450    | 12.5    | 12.9: | 14.4                    | 14.5  | 13.1 | 14.4  | -     | 13.7: | -     | 12.6  | NS4/5.2 | a-1     | m   |   |
| 751          | 208.396    | 12.5    | 12.9: | 14.3                    | 14.2  | 12.9 | 15.15 | 15.15 | 14.2  | 14.7  | 12.7  | overlap | a-3     | m   |   |
| 767          | 211.220    | 12.5    | 12.8  | 14.1                    | 14.1  | 12.9 | 13.6  | "     | 14.3  | 15.0  | 12.8  | NS4/5.6 | A5      | m   |   |
| 768          | 225.1      | 12.7    | 12.8  | 14.1                    | 14.4  | 12.9 | 14.1  | "     | 14.2  | 14.8  | 12.7  | 15.2:   | A5      | m   |   |
| is avg. 4mm? | 769        | 228.3   | 12.5  | 13.0                    | 14.1  | 14.4 | 13.0  | 14.4  | 15.8: | 14.1  | 15.1  | 12.5    | 14.5:   | A5  | m |
| 770          | 315        | 12.5    | 12.9  | 13.8                    | 14.5  | 13.0 | 14.7  | 14.6  | 13.7  | 14.6  | 12.7  | overlap | A5      | m   |   |
| 771          | 347        | 12.5    | 12.9  | 13.8                    | 14.2  | 13.0 | 14.4  | 14.9: | 13.8  | 14.7: | 12.7  | bluv    | A5      | m   |   |
| 772          | 379        | 12.5    | 12.7  | 14.1                    | 14.4  | 13.1 | 14.7  | 15.15 | 13.8: | 14.7  | 12.7  | NS4/5.2 | A5      | m   |   |
| 773          | 411        | 12.6    | 13.0: | 14.2                    | 14.2  | 13.1 | 14.7  | 16    | 13.7  | 14.7  | 12.7  | overlap | A5      | m   |   |
| trailed      | 784        | 214.360 | 12.5  | 12.9                    | 14.1: | 14.7 | 13.1  | 14.9  | 15.5  | 14.1  | 14.9  | 12.5    | NS4/5.6 | A5  | m |
| 837          | 232.310    | 12.4    | 12.8: | 14.2                    | 14.6  | 13.1 | 13.7  | 15.5  | 13.8  | 14.7  | 12.8  | 15.7    | A7      | m   |   |
| 15557        | 26 501.596 | 12.5    | 12.7  | 14.8:                   | 14.8: | 13.5 | 14.1  | -     | 14.1  | -     | 12.7: | 14.7:   | a8      | m   |   |
| 570          | 502.558    | 12.6    | 12.6  | 14.1                    | 14.7  | 13.5 | 14.7  | -     | 14.0: | -     | 12.8  | 15.8:   | b1      | -   |   |
| lost?        | 578        | 503.509 | 12.5  | 12.5                    | 14.9  | 14.8 | 13.7  | 14.8  | 15.0  | 13.5  | 12.7  | -       | -       | -   |   |
| 606          | 505.576    | 12.5    | 12.5  | 14.9                    | 14.8  | 13.7 | 14.8  | 15.0  | 13.8  | 15.0  | 12.7  | 15.3:   | a9      | m   |   |
| 660          | 512.511    | 12.4    | 12.7: | 13.7                    | 14.2  | 13.8 | 14.8: | 15.0  | 13.9  | -     | 12.7  | bluv    | a9      | m   |   |
| 668          | 516.505    | 12.4    | 12.8  | 14.1                    | 14.7  | 13.5 | 13.3  | 15.5  | 13.5  | 14.9: | 12.8  | 16.4    | -       | neg |   |
| lost?        | 717        | 540.454 | -     | -                       | -     | -    | -     | -     | -     | -     | -     | -       | -       | -   |   |
| 16770        | 26 838.524 | 12.4    | 12.5  | 14.9:                   | 14.2  | 13.7 | 14.8  | -     | 14.2  | -     | 12.7  | NS4/4.8 | a5      | -   |   |

| 387     | 905  | HV 3960 | 3962  | 3981     | 3983     | 3986     | 1.6011846 |
|---------|------|---------|-------|----------|----------|----------|-----------|
| m       | 272  | 14.3    | 14.7  | M        | off      | ≤ 15.2:  | 122       |
| m       | 273  | 14.5    | 13.7  | M        | nsc 15.  | ≤ 16.0   | 731       |
| m       | 274  | 14.5    | 13.9  | M        | nsc 15.6 | ≤ 15.6   | 178       |
| —       | 293  | 13.0    | 13.8  | M        | off      | ft       | 724       |
| m       | 300  | 13.0    | 13.9  | M        | off      | nsc 14.7 | 592       |
| —       | 301  | 13.0    | 13.8  | M        | off      | 13.1     | 426       |
| m       | 22   | 12.0    | 14.01 | M        | 14.81    | 13.4     | 068       |
| med-25  | 12.5 | 13.9    | M     | off      | 13.4     | 13.8     | 758       |
| m?      | 26   | 12.5    | 12.8  | M        | off      | 13.8     | 452       |
| m       | 27   | 12.5    | 14.0  | M        | off      | 13.1     | 082       |
| m       | 41   | 11.7    | 13.6  | M        | off      | 13.2     | 340       |
| m?      | 55   | 11.3    | 13.9  | M        | —        | 13.6     | 729       |
| m       | 73   | 11.6    | 13.7  | m'       | nsc 15.  | 14.8     | 464       |
| m       | 76   | 11.0    | 13.6  | M        | 15.0     | 14.8     | 986       |
| med?    | 11.2 | 13.8    | M     | ≤ 15.5   | 15.0     | 036      |           |
| m?      | 11.2 | 13.8    | M     | ≤ 15.2   | ≤ 15.2   | 087      |           |
| m?      | 11.2 | 14.0    | M     | 15.2:    | 15.0:    | 138      |           |
| med?    | 11.1 | 13.7    | M     | 15.5:    | ≤ 15.2:  | 189      |           |
| m?      | 11.3 | 14.0    | M     | 14.8     | 15.2:    | 241      |           |
| med?    | 11.4 | 13.8    | M     | 15.0:    | 15.2:    | 292      |           |
| m + 79  | 11.6 | ≤ 15.2  | m3    | ≤ 14.9   | nsc 15.6 | 15.4     | 014       |
| m + 797 | 11.9 | 13.8    | M     | nsc 14.8 | off      | nsc 15.3 | 755       |
| m?      | 61   | off     | 12.8  | M        | off      | 14.8     | 931       |
| —       | 62   | 11.0    | 13.6  | M        | "        | 13.8     | 472       |
| —       | 63   | —       | —     | —        | —        | —        | —         |
| m + 765 | 10.6 | 13.9    | M     | off      | 14.1     | 304      |           |
| m       | 72   | 11.2    | 13.9  | M        | off      | 14.0     | 408       |
| ng      | 74   | 11.7    | 13.8  | M        | off      | 14.0     | 804       |
| —       | 100  | —       | —     | —        | —        | —        | —         |
| —       | 93   | 14.2    | 13.7  | off      | off      | nsc 14.5 | 415       |

|              |                        | Aug d | 321   | 459    | 182   | 295   | 387   | 322     | 386   | 288             | 416  |         |     |
|--------------|------------------------|-------|-------|--------|-------|-------|-------|---------|-------|-----------------|------|---------|-----|
| 1000 MF16837 | 16970 26838. 26857.623 | 134   | 12.7  | -      | -     | 12.8: | 13.7: | -       | 13.5: | <del>12.7</del> | 12.7 | NS414.5 | a3  |
| 940          | 872.571                | 12.4  | 12.8  | 13.4   | 14.2  | 12.9  | 13.5  | 14.9    | 13.3: | 14.9:           | 12.8 | NS415.2 | a3  |
| 975          | 886.296                | 12.2  | 12.9  | 14.3:  | 14.2  | 12.9: | 13.5  | 14.9:   | 13.5  | 14.8:           | 12.8 | blw     | a6: |
| 17010        | 892.534                | 12.4: | 12.6  | -      | 14.2  | 13.1: | 13.5  | NS414.8 | 13.8: | 14.8:           | 12.7 | 15.4:   | b:  |
| trailed 202  | 923.441                | 12.5  | -     |        |       |       |       |         |       |                 | 12.7 | blw     | a5: |
| 376          | 950.346                | -     |       |        |       |       |       |         |       |                 | -    | 14.5    | a5  |
| 422          | 956.361                | 12.5  | dy    | 13.5   | 13.9  | 13.8  | 13.9  | ≤15     | 13.8  | 14.8:           | 12.5 | NS415.2 | b:  |
| 876          | 27160.568              | 12.5  | 12.8  | 14.3:  | 14.7  | 13.8  | 14.2  | -       | 13.2: | -               | 12.8 | NS414.8 | a6: |
| trailed 891  | 162.638                | 12.5  | 12.5  | -      | 14.3  | 13.5  | 14.8  | -       | 13.4  | 14.9:           | 12.8 | NS415.2 | a5  |
| 18127        | 221.633                | 12.4  | 12.4  | 14.2   | 14.3  | 14.1  | 13.9  | NS415   | 13.8  | 14.9:           | 12.5 | NS415.6 | b?  |
| 145          | 223.607                | 12.3  | 13.0  | -      | ≤14.6 | 13.2  | 14.3  | NS414.6 | 13.6  | 14.7:           | 12.4 | NS414.8 | b:  |
| 153          | 225.652                | 12.5  | 13.1  | 13.9   | 14.2: | 13.5: | 14.5  |         | 13.6  |                 | 12.4 | NS414.4 | a5: |
| 173          | 237.368                | 12.5  | 12.5: | -      | -     |       |       |         |       |                 | 12.2 | NS414.1 | -   |
| 177          | 239.337                | 12.5  | 12.7  | -      | 14.4  | 13.1  | 14.7: | 14.8:   | 13.8: |                 | 12.5 | NS414.5 | a6  |
| 179          | .402                   | 12.5  | 12.6  | 13.5   | 14.7: | 13.8  | 14.7: | NS414.5 | 13.6  | 14.7:           | 12.4 | 15.2:   | a8  |
| 183          | .548                   | 12.5  | 12.7  | 14.3   | 14.2  | 13.4  | 14.7: | 14.8:   | 13.9: | 14.7            | 12.5 | 15.2:   | b?  |
| 185          | .616                   | 12.5  | 12.8  | 14.7   | 14.0  | 13.7  | 14.8: | 14.8:   | 14.1  | 14.8:           | 12.5 | NS414.8 | a5  |
| 190          | 240.335                | 12.5  | 12.7  | 13.8   | 14.7: | 13.4  | 13.5  | NS414.5 | 14.1  |                 | 12.5 | 14.6:   | a2  |
| 192          | .400                   | 12.5  | 12.6  | 13.9   | 14.8  | 13.8  | 14.1  | ≤14.7   | 13.9  |                 | 12.3 | NS415.2 | b?  |
| 200          | 242.488                | 12.4  | 12.7  | ≤14.5: | 14.4: | 13.8  | 14.4: | ≤14.7   | 13.9  | 14.5:           | 12.5 | NS415.2 | b2  |
| 209          | 243.335                | 12.5  | dy    | 13.9   | 14.2  | 13.8  | 14.4  | NS414.8 | 13.9  | 14.6            | 12.5 | 15.8:   | b   |
| 212          | .433                   | 12.6  | 12.7  | 14.1   | 14.7  | 13.7  | 14.2  | -       | 14.0: | 14.7:           | 12.5 | NS415.6 | a7: |
| 215          | 243.535                | 12.5  | 12.6  | 14.1   | 14.1  | 13.8  | 14.1  | NS415.3 | 13.8  | 14.6            | 12.5 | 15.0:   | a5  |
| 234          | 247.571                | 12.5  | 12.5  | 13.9   | 14.4  | 14.1  | 14.7  | NS415   | 14.0  | 14.7            | 12.5 | NS415.2 | b2  |
| 276          | 252.527                | 12.5  | 12.5  | 13.9:  | 14.8: | 13.8  | ≤14.7 | -       | 13.5  | 14.7            | 12.7 | NS414.5 | b:  |
| 283          | 253.303                | 12.5  | 12.5  | 13.8:  | 14.3  | 13.9  | 14.4  | NS414.5 | 14.4  |                 | 12.7 | NS414.5 | b3  |
| 286          | .401                   | 12.4  | 12.3  | 14.1   | 14.4  | 13.8  | 14.4  | "       | 14.2  |                 | 12.8 | 14.5:   | a6: |
| 289          | .498                   | 12.3  | 12.4  | ≤14.5  | 14.4: | 14.0: | 13.7  |         | 13.3  |                 | 12.7 | NS414.4 | a5: |
| 292          | .597                   | 12.4  | 12.4  | 14.3:  | 14.4: | 13.8  | 14.2: |         | 13.8  |                 | 12.5 | NS414.1 | b:  |
| 297          | 254.304                | 12.4  | 12.6: | 13.4   | 14.2  | 13.8  | 14.3  | NS415   | 13.6  | 14.4:           | 12.5 | NS415.2 | b2  |

and from  
BKV  
99

1.601840

| HV 3960                                   | 3962 | 3961              | 3983        | 3980         | GW          |            |
|---|------|-------------------|-------------|--------------|-------------|------------|
| neg 112 <sup>2086</sup> 14.5: 14.0        |      | m' ff             | ff          | ns<14.7      | 14.0        | 996        |
| neg 127 15.0: 14.0                        |      | M ff              |             | 14.8         | 15.3: ft    | 931        |
| neg 141 15.0: 13.9                        |      | ff "              |             | 13.9         | 15.2 ft     | 907        |
| m? 147 ns<15.5 13.8                       |      | M "               |             | 14.1         | 13.8 Bw     | 895        |
| neg 178 ns<14.5 14.0? <sup>Poor fit</sup> |      | M "               |             | 13.8:        | 13.8:       | -          |
| neg 205 $\leq 15.2$ 13.8                  |      | M "               |             | 15.0         | 13.8        | -          |
| [M 211 $\leq 15.0$ 14.8:                  |      | M "               |             | ns<15.0      | 13.8        | 094        |
| M?? 110 ns<15 13.9                        |      | M "               |             | ns<15.6      | 13.8        | 067        |
| M? 112 $\leq 15.3$ 13.7                   |      | ff "              |             | ns<15.0      | 13.8 br     | 381        |
| - 171 ns<15 13.9                          |      | ff "              |             | ns<16.0      | 13.9 14.2?  | 843        |
| [M 173 <sup>ns?</sup> $\leq 14.6$ 13.9    |      | M ff              | ff          | ns<15        | 15.2:       | 004        |
| - 175 ns<14.0 ns<14.4                     |      | M 14.8:           | ns<15.0     | ns<14.5      | 14.9:       | 278        |
| - 187 ns<14.0 -                           |      | M ff              | ff          | ng           | $\leq 14.9$ | -          |
| [M 189 ns<14.2 13.8                       |      | ns "              | ff          | ns<14.7      | $\leq 15.0$ | 191        |
| - ns<15 13.8                              |      | ns "              | ff          | $\leq 14.9?$ | ns<15.0     | 295        |
| [M ns<15.0 13.6                           |      | m' "              |             | 14.8:        | $\leq 15$   | 528        |
| med?? ns<14.8 13.8                        |      | M: "              | ff          | 15.0:        | ns<15.0     | 637        |
| [M 190 ns<14.2 13.8                       |      | M "               |             | 14.8:        | ns<15       | 789        |
| [M ns<14.9 13.8                           |      | M "               |             | $\leq 14.8:$ | 15.0        | 893        |
| - 192 15.0: 13.8                          |      | M "               |             | 14.8::       | 15.2        | 236<br>172 |
| [M 193 ns<15.0 13.8                       |      | ff "              |             | 14.7:        | 15.1        | 592        |
| - ns<15.2 13.9                            |      | ff "              |             | 14.7:        | 15.0        | 749        |
| [M 193 14.9: 14.0                         |      | M ns<14.6         | ff          | 14.8:        | 15.2        | 912        |
| [M 197 ns<14.2 13.8                       |      | M ns<14.8         | $\leq 14.8$ | 14.8         | 15.1        | 395        |
| [M 202 <sup>new</sup> $\leq 14.5$ 13.6    |      | M ns<14.8         | ff          | 14.7:        | 14.5??      | 310        |
| - 203 ns<14.5 13.8                        |      | M ff              |             | 14.8:        | 14.8        | 553        |
| - " 13.8                                  |      | M "               |             | 14.7:        | 14.5:       | 710        |
| - " 13.7:                                 |      | M "               | ff          | def          | 14.2        | 865        |
| - ns<14.2 13.8                            |      | M ns<14.5 ns<14.8 | 14.7        | 14.3         |             | 023        |
| - 204 ns<15.2 13.8                        |      | M ff              | ff          | 14.6         | 14.5        | 155        |

|                          |              |        | deg d |        | 459   | 182   | 295     | 387     | 322   | 386    | 288   | 416         |     | 387 |
|--------------------------|--------------|--------|-------|--------|-------|-------|---------|---------|-------|--------|-------|-------------|-----|-----|
| MF 18299                 | 27 254.368   | 12.4   | 12.5  | 13.6   | 14.6  | 13.6  | 14.6    | ns<14.5 | 13.8  | 14.7:  | 12.7  | 15.4        | b1  | m?  |
| seg. 8 h?                | 301 .433     | 12.4   | 12.5  | 14.5:  | 14.7: | 13.7: | 14.6:   |         | 13.8  |        | 12.7  | 15.2:       | b2  | -   |
|                          | 303 .499     | 12.4   | 12.5  | overly | 14.3  | 13.8  | ≤14.3   |         | 13.8  |        | 12.7  | NS44.8      | b2  | -   |
|                          | 310 255.532  | 12.5   | 12.6  | 13.8   | 14.5  | 13.8  | 14.6    | ns<15   | 13.6  | 14.7   | 12.5  | NS<15.6     | b3  | E4  |
|                          | 348 270.514  | 12.5   | 12.9  | 13.7   | 14.5: | 14.2  | 14.2    | ≤14.8   | 14.2  | 14.7:  | 12.7  | NS<14.8     | b4  | E4  |
|                          | 355 271.306  | 12.6   | 13.1  | 13.8   | 14.4  | 14.1  | 14.8:   | ≤15.0   | 13.8: |        | 12.8  | NS44.8      | b5  | med |
|                          | 359 .463     | 12.5   | 12.8  | 14.6   | 14.1  | 13.8  | ≤14.8   | -       | 14.2  | 14.7   | 12.8  | NS<14.5     | b3  | -   |
|                          | 362 272.257  | 12.4   | 12.9  | 14.3:  | 14.4  | 14.3  | 14.1    | ns<14.5 | 14.2  | 14.7:  | 13.1  | NS<14.5     | b5  | E4  |
|                          | 364 .323     | 12.5   | 12.9  | -      | 14.2  | 13.9  | 13.9    | -       | 13.4  |        | 13.0  | NS<14.5     | a7  | -   |
|                          | 366 .390     | 12.2   | 13.1  | -      | 14.4  | 14.1  | ≤14.7   | -       | 13.5  |        | 13.1  | NS<14.5     | b:  | -   |
|                          | 368 .456     | 12.4   | 13.0  | -      | 13.9  | 13.9  | NS<14.5 | -       | 13.8  |        | 13.1  | NS<14.5     | b2  | -   |
|                          | 378 277.486  | 12.4   | 12.8  | 14.1   | 14.5  | 14.1  | 14.6:   | ≤15     | 13.3: | 15.0:  | 13.1  | NS<14.8     | b2  | E4  |
|                          | 395 278.543  | 12.7   | 13.1: | -      | 14.3: | 13.8  | 14.5:   | ns<14.5 | 13.8  | 14.6:  | 13.1  | NS<14.5     | b   | E4  |
|                          | 411 284.496  | 12.5   | 13.1  | 14.2   | 14.4  | 14.2  | 14.8:   | ns      | 14.2  | 14.8:  | 12.7  | 15.0:       | b1  | m?  |
|                          | 644 303.359  | 12.5   | 13.0  | 13.8   | 14.4  | 13.6  | 14.4    | ns      | 14.2: | overly | 12.7  | overlap     | a6  | E4  |
|                          | 653 305.217  | 12.5   | 12.8: | 14.4   | 14.6  | 13.4  | 14.7    | ns      | 13.5  | 14.7:  | 12.8  | NS<14.8     | a7  | E4  |
|                          | 666 306.218  | 12.5   | 12.5  | overly | 14.2: | 14.3: | 14.2    | 14.6    | -     | 14.2   | 12.6  | NS<14.4     | b2  | -   |
| 19378                    | 27 600.617   | 12.7   | 12.9  | 13.9:  | 14.6  | 14.1  | 14.4    | ns<15.0 | 14.1  | 14.8:  | 12.5  | blu         | b2  | m?  |
| good plate at back!      | 435 603.585  | 12.5   | 13.1  | 14.1   | 14.2  | 13.8  | 14.9    | ns<16.3 | 13.9  | 14.9   | 12.6  | 14.6        | b2  | m   |
|                          | 448 606.552  | 12.6   | 13.0  | 13.8   | 14.1  | 13.9  | 14.1    | ≤16.2   | 13.7  | 14.8   | 12.6  | 15.8        | b2  | pn  |
|                          | 555 631.549  | 12.7   | 12.9  | 14.1   | 14.2  | 13.8  | 14.2    | "       | 13.7  | 15.1   | 12.5  | 14.6        | a8  | m   |
|                          | 582 634.504  | 12.8   | 12.8  | 13.8   | 14.1  | 14.1  | 13.9    | ≤16.5   | 14.1  | 15.1   | 12.7  | 15.3        | -   | -   |
| 20570                    | 964.5554     | 12.8   | 12.8  | 13.6   | 14.1  | 13.9  | 14.6    | ns<16.5 | 13.8  | 14.9   | 13.0  | 15.5        | b   | m   |
| Poor yellow (?) on plate | 624 979.3856 | 12.7   | 12.9  | 14.7:  | 14.1  | 12.9  | 14.1    | ns<14.8 | 13.8  |        | 12.6  | blu overlap | a5  | m   |
|                          | 639 980.3829 | 12.6   | 12.8  | 14.4   | 14.4  | 12.9  | 13.6    | -       | 13.8  | 14.9   | 12.7  | 15.8        | a51 | m   |
|                          | 654 981.3802 | 12.5   | 12.8  | 14.1   | 13.9  | 13.1  | 14.7    | ns<15.5 | 14.1  | 15.1:  | 11.9: | 15.8:       | a5  | m   |
|                          | 682 984.3720 | 12.5   | 12.8  | 14.1   | 14.2  | 13.1  | 14.4    | ns<15   | 13.3  | 14.6   | 12.3  | NS<15.6     | a5  | m   |
| 30405                    | 30 516.4033  | 12.5   | 13.0  | 14.6   | 14.6  | 13.8  | 14.6    | 15.7    | 13.5: | 14.8   | 12.7  | 16.0        | b2  | med |
| 38578                    | 33 123.2823  | overly | 12.9  | 13.8   | 14.4  | 14.1  | def     | 16.3    | 14.2: | 14.9   | 13.0  | 14.6        | b2  | m   |
| 39617                    | 33 836.3333  | 12.6   | 12.9  | 14.2   | 14.2  | 13.3  | 14.6    | 16.0:   | 13.9  | 15.2   | 11.9: | 15.8        | a3  | m   |

| 387     | HV 3960 |       |           | 3983      | 3986      | 99<br>GW | 1601840 |
|---------|---------|-------|-----------|-----------|-----------|----------|---------|
| m? 201  | ns < 15 | 14.3  | off       | off       | 14.8:     | 14.3     | 258     |
| —       | 14.8:   | 13.7  | M         | "         | 14.5      | 13.8     | 362     |
| —       | ≤ 14.8: | 13.8  | M         | "         | ≤ 14.5    | 13.8     | 468     |
| E4 205  | ≤ 14.9  | 13.9  | M         | ns < 14.5 | ≤ 15.3    | 14.8     | 122     |
| E4 220  | 13.6    | 13.8  | M         | off       | 14.2:     | 14.0     | 111     |
| m? 221  | 15.0:   | 13.8  | M         | "         | 14.5:     | 13.9     | 379     |
| —       | 14.5:   | 13.9  | M         | "         | 14.0      | 13.9     | 630     |
| E4 222  | 14.3:   | 13.8  | off       | "         | 14.0      | 14.0:    | 902     |
| —       | 14.2:   | 14.2  | M         | "         | 14.0      | 13.8     | 007     |
| —       | 14.4:   | 14.3: | M         | "         | 14.2:     | 13.8     | 115     |
| —       | 14.2    | 14.3  | "         | "         | 14.0      | 13.8     | 220     |
| E4 227  | 14.1:   | 13.8  | ns < 14.5 | "         | 13.9      | 13.7     | 274     |
| E4 228  | 14.0:   | 14.3: | —         | "         | 14.0      | 14.2     | 967     |
| m? 234  | 14.0    | 14.0? | off       | "         | 13.7      | 13.9     | 498     |
| E4 253  | 13.0    | 13.9  | "         | "         | 13.7      | 14.2     | 702     |
| E4 255  | 12.8    | 13.8  | "         | ✓         | 14.2      | 13.9     | 677     |
| — 256   | 12.5    | 13.8  | "         | off       | 14.0:     | 13.8     | 279     |
| m? 245  | 12.5    | 13.7  | ns < 14.5 | ns < 15.2 | ns < 14.9 | 14.3     | 666     |
| m 248   | 12.2    | 13.6  | off       | off       | 14.9      | 13.8     | 419     |
| m 251   | 11.6    | 13.8  | off       | off       | 15.0      | 13.9     | 169     |
| m 276   | 11.2    | 14.0  | off       | ✓         | 13.6      | 13.8     | 194     |
| — 279   | 11.7    | 13.8  | ns < 15   | off       | 13.3      | 13.8     | 927     |
| m 304   | 11.0    | 13.9  | off       | "         | 15.5      | 13.7     | 398     |
| m 14    | 11.8    | 14.0  | 13.9      | "         | 15.2      | 13.9     | 145     |
| m 15    | 12.5    | 13.8  | off       | "         | 15.1      | 13.9     | 742     |
| m 16    | 12.4    | 13.8  | "         | "         | 15.1      | 14.2     | 338     |
| m 19    | 13.2    | 14.3  | "         | "         | 15.0      | 14.3     | 129     |
| mod 111 | 10.6    | 13.8  | "         | "         | 15.0      | 14.0     | 376     |
| m 278   | 10.8:   | 14.3: | ✓         | ✓         | 15.2      | 14:      | 469     |
| m 76    | ≤ 16.4  | 13.8  | M         | off       | 14.0      | 14.2     | 427     |

|          |  | 445  | 321  | 459  | 182  | 295               | 357 <sup>3</sup><br>322 | 322  | 386  | 288  | 416  |      |     |    |
|----------|--|------|------|------|------|-------------------|-------------------------|------|------|------|------|------|-----|----|
| MF39 618 | 33836. <sup>3659</sup> <del>3338</del> | 12.7 | 12.8 | 14.4 | 13.8 | 13.5              | 14.6                    | 15.8 | 14.0 | 14.9 | 12.0 | 15.9 | 933 | m  |
| 619      | .3984                                  | 12.7 | 12.9 | 14.0 | 14.1 | 13.8              | 14.7                    | 15.7 | 13.8 | 15.0 | 12.0 | 16.0 | 951 | m  |
| 625      | 858.2301                               | 12.5 | def  | 13.9 | 14.3 | 13.8              | 14.7                    | 15.8 | 14.2 | 14.7 | 12.4 | 14.6 | 93  | m  |
| 626      | .2620                                  | 12.5 | 12.9 | 13.9 | 14.1 | 13.3              | 14.7                    | 15.5 | 14.1 | 14.7 | 12.3 | 14.9 | 93  | m  |
| 627      | .2939                                  | 12.5 | 12.8 | 13.8 | 13.9 | 13.3              | 14.7                    | 15.6 | 14.1 | 14.7 | 12.5 | 15.2 | 95  | m+ |
| 628      | .3257                                  | 12.7 | 12.8 | 13.9 | 13.9 | 13.4              | 14.8                    | 15.6 | 13.8 | 14.7 | 12.7 | 15.6 | 93  | m  |
| 629      | .3603                                  | 12.7 | 12.8 | 14.1 | 13.9 | 13.8 <sup>6</sup> | 14.7                    | 15.7 | 13.8 | 14.7 | 12.7 | 16.1 | 95  | m+ |
| 630      | .3922                                  | 12.6 | 12.8 | 14.1 | 14.4 | 13.6              | 14.7                    | 15.8 | 13.8 | 14.7 | 12.6 | 16.2 | 951 | m  |
| 631      | .4240                                  | 12.5 | 12.8 | 14.1 | 14.4 | 13.7              | 14.7                    | 15.8 | 13.8 | 14.7 | 12.5 | 15.9 | -   | -  |
| 632      | .4559                                  | 12.7 | 12.8 | 14.1 | 14.6 | 13.2              | 14.9                    | 15.7 | 13.8 | 14.7 | 12.7 | 16.0 | 951 | m+ |
| 633      | .4878 <sup>def</sup>                   |      |      | 14.0 | 14.4 | 13.4              | 14.7                    | 15.6 | 13.8 | 14.7 | def  | 16.1 | 951 | m  |
| 634      | .5196                                  | 12.7 | 12.8 | 13.9 | 14.3 | 13.6              | 14.4                    | 15.6 | 13.8 | 14.7 | 12.3 | 16.0 | 93  | m+ |

NA 3639 35686.

last two days runs do not  
show significant variation

| 387              | 3960           | 3962 | 3983       | 3980  | GW   | -1     | 16011540 |
|------------------|----------------|------|------------|-------|------|--------|----------|
| m 76 $\leq 16.5$ | 14.0           | M    | ff         | 14.8  | 14.3 | 572 55 | 248      |
| m                | 16.6           | 13.8 | M          | 14.5  | 14.0 | 633 61 | 299      |
| m + 98           | 16.6           | 13.6 | ff         | 14.5  | 14.0 | 424 40 | 256      |
| m                | ns < 16.5      | 13.8 | ff         | 14.7  |      | 485 49 | 307      |
| m +              | ns < 16.5      | 13.8 |            | 15.0  | 13.8 | 546 53 | 357      |
| mod              | ns < 16.6      | 13.8 |            | 15.0  | 13.8 | 608 59 | 410      |
| m +              | $\leq 16.6$    | 13.7 | all<br>off | 15.0  | 14.2 | 673 66 | 464      |
| m +              | "              | 13.8 |            | 14.9  | 14.2 | 734 71 | 516      |
| -                | 16.31          | 13.8 |            | 14.9  | 14.0 | 795 78 | 567      |
| m +              | 16.5           | 13.8 |            | 14.9  | 14.0 | 856 84 | 618      |
| m                | $\leq 16.5$    | 13.7 |            | 14.9  | 13.9 | 918 90 | 669      |
| m +              | $\leq 16.5$    | 13.8 | ff         | 15.0  | 14.0 | 979 96 | 720      |
|                  | SS<br>A-Plates |      | ns < 14.5  | 14.0: | 14.0 |        |          |

| 14x17A   |       | aged       | 445  | 321  | 459  | 182  | 295  | 387  | 322  | 386  | 288  | 305 days | 302     | spec. sig.           |
|--|-------|------------|------|------|------|------|------|------|------|------|------|----------|---------|----------------------|
| A  | 8876  | 18 112.794 | 12.4 | 12.5 | 13.9 | 14.1 | 13.8 | 13.8 | -    | 14.0 |      | 12.2     |         | -                    |
|  | 9370  | 18 471.819 | 12.5 | 12.5 | 14.2 | 14.1 | 13.9 | 13.4 | 14.5 | 13.8 | 14.6 | 12.4     | 266     | a5                   |
|  | 12996 | 23 948.855 | 12.6 | 12.5 | 14.2 | 14.4 | 13.7 | 14.7 | 16.1 | 13.5 | 14.7 | 12.5     | 253 251 | b8                   |
|  | 13569 | 24 431.527 | 12.5 | 12.5 | 14.4 | 14.3 | 13.3 | 14.4 | 14.7 | 13.7 | 14.6 | 12.5     | 126 128 | a±                   |
|  | 13849 | 688.874    | 12.6 | 12.5 | 14.1 | 14.2 | 13.9 | 14.7 | 15.4 | 14.1 | 14.7 | 12.5     | 78 72   | a8                   |
|  | 14029 | 765.661    | 13.1 | 12.5 | 14.3 | 14.3 | 14.1 | 14.7 | 14.7 | 14.3 | 14.4 | 12.2     | 155 159 | b5                   |
|  | 14727 | 26 120.493 | 13.1 | 12.5 | 13.9 | 14.2 | 13.2 | 14.1 | 16.3 | 14.1 | 14.2 | 12.3     | 290 301 | a8                   |
|  | 15557 | 557.357    | 13.1 | 12.6 | 13.8 | 14.3 | 14.3 | 14.4 | 15.4 | 14.2 | 14.9 | 11.8     | 117 133 | b±                   |
|  | 15563 | 558.375    | 13.1 | 12.5 | 14.1 | 14.4 | 14.2 | 13.7 | 15.4 | 14.4 | 14.7 | 12.0     | 118 124 | b7                   |
|  | 15569 | 559.351    | 13.1 | 12.5 | 14.3 | 14.4 | 14.5 | 14.7 | 15.8 | 14.1 | 14.7 | 11.8     | 119 135 | c2                   |
|  | 15570 | .386       | 13.0 | 12.7 | 14.1 | 14.6 | 14.3 | 14.8 | 15.8 | 14.3 | 15.1 | 11.8     |         | c±                   |
|  | 15574 | 562.353    | 13.1 | 13.1 | 14.3 | 14.4 | 14.4 | 14.4 | 15.6 | 13.8 | 14.7 | 11.8     | 122 138 | b±                   |
| mainly   | 15609 | 564.231    | 12.9 | 12.7 | 14.1 | 14.4 | 14.2 | 14.6 | 15.6 | 14.3 | 14.6 | 11.9     | 124 140 | -                    |
|  | 15611 | .286       | 12.7 | 12.5 | 14.4 | 14.6 | 14.3 | 14.7 | 15.6 | 14.2 | 14.7 | 12.2     |         | c3                   |
|  | 15613 | .347       | 13.0 | 12.5 | 14.3 | 14.4 | 14.3 | 14.6 | 15.7 | 14.3 | 14.7 | 11.8     |         | b2<br>a8             |
|  | 15615 | .404       | 13.2 | 12.5 | 14.4 | 14.4 | 14.4 | 14.6 | 15.4 | 14.2 | 14.7 | 11.8     |         | a3<br>a7<br>b5<br>b3 |
|  | 15617 | .465       | 13.1 | 12.4 | 14.3 | 14.5 | 14.2 | 14.7 | 15.4 | 13.9 | 14.6 | 11.9     |         |                      |
|  | 15625 | 565.288    | 13.1 | 12.7 | 14.3 | 14.4 | 14.1 | 14.1 | 15.4 | 14.3 | 14.7 | 11.8     | 125 141 | a9                   |
|  | 15637 | 566.353    | 13.0 | 12.4 | 14.4 | 14.4 | 14.2 | 14.7 | 15.3 | 14.3 | 14.7 | 11.9     | 126 142 | c5                   |
|  | 15644 | 567.287    | 13.1 | 12.5 | 14.4 | 14.6 | 14.2 | 14.2 | 15.1 | 14.2 | 14.7 | 11.8     | 127 143 | b8                   |
|  | 15657 | 568.356    | 12.5 | 12.5 | 14.1 | 14.4 | 14.1 | 13.5 | 15.6 | 14.2 | 14.7 | 11.8     | 128 144 | a9                   |
|  | 15665 | 569.293    | 13.2 | 12.5 | 14.2 | 14.4 | 14.2 | 14.4 | 15.6 | 14.2 | 14.7 | 11.9     | 129 145 | b3                   |
|  | 15712 | 587.369    | 13.0 | 11.9 | 14.2 | 14.6 | 14.2 | 14.6 | 15.6 | 14.2 | 14.6 | 11.9     | 129 145 | c3                   |
|  | 15718 | 588.360    | 13.1 | 11.9 | 14.2 | 14.4 | 14.3 | 14.2 | 15.8 | 14.3 | 14.6 | 11.8     | 128 144 | c1                   |
|  | 15724 | 590.376    | -    | 11.8 | 14.3 | 14.4 | 14.2 | 14.3 | 15.8 | 14.4 | 14.4 | 12.1     | 150 146 | c5                   |
|  | 15730 | 591.361    | 12.8 | 11.8 | 14.4 | 14.6 | 14.3 | 14.7 | 15.8 | 14.3 | 14.5 | 11.8     | 151 147 | c8                   |
|  | 15736 | 593.365    | 13.1 | 11.8 | 14.4 | 14.4 | 14.3 | 14.2 | 15.6 | 14.4 | 14.4 | 12.0     | 153 149 | b2                   |
|  | 15745 | 594.366    | 13.1 | 11.8 | 14.1 | 14.6 | 14.3 | 14.7 | 15.8 | 14.3 | 14.6 | 11.9     | 154 170 | c3                   |
| Tinsy definite difference on A156574 15718 yet |       |            |      |      |      |      |      |      |      |      |      |          |         |                      |
| mgs poor.                                      |       |            |      |      |      |      |      |      |      |      |      |          |         |                      |

1953phae-proj-2536a

|       |       |        |     |                     |      |                  |
|-------|-------|--------|-----|---------------------|------|------------------|
| 27169 | 19142 | 191423 | 322 | <del>16011840</del> | 286  | 850 <sup>d</sup> |
| 516   | 054   | 117    | 916 | 26                  | 14.6 | 412              |
| 756   | 310   | 14.2   | 781 | -                   |      |                  |
| 415   | 058   | 417    | 523 | 27                  | 14.4 | 298              |
| 321   | 829   | 562    | 370 | 26                  | 15.1 | 781              |
| 977   | 443   | 418    | 430 | 62                  | 14.7 | 188              |
| 957   | 428   | 171    | 380 | 60                  | 14.6 | 265              |
| 826   | 848   | 631    | 715 | 23?                 | 15.3 | 720              |
| 155   | 093   | 889    | 215 | 28                  | 14.5 | 357              |
| 124   | 041   | 838    | 845 | 28                  | 14.5 | 358              |
| 971   | 710   | 706    | 408 | 28                  | 14.5 | 359              |
| 073   | 998   | 775    | 464 | 29                  | 14.5 |                  |
| 727   | 656   | 457    | 215 | 29                  | "    | 362              |
| 205   | 251   | 048    | 222 | 29                  | "    | 364              |
| 366   | 356   | 153    | 310 | 29                  | "    | "                |
| 544   | 473   | 270    | 407 | 29                  | "    | "                |
| 710   | 582   | 379    | 499 | 29                  | "    | "                |
| 888   | 679   | 496    | 596 | 60                  | 14.4 | 364              |
| 289   | 274   | 071    | 714 | 29                  | 14.5 | 365              |
| 395   | 313   | 110    | 619 | 60                  | 14.6 | 366              |
| 119   | 101   | 898    | 115 | 29                  | 14.5 | 367              |
| 238   | 147   | 944    | 827 | 28                  | 14.5 | 368              |
| 971   | 941   | 738    | 327 | 28                  | "    | 369              |
| 697   | 542   | 339    | 270 | 28                  | "    | 387              |
| 587   | 439   | 236    | 857 | 28                  | "    | 388              |
| 468   | 298   | 095    | 085 | 29                  | "    | 390              |
| 341   | 183   | 981    | 662 | 29                  | "    | 391              |
| 186   | 019   | 817    | 871 | 29                  | "    | 393              |
| 106   | 935   | 733    | 473 | 29                  | "    | 394              |

cent  
135

MV Sgr.

Examined on the B and four MF plates at Yale. Jan. 18 '58  
 Map on all plates except:

|          |          |          |
|----------|----------|----------|
| intermed | MF 14206 | JD 26095 |
| "        | MF 14399 | 26131    |
| faint    | MF 15668 | 26516    |

|           |       |       |       |
|-----------|-------|-------|-------|
| B-Plates: | Faint | 70422 | 31592 |
|           |       | 70579 | 613   |
|           |       | 70785 | 638   |

[off 70975]

|          |       |       |
|----------|-------|-------|
| intermed | 71709 | 31969 |
|          | 71849 | 32002 |
|          | 71863 | 003   |
|          | 72070 | 053   |
|          | 72084 | 054   |
|          | 72183 | 063   |

[Too poor for any est. 72495]

Bright on all others] 32276ff

These observations agree with those sent  
 from Harvard by Jean & used at Annapolis  
 meetings Dec. 1957.

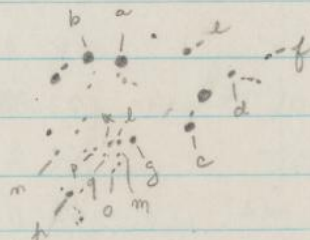
|         |       |     |      |     |                      |                          |
|---------|-------|-----|------|-----|----------------------|--------------------------|
|         |       | 286 | 8507 | 24  | 9D <sup>2</sup> 6100 | 294 <sup>d</sup>         |
| A 17045 | 27650 | c3  | 15.0 | 600 | E1                   | 15.5 <sup>5</sup> 80 222 |
| 1160    | 637   | ng  |      |     |                      |                          |
| 453     | 893   | c5  | 15.1 | 843 | e7                   | 15.2 29 171              |
| 823     | 28005 | b   | 14.6 | 105 | E16.5                | 141 -11                  |
| 898     | 022   | b3  | 14.7 | 122 | "                    | 158 6                    |
| 901     | 022.  | b7  | 14.8 | 123 | "                    | 158 6                    |
| 934     | 037.  | c   | 14.9 | 137 | "                    | 173 21                   |
| 936     | 037.  | b9  | 14.9 | 137 | "                    | 173 21                   |
| 19533   | 28715 | c7  | 15.1 | 815 | d2                   | 14.0 263 111             |
| 20814   | 29380 | c5  | 15.1 | 630 | E16.5                | 46 158                   |
| 21044   | 428   | c5  | 15.1 | 678 | "                    | 94 236                   |
| 083     | 434   | d3  | 15.3 | 684 | "                    | 100 242                  |
| 086     | 434   | c9  | 14.9 | "   | "                    | 100 242                  |
| 092     | 435   | c7  | 14.8 | 685 | "                    | 101 243                  |
| 187     | 464   | d3  | 15.3 | 714 | "                    | 130 272                  |
| 190     | 465   | d3  | 15.3 | 715 | ≤16.5!<br>ms         | 131 273                  |
| 247     | 482   | d8  | 15.4 | 732 | 416                  | 148 290                  |
| 249     | 482   | e   | 15.5 | "   | "                    | 148 290                  |
| 270     | 485   | d8  | 15.4 | 735 | "                    | 151 293                  |
| 271     | 485   | d9  | 15.5 | "   | ms<br>E9             | 151 293                  |
| 22084   | 850   | a3  | 14.1 | 250 | f2                   | 15.7 222 70              |
| 125     | 869   | a3  | 14.1 | 269 | off                  | - -                      |
| 126     | 869   | a0  | 13.9 | "   | d5                   | 14.1 241 89              |
| 143     | 872   | off |      | 272 | e±                   | 14.4 244 92              |
| 154     | 876   | a1  | 14.0 | 276 | d8                   | 14.3 248 96              |
| 8110    | 18600 | off |      |     | off                  |                          |
| 18597   | 28334 | a9  | 14.5 | 434 | off                  |                          |

Seq. II Near Var 358. Transferred from VGC6642  
or M22 (br)

GrS

EG

WD



MF

8766

9550

|   |      |      |   |
|---|------|------|---|
| a | 11.2 | 55   | 7 |
| b | 11.2 | 11.0 | 5 |
| c | 11.8 | 11.8 | 7 |
| d | 12.6 | 12.0 | 3 |
| e | 12.7 | 12.6 | 3 |
| f | 13.2 | 12.9 | 3 |
| g | 13.7 | 13.7 | 3 |
| h | 14.4 | 14.0 | 3 |
| k | 14.4 | 14.3 | 3 |
| l | 14.4 | 14.4 | 3 |
| m | 14.7 | 14.6 | 2 |
| n | 14.9 | 15.3 | 2 |
| o | 15.5 | 15.5 | 3 |
| p | 15.9 | 15.6 | 2 |
| q | 16.4 | 16.3 | 2 |

|   |      |
|---|------|
| a | 11.2 |
| b | 11.6 |
| c | 12.2 |
| d | 12.6 |
| e | 12.9 |
| f | 13.3 |
| g | 13.7 |
| h | 14.1 |
| k | 14.4 |
| l | 14.5 |
| m | 14.8 |
| n | 15.2 |
| o | 15.6 |
| p | 16.0 |
| q | 16.3 |

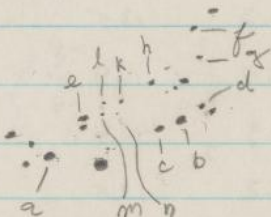
|   | MF   |      |       |       |       |                 | AV   | Δ   | AV | Δ | Adapt |
|---|------|------|-------|-------|-------|-----------------|------|-----|----|---|-------|
|   | 9550 | 8766 | 39628 | 14548 | 39631 | 14555           | AV   | Δ   | AV | Δ | Adapt |
| a | 11.0 | 11.3 | 11.2  | 11.1  | 11.1  | 11.3            | 11.2 | 3   | 5  |   | 11.2  |
| b | 11.3 | 11.7 | 11.5  | 11.7  | 11.5  | 11.5            | 11.5 | 5   | 7  |   | 11.6  |
| c | 11.8 | 11.9 | 11.9  | 12.6  | 12.0  | 11.9            | 12.0 | 6   | 3  |   | 12.2  |
| d | 12.2 | 12.5 | 12.6  | 12.8  | 12.6  | 12.6            | 12.6 | 3   | 3  |   | 12.6  |
| e | 12.6 | 12.8 | 13.0  | 13.2  | 12.8  | 13.1            | 12.9 | 5   | 3  |   | 12.9  |
| f | 13.2 | 13.4 | 13.3  | 13.5  | 13.3  | 13.4            | 13.4 | 4   | 3  |   | 13.3  |
| g | 13.9 | 13.8 | 13.7  | 13.9  | 13.9  | 13.7            | 13.8 | 3   | 4  |   | 13.7  |
| h | 14.2 | 13.9 | 13.9  | 14.4  | 13.9  | 14.0            | 14.1 | 2   | 3  |   | 14.1  |
| k | 14.4 | 14.3 | 14.2  | 14.5  | 14.3  | 14.3            | 14.3 | 2   | 1  |   | 14.4  |
| l | 14.5 | 14.4 | 14.4  | 14.6  | 14.4  | 14.4            | 14.5 | 2   | 3  |   | 14.5  |
| m | 14.8 | 14.6 | 14.6  | 14.9  | 14.7  | 14.5            | 14.7 | 4   | 2+ |   | 14.8  |
| n | 15.2 | 14.9 | 14.9  |       | 15.2  | 15.2            | 15.1 | 3   | 2  |   | 15.2  |
| o | 15.5 | 15.5 | 15.1  |       | 15.4  | -               | 15.4 |     |    |   | 15.6  |
| p | 15.6 | 15.9 | 15.6  |       | 15.5  | -               | 15.6 | 2   | 3  |   | 16.0  |
| q |      | 16.4 |       |       | 16.2  | -               | 16.3 |     |    |   | 16.3  |
|   |      |      |       |       |       | Total           | 5.0  | 4.4 |    |   |       |
|   |      |      |       |       |       | Range           | 5.1  |     |    |   |       |
|   |      |      |       |       |       | all but 1st two |      |     |    |   |       |
|   |      |      |       |       |       |                 | 4.2  | 3.2 |    |   |       |
|   |      |      |       |       |       |                 | 4.3  |     |    |   |       |

Seq III near var. 380

VJD

Transferred from 422 and ~~NGC 6642~~

New Seq h 22 Blk V



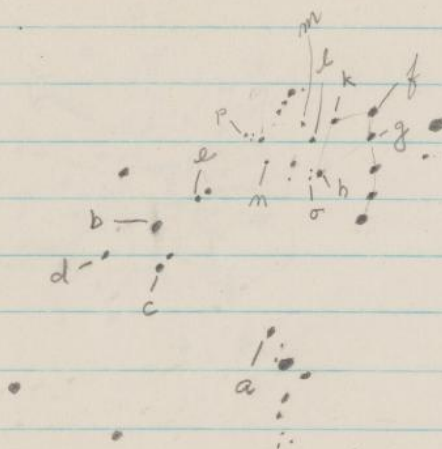
|   | 9550<br>Oct 22  | MF 39619<br>New 22<br>vac | 9550              | 14548             | 8766              | 39628             | Av.                     | Adopt |
|---|---|---------------------------|-------------------|-------------------|-------------------|-------------------|-------------------------|-------|
| a | 11.8 <sup>5</sup>   | 11.8 <sup>3</sup>         | 11.8 <sup>3</sup> | 11.8 <sup>1</sup> | 11.7 <sup>4</sup> | 11.7 <sup>2</sup> | 11.8 <sup>3 3</sup>     | 11.8  |
| b | 12.1 <sup>5</sup>   | 12.2 <sup>4</sup>         | 11.9 <sup>5</sup> | 11.8 <sup>5</sup> | 12.5 <sup>5</sup> | 12.0 <sup>5</sup> | 12.1 <sup>6 5 5</sup>   | 12.1  |
| c | 12.8 <sup>5</sup>   | 12.8 <sup>5</sup>         | 12.6 <sup>5</sup> | 12.8 <sup>5</sup> | 12.8 <sup>5</sup> | 12.5 <sup>4</sup> | 12.7 <sup>5 5 5</sup>   | 12.6  |
| d | 13.3 <sup>4</sup>   | 13.1 <sup>4</sup>         | 12.8 <sup>4</sup> | 13.0 <sup>2</sup> | 13.2 <sup>3</sup> | 12.8 <sup>3</sup> | 13.0 <sup>7 3 5</sup>   | 13.1  |
| e | 13.6 <sup>2</sup>   | 13.8 <sup>4</sup>         | 13.4 <sup>3</sup> | 13.4 <sup>3</sup> | 13.9 <sup>5</sup> | 13.9 <sup>3</sup> | 13.7 <sup>5 3.5 5</sup> | 13.6  |
| f | 14.0 <sup>3</sup>   | 14.2 <sup>2</sup>         | 14.2 <sup>3</sup> | 14.1 <sup>3</sup> | 14.3 <sup>3</sup> | 14.3 <sup>3</sup> | 14.2 <sup>4 3 4</sup>   | 14.1  |
| g | 14.2 <sup>4</sup>   | 14.7 <sup>4</sup>         | 14.6 <sup>4</sup> | 14.5 <sup>3</sup> | 14.7 <sup>4</sup> | 14.7 <sup>3</sup> | 14.6 <sup>2 4-3</sup>   | 14.5  |
| h | 14.4 <sup>4</sup>   | 14.8 <sup>3</sup>         | 14.7 <sup>3</sup> | 14.7 <sup>3</sup> | 14.9 <sup>4</sup> | 14.8 <sup>3</sup> | 14.8 <sup>4 3 4</sup>   | 14.8  |
| k | 14.6 <sup>4 4</sup>   | 15.4 <sup>3</sup>         | 15.2 <sup>3</sup> | 15.0 <sup>3</sup> | 15.2 <sup>2</sup> | 15.1 <sup>3</sup> | 15.2 <sup>4 3 4</sup>   | 15.2  |
| l | (15.0) <sup>2 1</sup>   | 15.8 <sup>2</sup>         | 15.6 <sup>1</sup> | 15.4 <sup>3</sup> | 15.6 <sup>3</sup> | 15.7 <sup>1</sup> | 15.6 <sup>3 2 3</sup>   | 15.6  |
| m | (15.2) <sup>3 2</sup>   | 15.8 <sup>3</sup>         | 15.8 <sup>3</sup> | 15.9 <sup>3</sup> | 15.9 <sup>3</sup> | 16.0 <sup>4</sup> | 15.9 <sup>5 3 5</sup>   | 15.9  |
| n | (15.5) <sup>4 4</sup><br>should<br>be<br>fainter<br>~ 16-16.5 | 16.3 <sup>3</sup>         | 15.6 <sup>3</sup> | 15.5 <sup>3</sup> | 16.3 <sup>3</sup> | 16.5 <sup>4</sup> | 16.4 <sup>3 9</sup>     | 16.4  |

range 3.7 3.9

4.5 3.7

## Seq IV near var. 45

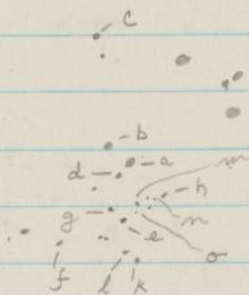
VJD



|   | 19582 | 39632<br><i>scratches</i> | 30405 | 8759 | 9550 | Av<br><i>a</i><br>Adg | Av<br><i>m</i> | Adopt<br>Av. |
|---|-------|---------------------------|-------|------|------|-----------------------|----------------|--------------|
| a | 11.6  | 11.8                      | 11.6  | 11.8 | 11.7 |                       | 11.7           |              |
| b | 12.2  | 12.2                      | 12.1  | 12.1 | 12.1 | 4-                    | 12.1           | 4            |
| c | 12.5  | 12.5                      | 12.4  | 12.4 | 12.3 | 4+                    | 12.4           | 3            |
| d | 12.8  | 12.8                      | 12.7  | 12.7 | 12.6 | 3+                    | 12.7           | 3            |
| e | 13.2  | 13.0                      | 13.1  | 13.0 | 13.0 | 4                     | 12.7           | 4            |
| f | 13.4  | 13.1                      | 13.2  | 13.1 | 13.1 | 3-                    | 13.1           | 1            |
| g | 13.6  | 13.5                      | 13.5  | 13.5 | 13.4 | 4                     | 13.2           | 3            |
| h | 13.9  | 13.9                      | 13.6  | 13.7 | 13.7 | 2                     | 13.5           | 2            |
| i | 14.3  | 14.0                      | 14.0  | 14.0 | 14.1 | 4-                    | 13.7           | 4            |
| j | 14.6  | 14.6                      | 14.5  | 14.4 | 14.6 | 4+                    | 14.1           | 4            |
| k | 15.0  | 14.9                      | 14.9  | 15.0 | 15.0 | 5                     | 14.5           | 5            |
| l | 15.3  | 15.3                      | 15.3  | 15.3 | 15.4 | 5                     | 15.0           | 3            |
| m | 15.7  | 15.7                      | 15.7  | 15.8 | 15.9 | 4+                    | 15.3           | 5            |
| n | 16.1  | 16.2                      | 16.1  | 16.1 | 16.2 | 2                     | 15.8           | 3            |
| o | 16.4  |                           |       |      |      |                       | 16.1           |              |

Sequence V near Var 165

VJD

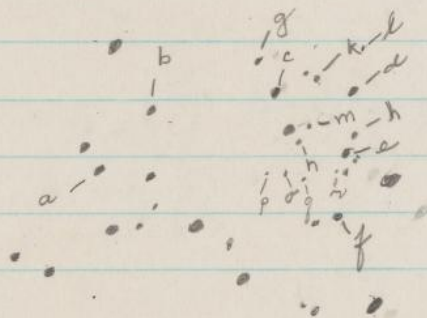


|      | MF 19582 | 8759 | 9550 | 39632 | 30405 | AV<br>s | AV<br>m | $\Delta$ |
|------|----------|------|------|-------|-------|---------|---------|----------|
| a    | 11.7     | 11.7 | 11.7 | 11.6  | 11.6  | 6       | 11.7    | 7        |
| b    | 12.3     | 12.5 | 12.4 | 12.3  | 12.5  | 6       | 12.4    | 4        |
| c    | 12.7     | 12.8 | 12.8 | 12.8  | 12.8  | 5       | 12.8    | 7        |
| d    | 13.4     | 13.7 | 13.4 | 13.3  | 13.5  | 4       | 13.5    | 2        |
| e    | 13.5     | 14.0 | 13.8 | 13.6  | 13.7  | 2       | 13.7    | 5        |
| f    | 14.1     | 14.2 | 14.3 | 14.0  | 14.2  | 5       | 14.2    | 2        |
| g    | 14.3     | 14.4 | 14.6 | 14.2  | 14.4  | 3       | 14.4    | 4        |
| h    | 14.9     | 14.9 | 14.7 | 14.4  | 14.9  | 4       | 14.8    | 3        |
| k    | 15.2     | 15.1 | 15.1 | 15.0  | 15.3  | 4       | 15.1    | 2        |
| l    | 16.4     | 15.3 | 15.3 | 15.3  | 16.4  | 4       | 15.3    | 3        |
| m    | 15.7     | 15.5 | 15.5 | 15.5  | 15.6  | 31      | 15.6    | 2        |
| n    | 16.9     | 15.8 | 16.0 | 15.7  | 15.9  | 3-4     | 15.8    | 4        |
| 16.2 | 16.2     | -    | -    | 16.2  | 16.2  | 24      | 16.2    |          |

✓

Sequence II near Vars 172-173

VJD

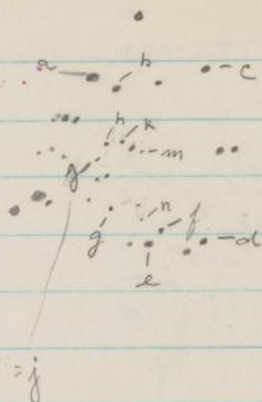


n on 39632

|        | 19582 | 8759 | 9550 | 39632 | 30405 | AV   | $\Delta$ |
|--------|-------|------|------|-------|-------|------|----------|
| a      | 11.5  | 11.4 | 11.8 | 11.5  | 11.4  | 11.5 |          |
| b      | 11.8  | 12.4 | 12.3 | 11.9  | 11.9  | 12.1 | 6        |
| c      | 12.2  | 12.5 | 12.6 | 12.2  | 12.1  | 12.3 | 2        |
| d      | 12.3  | 12.6 | 12.8 | 12.4  | 12.2  | 12.5 | 2        |
| omit e | 12.5  | 13.2 | 13.1 | 12.6  | 12.4  | 12.8 | 3        |
| f      | 12.6  | 13.1 | 13.3 | 12.5  | 12.6  | 12.8 | 6        |
| ✓ g    | 13.3  | 13.5 | 13.6 | 13.3  | 13.3  | 13.4 | 4        |
| h      | 13.8  | 14.0 | 13.8 | 13.8  | 13.6  | 13.8 | 3        |
| k      | 14.2  | 14.3 | 14.2 | 14.0  | 14.0  | 14.1 | 4        |
| l      | 14.6  | 14.8 | 14.4 | 14.4  | 14.5  | 14.5 | 1        |
| m      | 14.9  | 14.7 | 14.5 | 14.4  | 14.5  | 14.6 | 3        |
| n      | 15.3  | 15.0 | 14.9 | 14.7  | 14.7  | 14.9 | 4        |
| omit o | 15.5  | 15.4 | 15.1 | 15.0  | 15.4  | 15.3 | 4        |
| p      | 15.9  | 15.9 | 15.5 | 15.2  | 16.0  | 15.9 | 5        |
| q      | 16.1  | 16.0 | 15.8 | 15.8  | 15.9  | 15.9 | 3        |
| 16.4 r | 16.4  | -    | -    | 16.3  | 16.4  | 16.4 | 5        |

Seq. VII  
near var 17

2P



|        | 19582 | 39632 | 30405 | 9550 | 8759 | Av. m |
|--------|-------|-------|-------|------|------|-------|
| a      | 11.6  | 11.9  | 12.0  | 11.5 | 11.5 | 11.7  |
| b      | 12.5  | 12.4  | 12.5  | 12.5 | 12.5 | 12.5  |
| c      | 12.9  | 12.8  | 12.9  | 12.9 | 12.8 | 12.9  |
| d      | 13.2  | 13.2  | 13.1  | 13.1 | 13.2 | 13.2  |
| e      | 13.5  | 13.5  | 13.5  | 13.5 | 13.5 | 13.5  |
| f      | 13.9  | 14.0  | 14.0  | 13.9 | 13.9 | 13.9  |
| g      | 14.2  | 14.2  | 14.2  | 14.2 | 14.4 | 14.2  |
| h      | 14.7  | 14.6  | 14.9  | 14.6 | 14.7 | 14.7  |
| i      | 14.9  | 14.9  | 14.8  | 14.8 | 14.9 | 14.9  |
| k      | 15.2  | 15.2  | 15.1  | 15.1 | 15.4 | 15.2  |
| m      | 15.5  | 15.4  | 15.4  | 15.5 | 15.6 | 15.5  |
| 16.2 n | 16.0  | -     | 15.8  | -    | 15.9 | 15.9  |

Seq. VII  
412  
near Var. 224.

ERG

WD

|   | 19582 | 8759 | 9550 | 39632 | 30405 | AV                |
|---|-------|------|------|-------|-------|-------------------|
| a | 11.4  | 11.3 | -    | 11.3  | 11.4  | 11.4              |
| b | 11.9  | 11.6 | 11.6 | 11.7  | 11.7  | 11.7 <sup>3</sup> |
| c | 12.1  | 12.1 | 11.8 | 11.9  | 11.8  | 11.9 <sup>2</sup> |
| d | 12.6  | 12.4 | 12.5 | 12.3  | 12.2  | 12.4 <sup>5</sup> |
| e | 12.8  | 12.8 | 12.8 | 12.8  | 12.8  | 12.8 <sup>4</sup> |
| f | 13.0  | 13.1 | 12.9 | 13.0  | 13.2  | 13.0 <sup>2</sup> |
| g | 13.3  | 13.4 | 13.5 | 13.3  | 13.8  | 13.5 <sup>5</sup> |
| h | 14.3  | 14.2 | 14.5 | 13.9  | 14.2  | 14.2 <sup>7</sup> |
| i | 14.9  | 14.7 | 14.6 | 14.8  | 14.4  | 14.7 <sup>5</sup> |
| k | 15.0  | 14.9 | 14.8 | 14.9  | 14.9  | 14.9 <sup>2</sup> |
| m | 16.2  | 15.2 | 15.2 | 15.2  | 15.2  | 15.2 <sup>3</sup> |
| n | 15.7  | 15.7 | 15.6 | 15.6  | 15.6  | 15.6 <sup>4</sup> |
| o | 16.3  | 16.1 | 16.2 | 16.3  | 16.3  | 16.2 <sup>6</sup> |

16.4

44

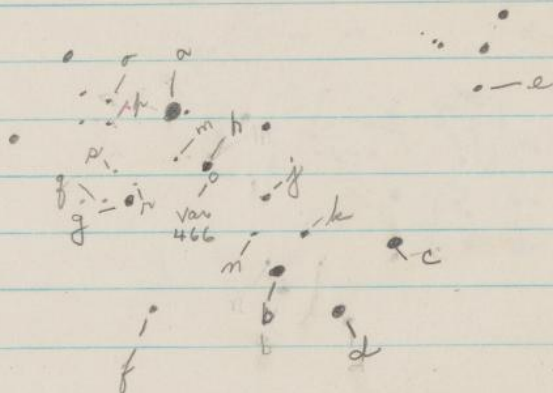
Seq. IX  
near 192

Var 466

Discovered  
while selecting  
sequence

DM. Aug 4 '54

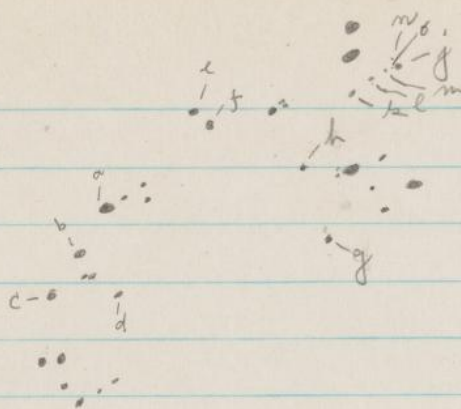
VJH



|        | MF 9550 | 19582 | 39632 | 30405 | 8759 | AV   |    |
|--------|---------|-------|-------|-------|------|------|----|
| a      | 11.4    | 11.5  | 11.3  | 11.4  | 11.3 | 11.4 | 5  |
| b      | 11.9    | 12.0  | 11.9  | 11.8  | 11.9 | 11.9 | 2  |
| c      | 12.1    | 12.1  | 12.0  | 12.0  | 12.1 | 12.1 | 3  |
| d      | 12.4    | 12.4  | 12.3  | 12.3  | 12.4 | 12.4 | 7  |
| e      | 13.3    | 13.0  | 13.0  | 12.8  | 13.1 | 13.1 | 2  |
| f      | 13.4    | 13.2  | 13.3  | 13.2  | 13.5 | 13.3 | 3  |
| omit g | 1       | -1    | -1    | -1    | 2    | 1    | 4  |
| h      | 13.6    | 13.4  | 13.6  | 13.5  | 13.8 | 13.6 | 5  |
| i      | 14.0    | 14.0  | 14.0  | 14.1  | 14.0 | 14.0 | 6  |
| omit j | 3       | 4     | 3     | 4     | 5    | 4    | 7  |
| k      | 14.1    | 14.1  | 14.7  | 14.5  | 14.3 | —    | 8  |
| l      | 3       | 5     | 0     | 3     | 3    | 3    | 9  |
| m      | 14.3    | 14.5  | 14.6  | 14.6  | —    | 14.5 | 10 |
| omit n | 4       | 14.5  | 15.0  | 14.8  | 2    | 14.8 | 11 |
| o      | 14.8    | 15.0  | 14.8  | 15.0  | 14.9 | 14.9 | 12 |
| p      | 15.0    | 15.3  | 15.1  | 15.2  | 15.1 | 15.1 | 13 |
| q      | 15.4    | 15.7  | 15.6  | 15.6  | 15.6 | 15.6 | 14 |
| r      | 15.9    | 16.1  | 16.0  | 16.1  | 16.1 | 16.1 | 15 |
| 16.2 s | 16.2    | —     | 16.4  | —     | —    | 16.3 | 16 |

Seq X  
near Var 113

VJH

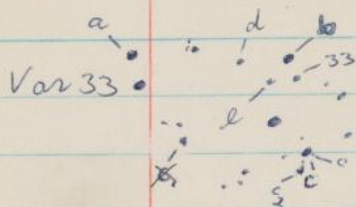


|   | 9550 | 19582 | 39632 | 30405 | 8759 |      |
|---|------|-------|-------|-------|------|------|
| a | 10.9 | 11.0  | 11.0  | 10.8  | 11.0 | 10.9 |
| b | 11.7 | 11.6  | 11.6  | 11.6  | 11.6 | 11.6 |
| c | 12.3 | 12.2  | 12.1  | 12.1  | 12.3 | 12.2 |
| d | 12.8 | 12.6  | 12.7  | 12.7  | 13.0 | 12.7 |
| e | 13.3 | 12.8  | 13.3  | 13.2  | 13.3 | 13.2 |
| f | 13.7 | 13.0  | 13.6  | 13.8  | 13.8 | 13.7 |
| g | 13.9 | 13.7  | 13.9  | 14.0  | 14.0 | 13.9 |
| h | 14.2 | 13.9  | 14.2  | 14.2  | 14.2 | 14.2 |
| i | 14.5 | 14.3  | 14.4  | 14.7  | 14.4 | 14.4 |
| j | 15.0 | 15.1  | 14.9  | 15.0  | 14.6 | 14.9 |
| k | 15.3 | 15.3  | 15.1  | 15.3  | 15.1 | 15.2 |
| l | 15.5 | 16.2  | 15.6  | 15.5  | 15.5 | 15.5 |
| m | 16.3 | 16.2  | 16.1  | 16.0  | 16.9 | 16.1 |
| n | 16.4 | 16.3  | 16.5  | 16.4  | 16.2 | 16.4 |





## Comparison Stars for individual Variables



br 9740, 9747

ft 12244, 12243

Var. judy

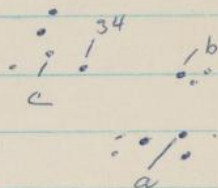
from Seg. IX

|                | MF<br><del>9550</del> 19582 | 30405 | 9550 | 39632 | 8759 | 39619 | AV   |
|----------------|-----------------------------|-------|------|-------|------|-------|------|
| a              | 11.6                        | 11.5  | 11.7 | 11.6  |      | 11.5  | 11.6 |
| b              | 12.0                        | 11.8  | 12.0 | 11.8  |      | 12.0  | 11.9 |
| c              | 12.2                        | 12.0  | 12.3 | 12.0  |      | 12.1  | 12.1 |
| d              | 13.8                        | 13.9  | 13.6 | 13.7  |      | 13.8  | 13.8 |
| e              | 14.2                        | 14.0  | 14.2 | 13.9  |      | 14.0  | 14.1 |
| 33             | 12.4                        | 12.1  | 11.9 | 12.2  |      | 12.4  |      |
| c <sub>1</sub> | 12.9                        | 12.9  | 12.8 | 12.8  |      | 12.9  | 12.9 |
| c <sub>2</sub> | 13.4                        | 13.4  | 13.5 | 13.4  |      | 13.6  | 13.5 |

the plate  
off

Var 34

from IX



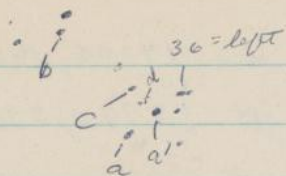
br 9740, 9747

ft. 12244, 12243

Var judy

|    | MF<br>19582 | 30405 | 9550 | 39632 | 8759 | AV   |
|----|-------------|-------|------|-------|------|------|
| a  | 12.0        | 11.7  | 11.8 | 11.6  | 11.6 | 11.7 |
| b  | 12.1        | 12.0  | 12.0 | 11.9  | 11.9 | 12.0 |
| c  | 12.9        | 12.6  | 12.9 | 12.7  | 12.9 | 12.8 |
| 34 | 12.4        | 12.1  | 12.1 | 12.1  | 12.0 | 12.2 |

Var 36  
from Seg. V



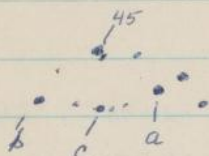
br 9740, 9747

ft 12244, 12243

D.H.

|    | MF | 19582 | 30405 | 9550 | 39632 | 8759 | AV   |
|----|----|-------|-------|------|-------|------|------|
| a' |    | 11.6  | 11.6  | 11.5 | 11.6  | 11.6 | 11.6 |
| a  |    | 12.3  | 12.4  | 12.5 | 12.3  | 12.3 | 12.4 |
| b  |    | 13.3  | 13.2  | 13.3 | 13.2  | 13.5 | 13.3 |
| c  |    | 14.5  | 14.3  | 14.3 | 14.6  | 14.5 | 14.5 |
| d  |    | 15.2  | 15.3  | 15.2 | 15.4  | 15.3 | 15.3 |
| 36 |    | 13.4  | 14.4  | 12.8 | 14.9  | 12.6 |      |

Var 45  
from Seg. IV



br 13482, 13454

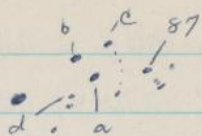
ft. 11677, 11663

Sharon

|    | MF | 19582 | 30405 | 9550 | 39632 | 8759 | AV   |
|----|----|-------|-------|------|-------|------|------|
| a  |    | 12.0  | 12.2  | 11.9 | 12.0  | 12.1 | 12.0 |
| b  |    | 12.6  | 12.5  | 12.3 | 12.6  | 12.6 | 12.5 |
| c  |    | 13.1  | 13.3  | 13.3 | 13.0  | 13.0 | 13.1 |
| 45 |    | 12.6  | 12.3  | 12.2 | 12.4  | 12.3 |      |

50

Var 87  
from Seq. IV



br 14206, 14178

ft 8770, 8759

Sharon

MF

|    | 19582 | 30405 | 9550 | 39632 | 8759 | AV   |
|----|-------|-------|------|-------|------|------|
| a  | 12.6  | 12.6  | 12.6 | 12.5  | 12.5 | 12.6 |
| b  | 13.6  | 13.6  | 13.6 | 13.6  | 13.4 | 13.6 |
| c  | 14.0  | 14.0  | 14.1 | 14.0  | 14.0 | 14.0 |
| d  | 14.4  | 14.4  | 14.3 | 14.5  | 14.2 | 14.4 |
| 87 | 12.4  | 12.9  | 13.4 | 12.6  | 13.5 |      |

Var 232  
from Seq. II



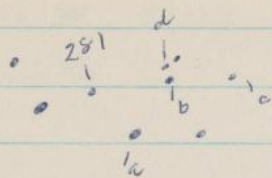
br 12195, 12194

ft 14399, 14255

MF

|     | 19582 | 30405 | 9550 | 39632 | 8759 | AV   |
|-----|-------|-------|------|-------|------|------|
| a   | 12.3  | 12.2  | 12.2 | 12.1  | 12.2 | 12.2 |
| b   | 12.9  | 13.0  | 13.0 | 13.1  | 12.7 | 12.9 |
| c   | 13.6  | 13.6  | 13.5 | 13.7  | 13.4 | 13.6 |
| 232 | 12.2  | 12.4  | 12.4 | 12.2  | 12.4 |      |

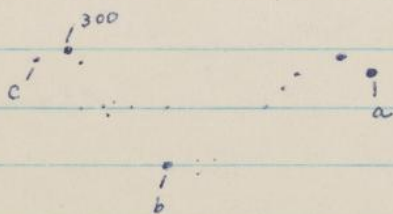
Var 281  
from Seq VII



br 8770, 8769  
ft 12090, 12191  
gudy

|     | MF | 19582 | 30405 | 9550 | 39632 | 8759 | AV   |
|-----|----|-------|-------|------|-------|------|------|
| a   |    | 12.9  | 12.9  | 12.9 | 12.7  | 12.6 | 12.8 |
| b   |    | 13.5  | 13.6  | 13.5 | 13.3  | 13.3 | 13.4 |
| c   |    | 13.7  | 13.9  | 13.9 | 13.7  | 13.7 | 13.8 |
| d   |    | 14.0  | 14.1  | 14.2 | 14.0  | 14.0 | 14.1 |
| 281 |    | 13.4  | 14.0  | 13.8 | 13.5  | 12.7 |      |

Var 300  
from Seq VII

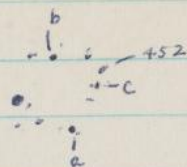


br 13135  
ft 12195  
Litcher

|     |      |      |      |      |      | AV    |
|-----|------|------|------|------|------|-------|
| a   | 1.0  | .8   | 1.0  | 1.0  | 1.2  | 10.3: |
| b   | 11.3 | 11.3 | 11.1 | 11.3 | 11.3 | 11.3  |
| c   | .7   | .5   | .7   | .5   | .6   | 11.9  |
| 300 | 11.0 | 11.6 | 10.9 | 11.9 | 11.6 |       |

Var. 452

from Seg. TV

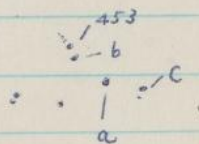


Sharon

|     | MF    |       |      |       |       | AV   |
|-----|-------|-------|------|-------|-------|------|
|     | 19582 | 30405 | 9550 | 39632 | .8759 |      |
| a   | 12.0  | 12.2  | 12.2 | 12.1  | 12.0  | 12.1 |
| b   | 12.8  | 12.8  | 12.5 | 12.8  | 12.6  | 12.7 |
| c   | 13.5  | 13.5  | 13.2 | 13.6  | 13.3  | 13.4 |
| 452 | 12.6  | 12.3  | 12.3 | 12.4  | 12.3  |      |

Var 453

from Seg. TV



Sharon

|     |      |      |      |      |      | AV   |
|-----|------|------|------|------|------|------|
| a   | 12.5 | 12.5 | 12.6 | 12.6 | 12.6 | 12.6 |
| b   | 12.9 | 12.9 | 12.7 | 12.9 | 12.8 | 12.8 |
| c   | 13.7 | 13.7 | 13.8 | 13.9 | 13.7 | 13.8 |
| 453 | 13.5 | 13.0 | 13.6 | 12.9 | 13.3 |      |

From Book XII P. 116

Florence

Var 451

from Sep. II

MF

|     |       |       |      |       |                      |      |
|-----|-------|-------|------|-------|----------------------|------|
|     | 19582 | 30405 | 9550 | 39632 | 8759                 | AV   |
| a   | 14.7  | 14.6  | 14.9 | 14.9  | 14.7                 | 14.8 |
| 451 | 13.9  | 14.0  | 14.2 | 14.2  | overlapping<br>image |      |

Var 461

from Sep. II  
near

AV

|     |      |      |      |      |      |      |
|-----|------|------|------|------|------|------|
| a   | 14.6 | 14.6 | 14.7 | 14.7 | 14.7 | 14.7 |
| 461 | 14.5 | 14.5 | 14.5 | 14.4 | 14.5 |      |

Var 460

from Sep. II  
near

AV

|     |      |      |      |      |      |      |
|-----|------|------|------|------|------|------|
| a   | 13.7 | 13.6 | 13.9 | 13.9 | 13.8 | 13.8 |
| 460 | 13.0 | 12.9 | 13.3 | 13.4 | 12.8 |      |

4

Var. 437

from Seq. IV  
near

|     | MF    |       |      |       |      | AV   |
|-----|-------|-------|------|-------|------|------|
|     | 19582 | 30405 | 9550 | 39632 | 8759 |      |
| a   | 14.8  | 14.8  | 14.5 | 14.8  | 14.6 | 14.7 |
| 437 | 14.9  | 14.7  | 14.4 | 14.5  | 14.5 |      |

Var 408 See p 72

from Seq. II  
near

|     |      |      |      |      |      | AV   |
|-----|------|------|------|------|------|------|
| a   |      |      |      |      |      |      |
| b   | 14.6 | 14.7 | 14.7 | 14.7 | 14.8 | 14.7 |
| 408 | 14.2 | 14.3 | 14.3 | 14.2 | 14.2 |      |

Var 375

from Seq. V

|     |      |      |      |      |      | AV   |
|-----|------|------|------|------|------|------|
| a   | 14.1 | 14.1 | 14.2 | 14.1 | 14.2 | 14.1 |
| b   | 14.9 | 14.9 | 15.0 | 14.9 | 15.0 | 14.9 |
| 375 | 13.5 | 13.8 | 13.8 | 13.8 | 13.6 |      |

Var 324

from Seq. VII  
near

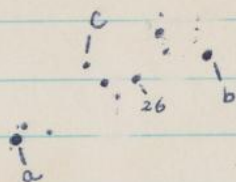
|     | MF    |       |      |       |      |      |
|-----|-------|-------|------|-------|------|------|
|     | 19582 | 30405 | 9550 | 39632 | 8759 | AV   |
| a   | 14.2  | 14.2  | 14.1 | 14.0  | 13.8 | 14.1 |
| b   | 15.0  | 15.2  | 15.1 | 15.0  | 14.9 | 15.0 |
| 324 | 14.0  | 14.0  | 14.0 | 13.8  | 14.0 |      |

Var 294

from Seq. III  
near

|                |      |      |      |      |      | AV   |
|----------------|------|------|------|------|------|------|
| a              | 15.0 | 15.1 | 15.0 | 14.7 | 15.0 | 15.0 |
| b              | 15.5 | 15.4 | 15.7 | 15.5 | 15.7 | 15.6 |
| Doubles<br>294 | 14.9 | 14.6 | 14.9 | 14.4 | 14.8 |      |

Var 26  
from Seq. X



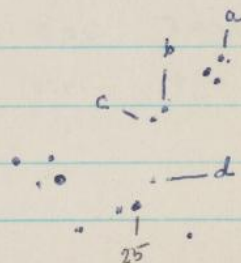
br 9740, 9747

ft 12244, 12243

Judy

|    | MI    |       |      |       |      |      |
|----|-------|-------|------|-------|------|------|
|    | 19582 | 30405 | 9550 | 39632 | 8759 | AV   |
| a  | 11.8  | 11.5  | 11.7 | 11.6  | 11.4 | 11.6 |
| b  | 12.2  | 12.0  | 12.3 | 12.0  | 12.0 | 12.1 |
| c  | 12.7  | 12.6  | 12.7 | 12.6  | 12.5 | 12.6 |
| 26 | 12.2  | 12.4  | 12.3 | 12.3  | 12.2 |      |

Var 25  
from Seq. X



br. 12244, 19582

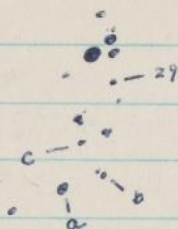
ft 9740

Judy

|    |      |      |      |      |      | AV   |
|----|------|------|------|------|------|------|
| a  | 13.5 | 13.5 | 13.6 | 13.6 | 13.7 | 13.6 |
| b  | 14.0 | 14.1 | 14.3 | 14.2 | 13.9 | 14.1 |
| c  | 14.6 | 14.5 | 14.6 | 14.4 | 14.3 | 14.5 |
| d  | 15.1 | 14.9 | 14.9 | 15.2 | 15.0 | 15.0 |
| 25 | 13.8 | 14.0 | 14.9 | 14.1 | 14.4 |      |

Var 29

from Sep. X

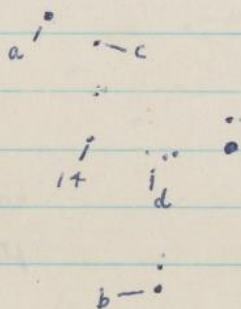


br. 9740

ft. 12244, 9672

MF

|   | 19582 | 30405 | 9550 | 39632 | 8759 | AV   |
|---|-------|-------|------|-------|------|------|
| a | 10.9  | 10.9  | 11.0 | 10.8  | 10.9 | 10.9 |
| b | 11.8  | 11.5  | 11.7 | 11.6  | 11.6 | 11.6 |
| c | 12.0  | 11.7  | 12.0 | 11.9  | 12.0 | 11.9 |
|   | 11.5  | 11.0  | 11.1 | 11.0  | 11.3 |      |

Var 14  
from Sep. IX

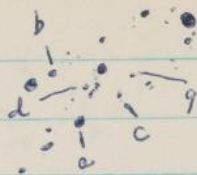
br. 12244, 9747

ft. 9740, 12245

Sandra

|    |      |      |      |      |      |      |
|----|------|------|------|------|------|------|
| a  | 13.0 | 13.2 | 13.0 | 12.9 | 13.1 | 13.0 |
| b  | 13.4 | 13.6 | 13.5 | 13.2 | 13.5 | 13.4 |
| c  | 14.1 | 14.1 | 13.9 | 13.9 | 13.9 | 14.0 |
| d  | 14.6 | 14.5 | 14.6 | 14.6 | 14.7 | 14.6 |
| 14 | 13.5 | 13.4 | 14.0 | 13.3 | 13.6 |      |

Var 9  
from Sep. XIII



br. 12244

ft. 9740

Landon

|   | MF<br>19582 | 30405 | 9550 | 39632 | 8757 | 13754 | 13533 | AV   |
|---|-------------|-------|------|-------|------|-------|-------|------|
| a | 12.5        | plate | 12.7 | plate | 12.6 | 12.6  | 12.4  | 12.6 |
| b | 12.9        |       | 13.3 |       | 13.2 | 13.0  | 12.9  | 13.1 |
| c | 13.9        | the   | 13.9 | the   | 13.8 | 14.0  | 13.7  | 13.9 |
| d | 14.6        | off   | 14.5 | off   | 14.5 | 14.7  | 14.5  | 14.6 |
| 9 | 13.1        |       | 13.2 |       | 13.2 | 13.3  | 13.0  |      |

Var 31  
from Sep. X

31

doubtful var.

br. 12244, 14206?

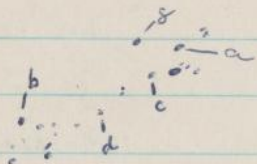
ft. 9740, 39634

AV

a

b

Var 8 bright  
from Seg. VIII



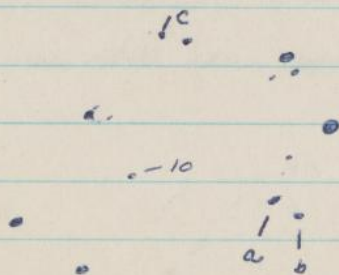
br 12244

ft 9740

Lundgren

|   | MF    |       |      |               |      |       |      |
|---|-------|-------|------|---------------|------|-------|------|
|   | 19582 | 30405 | 9550 | 39632         | 8759 | 13454 | AV   |
| a | 11.6  | 11.5  | 11.6 |               | 11.7 | 11.8  | 11.6 |
| b | 12.2  | 12.2  | 12.3 | off the plate | 12.2 | 12.3  | 12.2 |
| c | 12.8  | 12.7  | 12.9 |               | 12.8 | 13.0  | 12.8 |
| d | 13.7  | 13.6  | 13.7 |               | 13.7 | 13.8  | 13.7 |
| g | 12.1  | 12.1  | 13.0 |               | 12.0 | 12.9  |      |

Var 10 bright  
from Seg. VIII



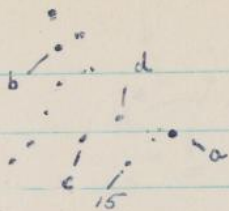
br 9740

ft 12244

Lundgren

|    |      |      |      |      |      | AV   |
|----|------|------|------|------|------|------|
| a  | 11.8 | 11.8 | 11.6 | 11.6 | 11.7 | 11.7 |
| b  | 12.5 | 12.3 | 12.3 | 12.0 | 12.5 | 12.3 |
| c  | 13.0 | 12.9 | 13.1 | 13.0 | 13.2 | 13.0 |
| 10 | 12.9 | 12.7 | 13.0 | 12.9 | 12.9 |      |

Var 15  
from Seq. VII



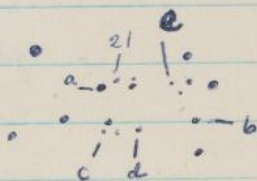
br 12244

ft 9740

Knotchen

|    | MF    |       |      |       |      | AV   |
|----|-------|-------|------|-------|------|------|
|    | 19582 | 30405 | 9550 | 39632 | 8759 |      |
| a  | 12.3  | 12.2  | 12.3 | 12.2  | 12.2 | 12.2 |
| b  | 12.7  | 12.5  | 12.5 | 12.4  | 12.4 | 12.5 |
| c  | 13.1  | 13.0  | 12.9 | 13.0  | 13.2 | 13.0 |
| d  | 13.6  | 13.7  | 13.7 | 13.5  | 13.6 | 13.6 |
| 15 | 13.5  | 13.7  | 13.7 | 13.3  | 13.4 |      |

Var 21  
from Seq. II



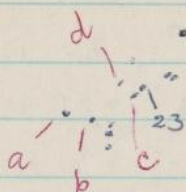
br 12244

ft 9740

Knotchen

|    |      |      |      |      |      | AV   |
|----|------|------|------|------|------|------|
| a  | 12.9 | 12.8 | 13.0 | 13.1 | 13.0 | 13.0 |
| b  | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 | 13.4 |
| c  | 14.2 | 14.0 | 14.1 | 14.2 | 14.1 | 14.1 |
| d  | 14.6 | 14.6 | 14.5 | 14.7 | 14.7 | 14.6 |
| e  | 15.1 | 15.0 | 15.1 | 15.1 | 15.1 | 15.1 |
| 21 | 15.0 | 14.8 | 14.0 | 14.3 | 14.3 |      |

Var 23  
from Seq. X

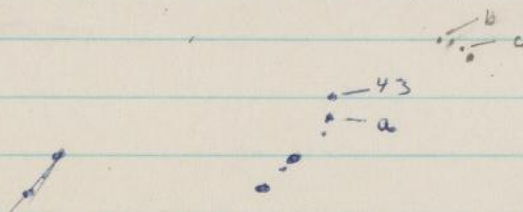


br 12244  
ft 9740

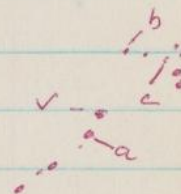
|    | MF    |       |      |       |      | AV   | <u>3H intervals</u> |    |      |
|----|-------|-------|------|-------|------|------|---------------------|----|------|
|    | 19582 | 30405 | 9550 | 39632 | 8759 |      |                     |    |      |
| a  | 13.8  | 13.7  | 13.7 | 13.8  | 13.7 | 13.7 |                     | AV | 13.7 |
| b  | 14.2  | 14.1  | 14.0 | 14.1  | 14.1 | 14.1 | 4 4 5 5 5           | 5  | 14.2 |
| c  | 14.5  | 14.4  | 14.3 | 14.3  | 14.5 | 14.4 | 3 4 5 5 5           | 5  | 14.7 |
| d  | 15.2  | 15.1  | 14.9 | 14.8  | 15.1 | 15.0 | 6 4 3 3 3           | 3  | 15.0 |
| 23 | 14.6  | 14.6  | 14.3 | 14.2  | 14.3 |      |                     |    |      |

Choko forgot to indicate which stars she measured  
DH picked some that seem appropriate

Var 43  
from Seq. VII



br 13482  
ft 11677  
sharon



|   | AV   |      |      |      |      |
|---|------|------|------|------|------|
| a | 13.6 | 13.5 | 13.6 | 13.5 | 13.6 |
| b | 13.9 | 13.9 | 13.8 | 13.8 | 13.8 |
| c | 14.2 | 14.3 | 14.2 | 14.2 | 14.2 |
|   | 14.0 | 14.1 | 14.3 | 13.9 | 14.0 |

red

Near Sq. TV

44

br 13482

ft 11677

hatcher

47

Draw better new  
diagram

47

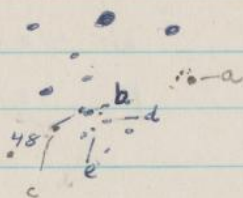
Near Sig. TV

br 13482

pt 11677

Gretchen

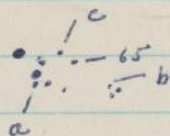
48  
from seg. IV



br 11677  
ft 13482  
Sharon

|    | MF    |       |      |       |      | AV   |
|----|-------|-------|------|-------|------|------|
|    | 19582 | 30405 | 9550 | 39632 | 8759 |      |
| a  | 13.3  | 13.3  | 13.3 | 13.6  | 13.4 | 13.4 |
| b  | 13.8  | 13.7  | 13.8 | 13.9  | 14.0 | 13.8 |
| c  | 14.3  | 14.2  | 14.2 | 14.3  | 14.3 | 14.3 |
| d  | 14.8  | 14.6  | 14.6 | 14.9  | 14.8 | 14.7 |
| e  | 15.5  | 15.5  | 15.5 | 15.4  | 15.6 | 15.5 |
| 48 | 15.1  | 13.6  | 13.9 | 13.9  | 13.9 |      |

Var 65



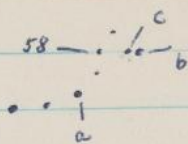
br 13121  
ft 12195  
Sharon

|    |      |      |      |      |      | AV   |
|----|------|------|------|------|------|------|
| a  | 14.0 | 13.8 | 14.0 | 14.0 | 13.8 | 13.9 |
| b  | 14.7 | 14.5 | 14.4 | 14.4 | 14.4 | 14.5 |
| c  | 15.2 | 15.3 | 15.2 | 15.1 | 15.2 | 15.2 |
| 65 | 14.9 | 14.0 | 15.3 | 15.3 | 15.2 |      |

64

Var 58

From Seq. VIII



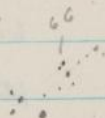
br 12195

ft 13121

|    | MF    |       |      |       |      |      |
|----|-------|-------|------|-------|------|------|
|    | 19582 | 30405 | 9550 | 39632 | 8759 | AV   |
| a  | 14.0  | 14.0  | 14.1 | 14.0  | 14.2 | 14.1 |
| b  | 14.6  | 14.8  | 14.8 | 14.6  | 14.8 | 14.7 |
| c  | 15.1  | 15.0  | 15.1 | 15.1  | 15.1 | 15.1 |
| 58 | 14.4  | 14.1  | 14.9 | 14.6  | 14.6 |      |

66

New Seq. IV



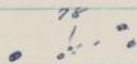
br 12195, 11677

ft 13121, 14206  
39682

bretcher

78

Near Seq. X



br 12195, 12244

ft 1321, 9672

judgy

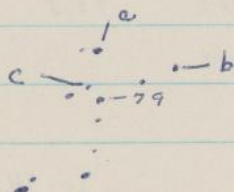
MF

19582 30405 9550 39632 8759 AV

79

var?

From Seq. VIII



br 13121

ft 12195

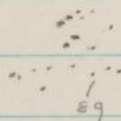
Sharon

AV

|    |      |      |      |      |      |      |
|----|------|------|------|------|------|------|
| a  | 13.2 | 13.1 | 13.4 | 13.3 | 13.4 | 13.3 |
| b  | 13.6 | 13.7 | 13.8 | 13.7 | 13.8 | 13.7 |
| c  | 14.0 | 14.0 | 14.1 | 14.0 | 14.1 | 14.0 |
| 79 | 13.7 | 13.5 | 13.7 | 13.5 | 13.7 |      |

89

Near Seq. III



br 8770, 15668

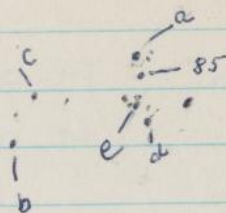
ft 14206, 39631

Sharon

66

85  
bright

From Seq. VI

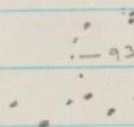


br 14206

ft 8770

|    | MF    |       |      |       |      | AV   |
|----|-------|-------|------|-------|------|------|
|    | 19582 | 30405 | 9550 | 39632 | 8759 |      |
| a  | 11.0  | 11.4  | 11.5 | 11.2  | 11.3 | 11.3 |
| b  | 11.5  | 11.9  | 11.9 | 11.8  | 11.8 | 11.8 |
| c  | 12.3  | 12.2  | 12.2 | 12.2  | 12.1 | 12.2 |
| d  | 12.7  | 12.6  | 12.7 | 12.9  | 12.6 | 12.7 |
| e  | 13.2  | 13.4  | 13.3 | 13.5  | 13.0 | 13.3 |
| 85 | 10.8  | 12.1  | 11.0 | 12.0  | 11.4 |      |

93



br 14206

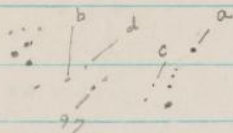
ft 8770

New Seq. III

Sharon

97

From Seg. II



br 14206

gt 8770

Sketches

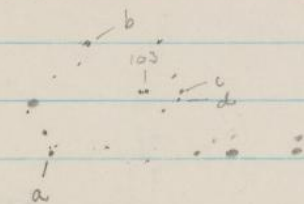
MF

|    | 19582 | 30405 | 9550 | 39632 | 8759 | AV.  |
|----|-------|-------|------|-------|------|------|
| a  | 14.0  | 14.1  | 14.2 | 14.0  | 14.0 | 14.1 |
| b  | 14.6  | 14.6  | 14.6 | 14.7  | 14.6 | 14.6 |
| c  | 15.2  | 15.3  | 15.2 | 15.5  | 15.2 | 15.3 |
| d  | 15.4  | 15.5  | 15.4 | 15.5  | 15.6 | 15.5 |
| 97 | 15.3  | 15.4  | 15.1 | 15.3  | 15.4 |      |

- 103

faint

From Seg. VII



br 14206

gt 8770

Sketches

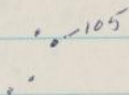
1V

|     | 13.6 | 13.7 | 13.7 | 13.6 | 13.7 | 13.7 |
|-----|------|------|------|------|------|------|
| a   |      |      |      |      |      |      |
| b   | 14.3 | 14.7 | 14.1 | 14.1 | 14.3 | 14.2 |
| c   | 14.7 | 14.7 | 14.7 | 14.6 | 14.7 | 14.7 |
| d   | 15.2 | 15.3 | 15.1 | 15.0 | 15.1 | 15.1 |
| 103 | 13.8 | 15.1 | 15.0 | 15.0 | 14.9 |      |

105

bright

Near Seq. VIII



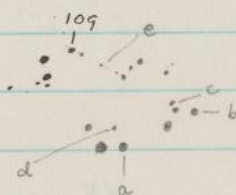
br 8770

ft 14206

Lactarium

109

From Seq. IX

br 8770, ~~14206~~

ft 14206

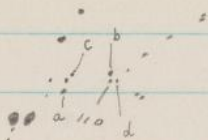
Sandy

|     | MF    |       |      |       |      |      |
|-----|-------|-------|------|-------|------|------|
|     | 19582 | 30405 | 9550 | 39632 | 8759 | AV   |
| a   | 12.7  | 12.5  | 12.7 | 12.6  | 12.6 | 12.6 |
| b   | 13.3  | 13.2  | 13.2 | 13.2  | 13.3 | 13.2 |
| c   | 13.8  | 14.0  | 13.8 | 13.7  | 13.8 | 13.8 |
| d   | 14.1  | 14.3  | 14.2 | 14.1  | 14.3 | 14.2 |
| e   | 14.6  | 14.6  | 14.6 | 14.6  | 14.7 | 14.6 |
| 109 | 13.7  | 14.2  | 14.0 | 13.9  | 13.1 |      |

Var = 14.0 on A2752, Sept 21, 1897

110

From Seq. X

br ~~89~~ 14206

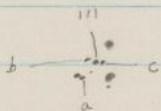
ft 8770

judgy

|     | MF    |       |      |       |      |      |
|-----|-------|-------|------|-------|------|------|
|     | 19582 | 30405 | 9550 | 39632 | 8759 | AV   |
| a   | 13.8  | 13.7  | 13.8 | 13.8  | 13.8 | 13.8 |
| b   | 14.3  | 14.3  | 14.3 | 14.3  | 14.4 | 14.3 |
| c   | 14.8  | 14.8  | 14.9 | 14.8  | 14.9 | 14.8 |
| d   | 15.3  | 15.2  | 15.3 | 15.2  | 15.3 | 15.3 |
| 110 | 14.2  | 14.2  | 13.9 | 14.3  | 14.5 |      |

111

From Seq. X



br 14206

ft 8770

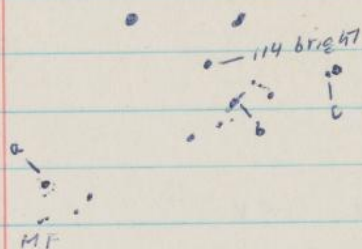
judgy

|     |      |      |      |      |       | AV   |
|-----|------|------|------|------|-------|------|
| a   | 14.3 | 14.3 | 14.3 | 14.3 | 14.4  | 14.3 |
| b   | 15.0 | 15.0 | 14.9 | 14.6 | 15.0  | 14.9 |
| c   | 15.5 | 15.6 | 15.5 | 15.2 | 15.2  | 15.4 |
| 111 | 14.8 | 14.8 | 14.3 | 14.4 | 14.8? |      |

70

114

From Seq. I

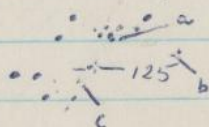


br 13482

ft 13289

|     | MF | 19582 | 30405 | 9550 | 39632 | 8959 | AV   |
|-----|----|-------|-------|------|-------|------|------|
| a   |    | 11.9  | 12.0  | 11.9 | 11.9  | 11.8 | 11.9 |
| b   |    | 12.3  | 12.3  | 12.3 | 12.4  | 12.4 | 12.3 |
| c   |    | 12.7  | 12.8  | 12.7 | 12.8  | 12.7 | 12.7 |
| 114 |    | 12.1  | 12.3  | 12.2 | 12.7  | 12.5 |      |

125

difficult; give  
special seq.

br 13289

ft 13482

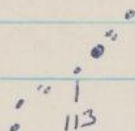
mitchem

From Seq. ~~VI~~ VII

|     |      |      |      |      |             | AV   |
|-----|------|------|------|------|-------------|------|
| a   | 14.1 | 14.1 | 14.1 | 14.0 | 14.1        | 14.1 |
| b   | 14.7 | 14.4 | 14.5 | 14.3 | 14.4        | 14.5 |
| c   | 15.0 | 15.1 | 14.8 | 15.0 | 15.0        | 15.0 |
| 125 | 14.6 | 14.8 | 14.6 | 14.7 | <u>14.6</u> |      |

113

Near Seq. X



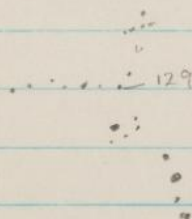
br 13289

fr 13482

juday

129

Near Seq. II



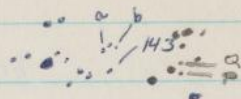
br 13482

fr 13289

Mitchem

143

faint



br. 13289

ft 13482

From Seg.

|     | MF    |       |      |       |      | AV   |
|-----|-------|-------|------|-------|------|------|
|     | 19582 | 30405 | 9550 | 39632 | 8759 |      |
| a   | 15.5  | 15.5  | 15.5 | 15.4  | 15.3 | 15.4 |
| b   | 16.1  | 16.0  | 15.8 | 15.9  | 15.9 | 15.9 |
| 1+3 | 15.5  | 15.6  | 15.4 | 15.5  | 15.4 |      |
| P   | 14.8  | 15.0  | 15.1 | 15.2  | 15.4 | 15.0 |
| Q   | 15.5  | 15.6  | 15.4 | 15.5  | 15.6 | omit |

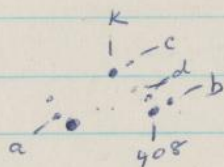
These are  
like mine only  
need map

seg II

Large  
dist. corr.

153

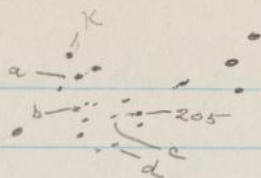
bright

from  
Seg II

|   | 408  | 12194 | 39633 | 19555 | 8766 | 13529 | 14253 | 11900 | AV   | avg. |
|---|------|-------|-------|-------|------|-------|-------|-------|------|------|
| K | 14.2 | 14.4  | 14.0  | 14.2  | 14.2 | 14.1  | 14.2  | 14.1  | 14.1 | 14.1 |
| A | 14.3 | 14.4  | 14.2  | 14.3  | 14.3 | 14.2  | 14.6  | 14.3  | 14.3 | 14.4 |
| B | 14.7 | 14.7  | 14.7  | 14.6  | 14.6 | 14.7  | 14.7  | 14.7  | 14.7 | 14.8 |
| C | 14.8 | 14.7  | 14.7  | 14.7  | 14.8 | 14.7  | 14.7  | 14.7  | 14.7 | 15.1 |
| D | 15.6 | 15.0  | 15.2  | 15.4  | 15.5 | 15.8  | 15.1  | 15.4  | 15.4 | 15.4 |

Pow Plate  
frames13 13  
rips

205

total  
upper seg. III

br

ft

marked MF 12195 top of plate

a

b

c

d

409

from

seg

|   | 8766              | 12194 | 11900 | 13529             | 14253             | 17555             | 39633             | Photo             |
|---|-------------------|-------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
|   |                   | Poor  | Poor  |                   |                   | g = 4             |                   | g = 4             |
| a | 14.0              | 13.5  | 13.9  | 14.0              | 14.0              | 14.0              | 14.0              | 14.0              |
| b | 14.8 <sup>5</sup> | 14.0  | 14.7  | 14.3 <sup>5</sup> | 14.7 <sup>5</sup> | 14.3 <sup>6</sup> | 14.2 <sup>5</sup> | 14.5 <sup>5</sup> |
| c | 15.8 <sup>4</sup> |       |       | 15.8 <sup>5</sup> | 16.0 <sup>5</sup> | 14.8 <sup>5</sup> | 15.8 <sup>6</sup> | 15.7 <sup>5</sup> |
| d | 15.9 <sup>6</sup> |       |       |                   |                   | lim               | 16.0 <sup>4</sup> | 16.3 <sup>5</sup> |
|   | 1.9 1.5           |       |       |                   |                   |                   |                   |                   |

3 (2.3  
8 steps  
interval)not over  
mark of point

Repeat

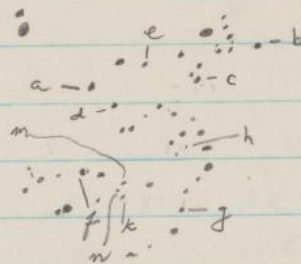
|  | 8766 | 12194 | 11900 | 13529 | 14253 | 17555 | 39633 | Photo |
|--|------|-------|-------|-------|-------|-------|-------|-------|
|  |      | Poor  | Poor  |       |       | g = 4 |       | g = 4 |

|     |     |      |      |      |      |      |      |       |
|-----|-----|------|------|------|------|------|------|-------|
| 4.1 | 409 | g d  |      | 2.8  |      |      |      |       |
| 4.5 | a   | 14.3 | 19.2 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0+ |
| 4.8 | b   | 14.6 | 14.7 | 15.2 | 14.3 | 14.7 | 14.6 | 14.7  |
| 5.1 | c   | 15.2 | 15.2 | 16.7 | 15.2 | 15.2 | 15.8 | 15.3  |
| 5.4 | d   | 16.5 | -    |      | 15.6 | 16.1 | 16.1 | 16.1  |

74 1964

## Comparison Stars for Var 410413.

|    | MP<br>39634 | 39634 | 8519 |
|----|-------------|-------|------|
| a  | 12.0        | 12.5  | 10   |
| b  | 13.1        | 13.1  | 4    |
| c  | 13.1        | 13.5  | 2    |
| d  | 13.2        | 13.8  | 10   |
| e  | 13.9        | 13.9  | 3    |
| e' | 14.2        | 14.2  | 5    |
| f  | 14.6        |       | 5    |
| g  | 15.0        |       | 5    |
| h  | 15.6        |       | 5    |
| k  | 15.8        |       | 3    |
| m  | 16.2        |       |      |

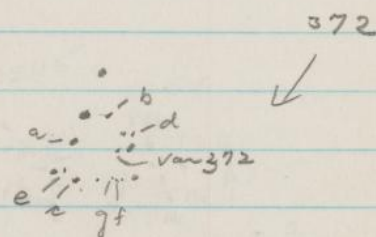
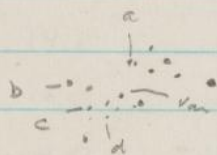


| Different Selection | 39634 | 20570 | 8519 | 19448 | 18831 | Adopt<br>Av |
|---------------------|-------|-------|------|-------|-------|-------------|
| a                   | 12.5  | 12.7  | 12.3 | 12.4  | 12.4  | 12.5        |
| b                   | 13.0  | 12.8  | 12.7 | 12.7  | 12.8  | 12.8        |
| c                   | 13.2  | 13.1  | 13.4 | 13.1  | 13.4  | 13.3        |
| d                   | 13.6  | 13.5  | 13.8 | 13.5  | 13.5  | 13.6        |
| e                   | 14.0  | 13.9  | 14.0 | 14.0  | 13.8  | 13.9        |
| f                   | 14.3  | 14.0  | 14.3 | 14.5  | 14.0  | 14.2        |
| g                   | 14.8  | 14.6  | 14.5 | 14.6  | 14.5  | 14.6        |
| h                   | 15.3  | 15.0  | 14.7 | 15.8  | 16.0  | 15.2        |
| k                   | 15.4  | 15.5  | 15.2 | 15.8  |       | 15.5        |
| omit m              | 15.8  | 16.0  |      | Poor  |       | 15.8        |
| n                   | 16.2  |       |      | 16.0  |       | 16.1        |

Comparison Stars for Var 372

located in Seg III

|   | 20570             | 39633             | 19448             | 14253             | 8519              | AV                | Adpt              |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| a | 12.8 <sup>5</sup> | 12.5 <sup>0</sup> | 12.3 <sup>5</sup> | 12.8 <sup>4</sup> | 12.7 <sup>5</sup> | 12.6 <sup>5</sup> | 12.6 <sup>5</sup> |
| b | 12.9 <sup>4</sup> | 12.8 <sup>5</sup> | 13.2 <sup>3</sup> | 13.4 <sup>4</sup> | 12.5 <sup>5</sup> | 13.2 <sup>4</sup> | 13.1 <sup>5</sup> |
| c | 13.5 <sup>4</sup> | 13.1 <sup>5</sup> | 13.5 <sup>3</sup> | 13.7 <sup>4</sup> | 13.7 <sup>5</sup> | 13.5 <sup>3</sup> | 13.5 <sup>4</sup> |
| d | 14.2 <sup>4</sup> | 14.3 <sup>8</sup> | 14.5 <sup>7</sup> | 14.6 <sup>5</sup> | 14.4 <sup>0</sup> | 14.4 <sup>9</sup> | 14.4 <sup>9</sup> |
| e | 14.6 <sup>4</sup> | 14.8 <sup>5</sup> | 15.3 <sup>5</sup> | -                 | 15.0 <sup>5</sup> | 14.9 <sup>5</sup> | 14.9 <sup>5</sup> |
| f | 15.2 <sup>5</sup> | 15.4 <sup>4</sup> | 15.6 <sup>2</sup> | -                 | 15.0 <sup>3</sup> | 15.4 <sup>5</sup> | 15.4 <sup>5</sup> |
| g | 15.6 <sup>3</sup> | 16.3 <sup>3</sup> | 16.2 <sup>3</sup> | -                 | -                 | 16.1 <sup>3</sup> | 15.9 <sup>5</sup> |

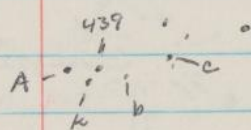


Var 273

|   | 19448             | 39633             | 39625             | 8519              | 20570             | AV                | Adpt              |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| a | 15.0 <sup>3</sup> | 14.7 <sup>5</sup> | 15.0 <sup>4</sup> | 14.9 <sup>2</sup> | 14.9 <sup>4</sup> | 14.9 <sup>3</sup> | 14.8 <sup>5</sup> |
| b | 15.5 <sup>4</sup> | 15.0 <sup>2</sup> | 15.1 <sup>3</sup> | 15.1 <sup>4</sup> | 15.2 <sup>4</sup> | 15.2 <sup>3</sup> | 15.2 <sup>5</sup> |
| c | 15.6 <sup>5</sup> | 15.5 <sup>2</sup> | 15.4 <sup>3</sup> | 15.4 <sup>4</sup> | 15.4 <sup>4</sup> | 15.5 <sup>3</sup> | 15.5 <sup>5</sup> |
| d | 15.7 <sup>5</sup> | 15.7 <sup>4</sup> | 15.8 <sup>5</sup> | 15.8 <sup>3</sup> | 15.8 <sup>4</sup> | 15.8 <sup>3</sup> | 15.9 <sup>5</sup> |

Var 204 See Bk IV for diagram. Compared with Seq VII

|   | 11871             | 30405             | 39632             | 9550 | 14399             | AV                | Adapt             |
|---|-------------------|-------------------|-------------------|------|-------------------|-------------------|-------------------|
| a | 13.3              | 13.5              | 13.4              | 13.4 | 13.3              | 13.4              | 13.4              |
| b | 13.6 <sup>4</sup> | 13.8 <sup>4</sup> | 13.7 <sup>5</sup> | 13.8 | 13.7 <sup>5</sup> | 13.7 <sup>3</sup> | 13.8 <sup>4</sup> |
| c | 14.0 <sup>4</sup> | 14.1 <sup>4</sup> | 14.1 <sup>4</sup> | 14.2 | 14.1 <sup>4</sup> | 14.1 <sup>4</sup> | 14.1 <sup>3</sup> |
| d | 14.5 <sup>4</sup> | 14.5 <sup>4</sup> | 14.4 <sup>4</sup> | 14.5 | 14.3 <sup>4</sup> | 14.4 <sup>3</sup> | 14.4 <sup>3</sup> |



from Seq III

Var 439

|   | 20570             | 13533             | 19448             | 19435              | 30405             | AV   |
|---|-------------------|-------------------|-------------------|--------------------|-------------------|------|
| k | 14.0              | 14.2              | 14.3              | 14.2               | 14.3              | 14.2 |
| a | 14.7 <sup>4</sup> | 14.6 <sup>3</sup> | 14.7 <sup>4</sup> | 14.7 <sup>4</sup>  | 14.7 <sup>5</sup> | 14.7 |
| b | 14.9 <sup>3</sup> | 14.9 <sup>2</sup> | 14.9 <sup>3</sup> | 14.8 <sup>-1</sup> | 15.0 <sup>2</sup> | 14.9 |
| c | 15.0 <sup>5</sup> | 15.2 <sup>4</sup> | 15.4 <sup>4</sup> | 15.3               | 15.3 <sup>4</sup> | 15.3 |

Var 274

a

b

c

d

## Var 446

|                                  | B                 |                   |                     |                   |                   | Adopt             | Rel. NGC |
|----------------------------------|-------------------|-------------------|---------------------|-------------------|-------------------|-------------------|----------|
|                                  | 60699             | 61174             | 69456               | 72183             | 73622             | an                |          |
| a                                | 14.2 <sup>5</sup> | 14.4 <sup>3</sup> | 14.2 <sup>4</sup>   | 14.1 <sup>7</sup> | 13.9 <sup>5</sup> | 14.1 <sup>5</sup> |          |
| b                                | 14.4 <sup>3</sup> | 5                 | (14.8) <sup>3</sup> | 14.4 <sup>7</sup> | 14.4 <sup>3</sup> | 14.4 <sup>3</sup> |          |
| c                                | 4                 | 5                 | 4                   | 3                 | 14.7 <sup>4</sup> | 14.7 <sup>3</sup> |          |
| d                                | 15.0              | 15.6 <sup>1</sup> | 14.9 <sup>4</sup>   | 14.9 <sup>3</sup> | 14.9 <sup>4</sup> | 15.0 <sup>3</sup> |          |
| See Ruthe Saifert's Chart (orig) |                   |                   |                     |                   |                   | 13                | 9        |

## Var 447

|   | MF<br>39634       | 20570             | Rel to VI<br>B73515 | 71709             | 63545             | AV                | AVO | Adopt |
|---|-------------------|-------------------|---------------------|-------------------|-------------------|-------------------|-----|-------|
| a | 14.0              | 14.0              | 13.8                | 13.8              | 13.8              | 13.9              |     | 13.9  |
| b | 14.2 <sup>4</sup> | 14.1 <sup>5</sup> | 14.1 <sup>5</sup>   | 14.1 <sup>5</sup> | 14.1 <sup>3</sup> | 14.1 <sup>2</sup> | 5   | 14.2  |
| c | 1                 | 14.5 <sup>3</sup> | 14.4 <sup>2</sup>   | 14.2 <sup>2</sup> | 14.3 <sup>2</sup> | 14.3 <sup>2</sup> | 2   | 14.3  |
| d | 14.5 <sup>3</sup> | 14.7 <sup>2</sup> | 14.5 <sup>3</sup>   | 14.5 <sup>3</sup> | 14.6 <sup>4</sup> | 14.6 <sup>3</sup> | 3   | 14.6  |

## Var 286

|    | MF<br>19532       | 20570             | 39633             | 9550              | 8970              | an | AV                |
|----|-------------------|-------------------|-------------------|-------------------|-------------------|----|-------------------|
| a  | 13.9              | 14.1              | 13.9              | 13.8              | 13.8              |    | 13.9              |
| b  | 14.7 <sup>8</sup> | 14.6 <sup>7</sup> | 14.2 <sup>8</sup> | 14.7 <sup>5</sup> | 14.6 <sup>7</sup> | 7  | 14.6 <sup>7</sup> |
| c  | 15.0 <sup>3</sup> | 14.8 <sup>3</sup> | 14.7 <sup>3</sup> | 15.1 <sup>3</sup> | 15.0 <sup>4</sup> | 3  | 14.9 <sup>3</sup> |
| d  | 15.2 <sup>5</sup> | 15.2 <sup>3</sup> | 15.1 <sup>3</sup> | 15.5 <sup>4</sup> | 15.1 <sup>3</sup> | 4  | 15.2 <sup>3</sup> |
| e  | 15.5 <sup>5</sup> | 15.4 <sup>3</sup> | 15.6 <sup>5</sup> | 15.6 <sup>4</sup> | 15.4 <sup>3</sup> | 4  | 15.5 <sup>3</sup> |
| OK |                   |                   |                   |                   |                   |    | cc                |

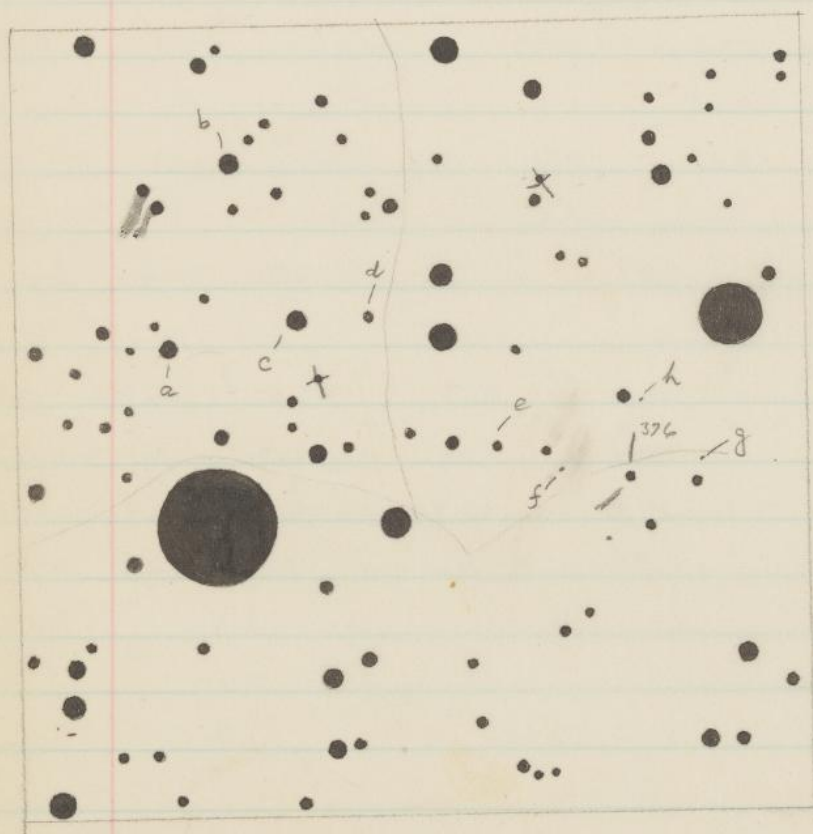
Ver 376 Marked on Retha Seifert's sketch of 20g. 9:13:205

282

| Seg. III | 39680 | 20570 | 20405 | 8519 | 8759 | AV<br>outp | Am  | Adjusted |
|----------|-------|-------|-------|------|------|------------|-----|----------|
| a        | 13.5  | 13.2  | 13.2  | 13.5 | 13.0 | 13.3       | 8   | 13.3     |
| b        | 14.1  | 14.0  | 14.2  | 13.9 | 14.2 | 14.1       | 3   | 14.0     |
| c        | 14.4  | 14.3  | 14.4  | 14.4 | 14.4 | 14.4       | 5   | 14.4     |
| d        | 15.0  | 14.8  | 14.7  | 15.0 | 14.7 | 14.9       | 5.5 | 14.9     |
| e        |       | 15.4  | 15.5  | 15.5 | 15.4 | 15.45      | .35 | 15.4     |
| f        |       |       | 15.8  |      |      | 15.8       |     | 15.8     |
| g        | 3     | 3     | 5     | 1;   | 3    | 3          |     | 16.1     |
| h        | 3     | 1?    | 2     | 1;   | 1?   | 2          |     | 16.3     |

DH. June 13, 1967

9:13:205



376

Var 423 Aug VIII to be used

|   | HF 19555 | 39634 | 14192 | 9597 | 8519 | AV   |
|---|----------|-------|-------|------|------|------|
| a | 13.4     | 13.2  | 13.4  | 13.5 | 13.4 | 13.4 |
| b | 13.8     | 13.9  | 13.7  | 14.0 | 14.0 | 13.9 |
| d | 14.8     | 14.8  | 14.8  | 14.8 | 14.8 | 14.8 |

Max ~ a.0 = 13.4

frequent est a 5 = 13.6

min b3 = 14.2

Var 244 from Seg. IX

|        | AS92 | 20570 | 30405 | 8519 | 9597 | 14192 | AV   |
|--------|------|-------|-------|------|------|-------|------|
| A      | 13.2 | 12.8  | 13.2  | 13.1 | 13.0 | 12.9  | 13.0 |
| B      | 13.8 | 13.8  | 13.8  | 13.7 | 13.8 | 13.7  | 13.8 |
| C      | 14.3 | 14.2  | 14.2  | 13.9 | 14.2 | 14.1  | 14.2 |
| var? D | 14.1 | 13.9  | 14.4  | 13.9 | 14.2 | 13.9  | 14.1 |
| D'     | 14.4 | 14.4  | 14.4  | 14.4 | 14.4 | 14.2  | 14.4 |

OK

Var 364 Seg M28

|   | 19552 | 14253 | 20570 | 30405 | 8519 | 39632 | AV   |
|---|-------|-------|-------|-------|------|-------|------|
| a | 13.4  | 13.6  | 13.6  | 13.7  | 13.2 | 13.7  | 13.6 |
| b | 14.1  | 14.1  | 14.0  | 14.3  | 14.3 | 14.4  | 14.2 |
| c | 14.6  | 14.6  | 14.1  | 14.5  | 14.5 | 14.8  | 14.6 |
| d | 14.9  | 14.9  | 15.2  | 15.4  | 15.4 | 15.9  | 15.2 |

Too many  
blemishes

M28 too crowded!

449 Seg 428

|   | 8519 | 14253 | 20570 | 30405 | 39632 | AV   | Adopt |
|---|------|-------|-------|-------|-------|------|-------|
| A | 12.8 | 13.3  | 12.9  | 13.5  | 13.6  | 13.2 | 13.2  |
| B | 13.6 | 13.5  | 13.7  | 13.7  | 13.7  | 13.6 | 13.7  |
| C | 14.6 | 14.6  | 14.8  | 14.6  | 14.4  | 14.6 | 14.6  |

from Seg VII

| 253 | 19582 | 15688 | 8519 | 14253 | 20570 | 30405 | AV   | Adopt |
|-----|-------|-------|------|-------|-------|-------|------|-------|
| A   | 13.1  | 13.4  | 13.3 | 13.2  | 13.3  | 13.3  | 13.3 | 13.2  |
| B   | 13.6  | 13.6  | 13.7 | 13.4  | 13.6  | 13.6  | 13.6 | 13.6  |
| C   | 14.1  | 14.0  | 13.9 | 14.1  | 13.7  | 13.8  | 13.9 | 13.9  |

range seems greater

227/228 from Seg VII

|   | 14399 (8519) | 20570 | 30405 | 39632 | 19582 | AV   | Adopt |
|---|--------------|-------|-------|-------|-------|------|-------|
| A | 13.1         | 13.3  | 13.3  | 13.1  | 13.3  | 13.2 | 13.2  |
| B | 13.6         | 13.6  | 13.7  | 13.6  | 13.8  | 13.7 | 13.6  |
| C | 13.8         | 14.1  | 13.9  | 14.1  | 14.0  | 14.0 | 14.0  |
| D | 14.1         | 14.5  | 14.5  | 14.3  | 14.3  | 14.3 | 14.3  |

24 1970

Var. 318

|   | MF 8759 | 195-82<br>20590 | 30203-1   | 39632 | 95550 | AV |
|---|---------|-----------------|-----------|-------|-------|----|
| a | 7       | 7               | 7         | 7     | 7     | 7  |
| b | 3       | 2               | 11.4<br>3 | 3     | 2     | 3  |
| c | 3       | 4               | 11.5<br>3 | 2     | 4     | 3  |
| d | 5       | 7               | 5         | 3     | 5     | 5  |
| e |         |                 | 12.0      |       |       |    |

Only 1128 seg. has sufficiently bright stars identified

Scale

| seg 1128 | .   | 0   | x   | Δ   | □   |
|----------|-----|-----|-----|-----|-----|
| 9.74 D   | 1.3 |     | -   | 0.6 | -   |
| 10.83 E  | 2.0 | 0.8 | 1.0 | 1.5 | 1.5 |
| 11.38 F  | 2.9 | 1.8 | 2.2 | 2.2 | 2.4 |
| 11.68 G  | 3.3 | 2.3 | 2.8 | 2.6 | 2.9 |
| 11.84 H  | 3.7 | 2.9 | 3.2 | 2.8 | 3.5 |
| 12.74 a  | 5.0 | 4.3 | 4.3 | 4.0 | 4.4 |

Var 318

|   |     |      |     |       |     |      |     |      |     |      | AV   | obs |
|---|-----|------|-----|-------|-----|------|-----|------|-----|------|------|-----|
| a | 2.2 | 10.9 | 0.0 | 10.0? | 1.0 | 10.8 | 1.2 | 10.5 | 1.3 | 10.5 | 10.5 |     |
| b | 2.5 | 11.2 | 1.5 | 11.2  | 1.6 | 11.1 | 1.6 | 10.9 | 1.9 | 11.1 | 11.1 | 6   |
| c | 2.8 | 11.3 | 1.8 | 11.4  | 2.0 | 11.3 | 1.7 | 11.0 | 2.4 | 11.4 | 11.3 | 2   |
| d | 3.2 | 11.6 | 2.0 | 11.6  | 2.4 | 11.5 | 2.2 | 11.4 | 2.7 | 11.6 | 11.5 | 2   |
| e | 4.1 | 12.1 | 3.9 | 12.4  | 3.3 | 11.9 | 3.0 | 12.0 | 3.9 | 12.7 | 12.2 | 7   |

↑  
adopt

OK

DH1970

| Var 307 | 20570        | 30405 | 39632 | 9550         | 8759 | AV    |
|---------|--------------|-------|-------|--------------|------|-------|
| tyf III |              |       |       |              |      | AV 10 |
| a       | 13.5<br>14.5 | 12.5  | 13.5  | 13.9<br>14.1 | 13.7 | 13.8  |
| b       | 14.3         | 14.3  | 14.4  | 14.2         | 14.6 | 14.4  |
| c       | 14.7         | 14.7  | 14.9  | 14.7         | 14.8 | 14.9  |
| d       | 15.0         | 15.0  | 15.2  | 15.0         | 15.1 | 15.1  |

↑  
OK

Var 24

Scale readings

|      |         |        |                  |                |                |       |                  |      |     |      |      |
|------|---------|--------|------------------|----------------|----------------|-------|------------------|------|-----|------|------|
| tyf. | A 12661 | Var 24 | 12683            | 3802           | 12600          | 12675 | AV               |      |     |      |      |
| a    | 1.4     | 11.9   | 2.5 <sup>0</sup> | 12.4           | 1 <sup>±</sup> | 12.2  | 1.5              | 12.4 | 2.2 | 12.4 | 12.3 |
| b    | 2.5     | 12.4   | 3.3              | 12.9           | 2.1            | 13.1  | 2.5              | 13.1 | 3.2 | 13.0 | 12.9 |
| c    | 3.3     | 12.7   | 3.6              | 13.2           | 2.9            | 13.8  | 3.2              | 13.7 | 3.5 | 13.2 | 13.5 |
| d    | 3.8     | 14.0   | 4.2              | 13.8           | 3.3            | 14.2  | 3.6              | 14.2 | 3.7 | 13.4 | 13.9 |
| e    | 4.0     | 14.1   | 4.5              | 14.1           | 4.0            | 15.0  | 4.3              | 14.7 | 4.3 | 14.0 | 14.4 |
|      | seg     |        |                  |                |                |       |                  |      |     |      |      |
| 11.7 | 2       | 71     | 1.2              |                |                |       | 1.0 <sup>±</sup> |      |     |      |      |
| 12.2 | 3       | 2.5    | 2.2              | 1 <sup>±</sup> |                | 1.3   | 2.0              |      |     |      |      |
| 12.5 | 4       | 2.8    | 2.7              | 1.2            |                | 1.9   | 2.3              | 2.3  |     |      |      |
| 12.9 | 5       | 2.8    | 3.2              | 1.9            |                | 2.3   | 2.1              |      |     |      |      |
| 13.0 | 6       | 3.0    | 3.7              | 2.0            |                | 2.3   | 3.2              |      |     |      |      |
| 13.4 | 7       | 2.8    | 3.7              | 2.3            |                | 2.9   | 3.8              |      |     |      |      |
| 13.5 | 8       | 3.1    | 3.9              | 2.6            |                | 2.9   | 3.9              |      |     |      |      |
| 13.9 | 9       | 3.5    | 4.6              | 3.0            |                | 3.3   | 4.1              |      |     |      |      |
| 14.1 | 10      | 4.0    | 4.6              | 3.1            |                | 3.9   | 5.1              |      |     |      |      |
| 14.5 | 11      | 4.4    | 4.6              | 3.7            |                | 4.1   | 6.0              |      |     |      |      |
| 14.9 | 12      |        |                  | 3.7            |                | 4.6   |                  |      |     |      |      |
| 15.4 | 13      |        |                  | 4.5            |                | 4.5   |                  |      |     |      |      |
| f    |         | 15.5   | 15.6             | 15.5           |                |       | 15.5             |      |     |      |      |
| g    |         | 16.3   |                  | 16.3           |                | 16.4  | 16.4             |      |     |      |      |













Search for new variables in NSF 193

Contact NA 3864

Nancy Gregg 1969

with NA 4742

Old Vers

br Astroid Harmonia

ft 270 a T 348, 301.?, Astroid Edburga, V915, AX Sgr.











