

MAS RR Lyrae Ephemeris for March 2015

all times in U.T.

Page 1

|       | SW   | XX   | AT   | SW   | YZ   | AA   | TZ   | BH   | RS   | ST   | SW   | SZ   | TV   | TW   | UU   | UY   | UY   | RW   | TT   | VZ  | VZ  | KV   | SS   |     |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|------|------|-----|
|       | AND  | AND  | AND  | AQR  | AQR  | AQR  | AUR  | AUR  | BOO  | BOO  | BOO  | BOO  | BOO  | BOO  | BOO  | BOO  | CAM  | CNC  | CNC  | CNC | CNC | CNC  | CVN  |     |
| MAX   | 9.3  | 10.3 | 10.8 | 10.5 | 12.1 | 11.4 | 11.2 | 11.1 | 9.8  | 10.6 | 11.3 | 12.0 | 10.8 | 10.8 | 11.2 | 10.6 | 11.5 | 10.7 | 11.0 | 7.2 | 7.2 | 11.9 | 11.2 |     |
| MIN   | 10.8 | 11.6 | 11.5 | 12.1 | 12.9 | 13.0 | 12.8 | 12.6 | 11.3 | 11.8 | 12.7 | 13.4 | 11.5 | 12.1 | 12.7 | 12.0 | 11.9 | 12.6 | 12.3 | 7.9 | 7.9 | 13.0 | 12.5 |     |
| RISE  | 2    | 3    | 3    | 1    | 2    | 2    | 2    | 2    | 2    | 3    | 2    | 2    | 3    | 2    | 1    | 2    | 3    | 2    | 3    | 1   | 1   | 2    | 2    |     |
| 0- 1  | 2.0  | 4.0  |      |      | 12.5 |      |      | 1.0  |      | 9.5  | 8.0  | 11.5 | 8.0  | 3.5  | 7.0  | 10.5 |      | 2.5  | 6.5  |     | 6.5 | 2.5  | 4.0  | 3.0 |
| 1- 2  |      |      | 11.5 |      |      |      | 5.5  | 7.5  | 4.0  |      | 12.5 | 9.0  | 2.0  | 8.5  | 8.5  | 7.0  | 4.5  | 8.5  |      | 8.5 | 4.0 | 4.0  | 1.5  |     |
| 2- 3  |      |      | 2.0  |      |      |      | 9.5  | 5.5  | 7.0  | 4.5  |      | 10.5 | 0.5  | 10.0 | 6.5  |      | 6.0  | 11.0 | 3.0  | 1.5 | 6.0 | 4.0  | 0.5  |     |
| 3- 4  |      | 1.5  |      | 12.0 |      |      | 4.5  | 3.5  | 10.0 | 10.5 | 1.5  | 11.5 | 6.5  | 11.5 | 4.0  | 6.0  | 1.0  |      | 6.0  | 3.0 | 7.5 | 4.0  | 11.0 |     |
| 4- 5  | 1.5  | 12.0 |      | 10.0 |      |      | 8.5  | 1.0  | 4.5  |      | 2.0  | 12.5 | 5.0  |      | 2.0  |      | 3.0  | 2.5  | 9.0  | 5.0 | 0.5 | 4.0  | 10.0 |     |
| 5- 6  |      |      |      |      |      |      | 3.5  |      | 7.5  | 7.0  | 2.5  |      | 3.5  | 1.5  | 11.0 | 4.5  | 4.5  | 4.5  |      | 6.5 | 2.5 | 4.5  | 9.0  |     |
| 6- 7  |      |      | 10.0 |      |      |      | 7.5  | 8.0  | 10.5 |      | 3.5  | 2.0  | 2.0  | 3.5  | 9.0  | 12.0 | 6.0  | 7.0  | 1.5  | 8.5 | 4.0 | 4.5  | 8.0  |     |
| 7- 8  |      |      | 0.5  |      |      |      | 2.5  | 6.0  | 4.5  | 4.0  | 4.0  | 3.5  | 0.5  | 5.0  | 7.0  | 3.5  | 1.5  | 9.0  | 4.5  | 1.5 | 5.5 | 4.5  | 7.0  |     |
| 8- 9  | 1.0  | 2.5  |      |      |      |      | 6.5  | 3.5  | 8.0  | 10.0 | 4.5  | 4.5  | 6.5  | 6.5  | 5.0  | 10.5 | 3.0  | 11.5 | 7.5  | 3.0 | 7.5 | 4.5  | 6.0  |     |
| 9-10  |      |      | 12.0 | 11.5 |      |      | 1.5  | 1.5  | 2.0  |      | 5.0  | 5.5  | 5.0  | 8.0  | 3.0  | 2.5  | 4.5  | 0.5  |      | 5.0 | 0.5 | 4.5  | 5.0  |     |
| 10-11 |      |      | 2.5  |      |      |      | 5.5  |      | 5.0  | 6.5  | 6.0  | 6.5  | 3.5  | 9.5  | 11.5 | 9.5  | 6.0  | 2.5  |      | 6.5 | 2.0 | 5.0  | 4.0  |     |
| 11-12 |      |      |      |      |      |      | 0.5  |      | 8.5  |      | 6.5  | 7.5  | 2.0  | 11.0 | 9.5  |      | 1.5  | 5.0  | 3.5  | 8.0 | 4.0 | 5.0  | 3.0  |     |
| 12-13 | 0.5  |      |      |      |      |      | 4.5  | 6.5  | 2.5  | 3.5  | 7.0  | 8.5  | 1.0  |      | 7.5  | 8.5  | 3.0  | 7.0  | 6.5  | 1.5 | 5.5 | 5.0  | 2.0  |     |
| 13-14 |      | 4.0  |      |      |      |      | 9.0  | 4.0  | 5.5  | 9.5  | 8.0  | 10.0 | 7.0  | 1.5  | 5.5  |      | 4.5  | 9.5  | 9.5  | 3.0 | 7.0 | 5.0  | 1.0  |     |
| 14-15 |      |      | 10.5 |      |      |      | 3.5  | 2.0  | 9.0  |      | 8.5  | 11.0 | 5.5  | 3.0  | 3.5  | 7.5  | 6.5  | 12.0 |      | 4.5 | 9.0 | 5.0  | 11.5 |     |
| 15-16 | 2.5  |      | 1.0  | 10.5 |      |      | 8.0  |      | 3.0  | 6.0  | 9.0  | 12.0 | 4.0  | 4.5  | 12.5 |      | 1.5  | 1.0  | 2.0  | 6.5 | 2.0 | 5.5  | 10.5 |     |
| 16-17 |      | 1.5  |      |      |      |      | 2.5  |      | 6.0  | 12.0 | 10.0 |      | 2.5  | 6.0  | 10.5 | 6.0  | 3.0  | 3.0  | 5.0  | 8.0 | 3.5 | 5.5  | 9.0  |     |
| 17-18 |      | 12.0 | 12.5 |      |      |      | 7.0  | 6.5  | 9.0  | 3.0  | 10.5 |      | 1.0  | 7.5  | 8.0  |      | 5.0  | 5.5  | 8.0  | 1.0 | 5.5 | 5.5  | 8.0  |     |
| 18-19 |      |      | 3.0  |      |      | 12.0 | 1.5  | 4.5  | 3.5  | 9.0  | 11.0 | 3.0  | 7.0  | 9.0  | 6.0  | 5.0  | 6.5  | 7.5  |      | 3.0 | 7.0 | 5.5  | 7.0  |     |
| 19-20 | 2.5  |      |      |      |      |      | 6.0  | 2.5  | 6.5  |      | 12.0 | 4.0  | 5.5  | 10.5 | 4.0  | 12.5 | 1.5  | 10.0 | 0.5  | 4.5 | 9.0 | 5.5  | 6.0  |     |
| 20-21 |      |      |      | 12.0 |      |      | 0.5  |      | 9.5  | 5.5  | 12.5 | 5.0  | 4.0  | 12.0 | 2.0  | 4.0  | 3.5  |      | 3.5  | 6.0 | 2.0 | 6.0  | 5.0  |     |
| 21-22 |      | 3.0  |      |      | 12.0 |      | 5.0  |      | 4.0  | 11.5 |      | 6.0  | 2.5  | 1.0  | 11.0 | 11.0 | 5.0  | 1.5  | 6.5  | 8.0 | 3.5 | 6.0  | 4.0  |     |
| 22-23 |      |      | 11.0 |      |      |      | 9.0  | 7.0  | 7.0  | 2.5  | 1.5  | 7.0  | 1.0  | 2.5  | 9.0  | 3.0  | 6.5  | 3.5  | 10.0 | 1.0 | 5.5 | 6.0  | 3.0  |     |
| 23-24 | 2.0  |      | 1.5  |      |      |      | 4.0  | 5.0  | 10.0 | 8.5  | 2.0  | 8.0  | 7.0  | 4.0  | 7.0  | 10.0 | 2.0  | 6.0  |      | 2.5 | 7.0 | 6.0  | 2.0  |     |
| 24-25 |      |      |      |      |      |      | 8.0  | 3.0  | 4.5  |      | 2.5  | 9.5  | 5.5  | 5.5  | 4.5  |      | 3.5  | 8.0  | 2.5  | 4.5 | 8.5 | 6.0  | 1.0  |     |
| 25-26 |      |      |      |      |      |      | 3.0  | 0.5  | 7.5  | 5.0  | 3.5  | 10.5 | 4.0  | 7.0  | 2.5  | 9.0  | 5.0  | 10.5 | 5.5  | 6.0 | 2.0 | 6.5  | 11.5 |     |
| 26-27 |      | 4.5  | 3.5  | 11.5 |      |      | 7.0  |      | 10.5 | 11.0 | 4.0  | 11.5 | 2.5  | 8.5  | 11.5 |      | 7.0  |      | 8.5  | 7.5 | 3.5 | 6.5  | 10.5 |     |
| 27-28 | 1.5  |      |      |      |      |      | 2.0  | 7.5  | 4.5  |      | 4.5  |      | 1.0  | 10.5 | 9.5  | 8.0  | 2.0  | 2.0  |      | 1.0 | 5.0 | 6.5  | 9.5  |     |
| 28-29 |      |      |      |      |      |      | 6.0  | 5.5  | 8.0  | 8.0  | 5.5  |      | 7.0  | 12.0 | 7.5  |      | 3.5  | 4.0  | 1.0  | 2.5 | 7.0 | 6.5  | 8.5  |     |
| 29-30 |      | 1.5  |      |      |      |      | 1.0  | 3.5  | 2.0  |      | 6.0  | 2.5  | 5.5  |      | 5.5  | 6.5  | 5.5  | 6.5  | 4.0  | 4.0 | 8.5 | 6.5  | 7.5  |     |
| 30-31 |      | 12.5 | 11.5 |      |      |      | 5.0  | 1.0  | 5.0  | 4.5  | 6.5  | 3.5  | 4.0  | 2.0  | 3.5  |      | 0.5  | 8.5  | 7.0  | 6.0 | 1.5 | 7.0  | 6.5  |     |

|       | RV   | RZ   | VW   | YZ   | AN   | RR   | RU   | RV   | RZ   | XX   | XZ   | DM   | RW   | XZ   | RX   | SV   | BB   | RX   | SS   | RR   | TW   | VX   | VZ   |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       | CAP  | CAP  | CAP  | CAP  | CAP  | CET  | CET  | CET  | CET  | CYG  | CYG  | CYG  | DRA  | DRA  | ERI  | ERI  | ERI  | FOR  | FOR  | GEM  | HER  | HER  | HER  |
| MAX   | 10.2 | 12.5 | 12.6 | 11.0 | 12.0 | 9.3  | 10.8 | 10.3 | 11.2 | 11.4 | 9.1  | 11.2 | 11.0 | 9.6  | 9.2  | 9.6  | 10.9 | 11.1 | 9.4  | 10.7 | 10.5 | 9.9  | 10.7 |
| MIN   | 11.6 | 13.5 | 13.5 | 11.6 | 13.0 | 10.3 | 12.1 | 11.2 | 12.4 | 12.5 | 10.5 | 12.7 | 12.0 | 10.3 | 10.1 | 10.2 | 11.9 | 12.5 | 10.6 | 11.9 | 11.8 | 10.4 | 12.0 |
| RISE  | 2    | 3    | 2    | 3    | 5    | 2    | 3    | 3    | 2    | 1    | 3    | 2    | 2    | 3    | 3    | 5    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| 0- 1  |      |      |      |      |      |      | 0.5  | 1.5  |      | 7.5  | 6.0  |      | 7.0  | 7.0  |      | 2.0  |      |      | 0.5  | 3.0  | 8.5  | 7.5  | 7.5  |
| 1- 2  | 11.0 | 10.5 |      |      |      |      |      |      |      | 3.0  | 4.5  |      | 4.0  | 5.5  |      |      |      | 1.5  | 0.5  | 7.5  |      | 5.5  | 4.5  |
| 2- 3  |      |      |      |      |      |      |      |      |      | 8.0  | 3.0  | 9.0  | 1.5  | 4.5  | 3.0  |      |      |      |      | 2.5  | 8.5  |      | 12.0 |
| 3- 4  |      | 10.5 | 12.0 |      |      |      |      |      |      | 3.5  | 1.0  |      | 9.0  | 3.5  |      |      | 3.5  |      |      | 7.0  |      | 12.0 | 9.5  |
| 4- 5  |      |      |      |      |      |      |      |      |      | 8.5  | 11.0 | 11.5 | 6.5  | 2.0  |      |      |      | 1.5  |      | 2.0  | 8.5  | 10.0 | 6.5  |
| 5- 6  | 11.5 | 11.0 |      |      |      |      |      | 1.5  |      | 4.0  | 9.0  |      | 3.5  | 1.0  | 1.5  | 2.0  |      |      |      | 7.0  |      | 8.0  |      |
| 6- 7  |      |      |      |      |      |      |      |      |      | 9.0  | 7.5  |      | 1.0  | 11.5 |      |      |      |      |      | 2.0  | 8.5  | 6.0  | 11.5 |
| 7- 8  |      | 11.0 |      |      |      |      |      |      |      | 4.5  | 6.0  | 10.0 | 9.0  | 10.5 |      |      | 3.5  | 1.0  |      | 6.5  |      |      | 8.5  |
| 8- 9  |      |      |      |      |      |      |      |      |      | 10.0 | 4.5  |      | 6.0  | 9.0  |      |      |      |      |      | 1.5  | 8.5  | 12.5 | 5.5  |
| 9-10  | 12.0 | 11.0 | 11.5 | 11.0 |      | 2.0  |      |      |      | 5.0  | 3.0  | 12.0 | 3.5  | 8.0  | 4.0  |      |      |      |      | 6.0  |      | 10.5 |      |
| 10-11 |      |      |      |      |      |      |      | 1.0  |      | 0.5  | 1.0  | 8.5  | 0.5  | 7.0  |      | 2.0  |      | 0.5  |      | 1.0  | 8.5  | 8.0  | 10.5 |
| 11-12 |      | 11.0 |      |      |      |      |      |      |      | 6.0  | 11.0 |      | 8.5  | 6.0  |      |      | 3.0  |      |      | 6.0  |      | 6.0  | 7.5  |
| 12-13 |      |      |      | 11.5 |      |      |      |      | 1.0  | 1.0  | 9.0  | 10.5 | 6.0  | 4.5  | 2.5  |      |      |      |      | 1.0  | 8.0  |      | 4.5  |
| 13-14 |      | 11.5 |      |      |      |      |      |      |      | 1.5  | 6.5  | 7.5  |      | 3.0  | 3.5  |      |      |      |      | 5.5  |      |      | 12.5 |
| 14-15 |      |      | 12.0 |      |      | 1.5  |      |      |      | 2.0  | 1.5  | 6.0  | 11.0 | 2.5  |      |      |      |      |      | 0.5  | 8.0  | 10.5 | 9.5  |
| 15-16 |      | 11.5 |      | 11.5 |      |      |      | 1.0  | 2.5  | 7.0  | 4.5  | 9.5  | 8.0  | 1.5  | 1.0  | 2.0  | 3.0  |      |      | 5.0  |      | 8.5  | 6.5  |
| 16-17 |      |      |      |      |      |      |      |      |      | 2.5  | 3.0  |      | 5.5  | 11.5 |      |      |      |      |      | 9.5  | 8.0  | 6.0  | 4.0  |
| 17-18 |      | 11.5 |      |      |      |      | 0.5  |      |      | 7.5  | 1.0  | 11.5 | 2.5  | 10.5 |      |      |      |      |      | 5.0  |      |      | 11.5 |
| 18-19 | 11.0 |      |      | 11.5 |      |      |      |      |      | 3.0  | 11.0 |      | 10.5 | 9.5  |      |      |      |      |      | 9.5  | 8.0  |      | 8.5  |
| 19-20 |      | 11.5 |      |      |      | 1.0  |      |      |      | 8.0  | 9.0  |      | 8.0  | 8.0  | 3.5  |      | 2.5  |      |      | 4.5  |      | 10.5 | 6.0  |
| 20-21 |      |      | 11.5 |      |      |      |      | 0.5  |      | 3.5  | 7.5  | 10.0 | 5.0  | 7.0  |      | 2.0  |      |      |      | 9.0  | 8.0  | 8.5  |      |
| 21-22 |      | 11.5 |      | 12.0 |      |      |      |      |      | 8.5  | 6.0  |      | 2.5  | 6.0  |      |      |      |      |      | 4.0  |      | 6.5  | 10.5 |
| 22-23 | 12.0 |      |      |      |      |      |      |      |      | 4.0  | 4.5  |      | 10.5 | 5.0  | 2.0  |      |      |      |      | 9.0  | 8.0  |      | 8.0  |
| 23-24 |      | 12.0 |      |      |      |      |      |      |      | 9.0  | 3.0  | 8.5  | 7.5  | 3.5  |      |      | 2.5  |      |      | 4.0  |      |      | 5.0  |
| 24-25 |      |      |      | 12.0 |      | 0.5  |      |      |      | 4.5  | 1.0  |      | 5.0  | 2.5  |      |      |      |      |      | 8.5  | 8.0  | 11.0 |      |
| 25-26 |      | 12.0 | 12.0 |      |      |      |      |      |      | 9.5  | 11.0 | 11.0 | 2.0  | 1.5  | 0.5  | 2.0  |      |      |      | 3.5  |      | 9.0  | 9.5  |
| 26-27 |      |      |      |      |      |      |      |      |      | 5.0  | 9.0  |      | 10.0 | 11.5 |      |      |      |      |      | 8.0  | 8.0  | 6.5  | 7.0  |
| 27-28 |      | 12.0 |      | 12.0 |      |      |      |      |      | 0.5  | 7.5  |      | 7.0  | 10.5 |      |      | 2.0  |      |      | 3.0  |      | 4.5  | 4.0  |
| 28-29 |      |      |      |      |      |      |      |      |      | 5.5  | 6.0  | 9.5  | 4.5  | 9.5  |      |      |      |      |      | 8.0  | 8.0  |      | 11.5 |
| 29-30 |      | 12.0 |      |      | 12.5 |      |      |      |      | 1.0  | 4.5  |      | 1.5  | 8.5  | 3.5  |      |      |      |      | 3.0  |      | 11.0 | 9.0  |
| 30-31 |      |      |      | 12.5 |      |      |      |      |      | 6.0  | 2.5  | 12.0 | 9.5  | 7.0  |      | 1.5  |      |      |      | 7.5  | 8.0  | 9.0  | 6.0  |

MAS RR Lyrae Ephemeris for March 2015

all times in U.T.

Page 3

|       | AR   | DL   | DY   | DY   | DY   | LS   | SZ   | UU   | DG   | DH   | RR   | SS   | ST   | TV   | WW   | AA   | U    | SZ  | SZ  | SZ  | RR   | RZ   | ST   |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|------|------|------|
|       | HER  | HER  | HER  | HER  | HER  | HER  | HYA  | HYA  | HYA  | HYA  | LEO  | LEO  | LEO  | LEO  | LEO  | LEO  | LEP  | LYN | LYN | LYN | LYR  | LYR  | OPH  |
| MAX   | 10.6 | 11.0 | 10.2 | 10.2 | 10.2 | 10.8 | 10.6 | 10.7 | 11.6 | 11.4 | 10.0 | 10.5 | 10.8 | 11.5 | 11.0 | 11.3 | 9.8  | 9.1 | 9.1 | 9.1 | 7.1  | 10.0 | 11.3 |
| MIN   | 11.6 | 12.4 | 10.6 | 10.6 | 10.6 | 11.1 | 11.7 | 12.3 | 12.6 | 12.6 | 11.7 | 12.0 | 12.3 | 12.6 | 12.0 | 12.4 | 11.1 | 9.6 | 9.6 | 9.6 | 8.1  | 12.0 | 12.7 |
| RISE  | 2    | 1    | 1    | 1    | 1    | 2    | 2    | 2    | 3    | 2    | 2    | 2    | 2    | 2    | 3    | 2    | 2    | 1   | 1   | 1   | 2    | 2    | 3    |
| 0- 1  | 5.5  |      | 11.5 |      | 8.0  | 7.0  | 5.5  |      | 1.5  |      | 4.5  | 9.5  | 1.0  |      | 7.5  | 4.5  |      | 0.5 | 3.5 | 6.5 | 8.0  | 12.0 |      |
| 1- 2  | 4.5  | 6.5  | 9.0  |      | 5.5  | 5.0  | 7.0  | 1.0  |      |      | 2.0  | 0.5  | 11.0 | 6.5  |      | 9.5  | 3.5  | 2.5 | 5.5 | 8.5 | 11.0 |      | 10.5 |
| 2- 3  | 3.0  | 11.0 | 6.5  | 10.0 |      | 9.0  | 9.0  | 2.0  | 8.0  |      | 10.5 | 6.5  | 10.0 |      | 3.0  |      |      | 4.5 | 7.5 | 1.5 |      |      | 8.0  |
| 3- 4  | 1.5  |      |      | 7.5  | 11.0 | 7.0  |      | 3.0  | 2.0  |      | 8.5  |      | 9.0  | 7.0  | 8.0  | 4.5  |      | 6.5 | 1.0 | 4.0 |      |      |      |
| 4- 5  | 11.0 | 5.5  | 12.0 | 5.0  | 8.5  | 5.0  |      | 4.5  |      | 9.5  | 6.0  | 3.5  | 8.0  |      |      | 9.0  | 1.5  | 8.5 | 3.0 | 6.0 | 7.0  |      |      |
| 5- 6  | 10.0 | 10.0 | 9.5  |      | 6.0  | 9.0  | 1.5  | 5.5  | 8.5  | 9.0  | 4.0  | 10.0 | 7.0  | 7.5  | 3.5  |      |      | 2.0 | 5.0 | 8.0 | 10.5 |      | 11.5 |
| 6- 7  | 8.5  |      | 7.0  | 10.5 |      | 7.0  | 3.0  | 6.5  | 2.5  | 8.5  | 1.5  | 1.0  | 6.0  |      | 8.5  | 4.0  |      | 4.0 | 7.0 | 1.0 |      |      | 9.5  |
| 7- 8  | 7.0  |      |      | 8.0  | 11.5 | 5.5  | 5.0  | 8.0  |      | 7.5  | 10.0 | 7.0  | 5.0  | 8.0  |      | 9.0  |      | 6.0 | 9.0 | 3.0 |      |      | 7.0  |
| 8- 9  | 5.5  | 9.0  | 12.5 | 5.0  | 9.0  | 9.0  | 7.0  | 9.0  | 9.0  | 7.0  | 8.0  |      | 4.0  |      | 4.0  |      | 3.0  | 8.0 | 2.5 | 5.5 | 6.5  |      |      |
| 9-10  | 4.0  |      | 10.0 |      | 6.0  | 7.0  | 8.5  | 10.0 | 3.0  | 6.5  | 5.5  | 4.0  | 2.5  | 8.5  | 8.5  | 4.0  |      | 1.5 | 4.5 | 7.5 | 9.5  |      |      |
| 10-11 | 2.5  |      | 7.0  | 10.5 |      | 5.5  |      |      |      | 6.0  | 3.0  | 10.0 | 1.5  | 0.5  |      | 9.0  |      | 3.5 | 6.5 | 0.5 |      |      | 10.5 |
| 11-12 | 1.0  | 8.0  |      | 8.0  | 11.5 | 9.0  |      |      | 9.0  | 5.5  | 1.0  | 1.0  | 0.5  | 9.0  | 4.0  |      | 1.0  | 5.5 | 8.5 | 2.5 |      | 5.5  | 8.0  |
| 12-13 | 11.0 | 12.5 |      | 5.5  | 9.0  | 7.0  | 1.0  | 1.0  | 3.5  | 5.0  | 9.5  | 7.0  | 11.0 | 1.0  | 9.0  | 4.0  |      | 7.5 | 2.0 | 4.5 | 5.5  | 6.0  |      |
| 13-14 | 9.5  |      | 10.0 |      | 6.5  | 5.5  | 3.0  | 2.0  |      | 4.5  | 7.0  |      | 10.0 | 9.5  |      | 8.5  |      | 1.0 | 4.0 | 6.5 | 9.0  | 7.0  |      |
| 14-15 | 8.0  | 7.0  | 7.5  | 11.0 |      | 9.0  | 4.5  | 3.5  |      | 4.0  | 5.0  | 4.0  | 9.0  | 1.5  | 4.5  |      |      | 3.0 | 6.0 | 9.0 | 12.0 | 7.5  | 12.0 |
| 15-16 | 6.5  | 11.5 | 5.0  | 8.5  | 12.0 | 7.0  | 6.5  | 4.5  | 3.5  | 3.5  | 2.5  | 10.5 | 8.0  | 10.0 | 9.5  | 4.0  | 2.5  | 5.0 | 8.0 | 2.0 |      | 8.0  | 9.5  |
| 16-17 | 5.0  |      |      | 6.0  | 9.5  | 5.5  | 8.0  | 5.5  |      | 3.0  | 11.0 | 1.5  | 7.0  | 2.0  |      | 8.5  |      | 7.0 | 1.5 | 4.0 |      | 8.5  | 7.0  |
| 17-18 | 4.0  | 6.0  | 10.5 |      | 7.0  | 9.0  |      | 6.5  |      | 2.5  | 9.0  | 7.5  | 6.0  | 10.0 | 5.0  |      |      | 0.5 | 3.5 | 6.0 | 8.0  | 9.0  |      |
| 18-19 | 2.5  | 10.5 | 8.0  | 11.5 |      | 7.0  |      | 8.0  | 4.0  | 2.0  | 6.5  |      | 4.5  | 2.5  | 10.0 | 3.5  |      | 2.5 | 5.5 | 8.0 | 11.5 | 9.5  |      |
| 19-20 | 12.0 |      | 5.0  | 9.0  | 12.5 | 5.5  | 0.5  | 9.0  |      | 1.5  | 4.5  | 4.5  | 3.5  | 10.5 |      | 8.5  | 4.0  | 4.5 | 7.5 | 1.5 |      | 10.0 | 10.5 |
| 20-21 | 10.5 |      |      | 6.0  | 9.5  | 9.0  | 2.5  | 10.0 |      | 1.0  | 2.0  | 10.5 | 2.5  | 3.0  | 5.0  |      |      | 6.5 | 1.0 | 3.5 |      | 10.5 | 8.5  |
| 21-22 | 9.5  | 9.5  | 10.5 |      | 7.0  | 7.0  | 4.0  |      | 4.5  |      | 10.5 | 1.5  | 1.5  | 11.0 | 10.0 | 3.5  |      | 8.5 | 3.0 | 5.5 | 7.5  | 11.0 |      |
| 22-23 | 8.0  |      | 8.0  | 11.5 |      | 5.5  | 6.0  |      |      |      | 8.5  | 7.5  | 0.5  | 3.0  | 0.5  | 8.0  | 2.0  | 2.0 | 5.0 | 7.5 | 10.5 | 11.5 |      |
| 23-24 | 6.5  |      | 5.5  | 9.0  |      | 9.0  | 8.0  | 1.0  |      |      | 6.0  |      | 11.0 | 11.5 | 5.5  |      |      | 4.0 | 7.0 | 1.0 |      | 12.0 | 12.0 |
| 24-25 | 5.0  | 8.5  |      | 6.5  | 10.0 | 7.0  | 9.5  | 2.0  | 5.0  |      | 4.0  | 4.5  | 10.0 | 3.5  | 10.5 | 3.5  |      | 6.0 | 9.0 | 3.0 |      |      | 9.5  |
| 25-26 | 3.5  |      | 11.0 |      | 7.5  | 5.5  |      | 3.5  |      |      | 1.5  | 11.0 | 9.0  |      | 1.0  | 8.0  |      | 8.0 | 2.5 | 5.0 | 6.5  |      | 7.0  |
| 26-27 | 2.0  |      | 8.5  | 12.0 | 5.0  | 9.0  |      | 4.5  |      |      | 10.0 | 2.0  | 7.5  | 4.0  | 6.0  |      | 3.5  | 1.5 | 4.5 | 7.0 | 9.5  |      |      |
| 27-28 | 12.0 | 7.5  | 6.0  | 9.5  |      | 7.0  | 2.0  | 5.5  | 5.5  | 9.0  | 8.0  | 8.0  | 6.5  |      |      | 3.0  |      | 3.5 | 6.5 | 0.5 |      |      |      |
| 28-29 | 10.5 | 12.0 |      | 7.0  | 10.5 | 5.5  | 4.0  | 6.5  |      | 8.5  | 5.5  |      | 5.5  | 4.5  | 1.5  | 8.0  |      | 5.5 | 8.5 | 2.5 |      |      | 11.0 |
| 29-30 | 9.0  |      | 11.5 |      | 7.5  | 9.0  | 5.5  | 8.0  |      | 8.0  | 3.0  | 5.0  | 4.5  |      | 6.0  |      | 1.5  | 7.5 | 1.5 | 4.5 | 5.5  |      | 8.5  |
| 30-31 | 7.5  | 6.5  | 8.5  | 12.5 | 5.0  | 7.0  | 7.5  | 9.0  | 5.5  | 7.5  | 1.0  | 11.0 | 3.5  | 5.0  |      | 3.0  |      | 1.0 | 4.0 | 6.5 | 9.0  |      |      |

all times in U.T.

|      | AV   | BH   | KZ   | DF   | RV   | TU   |
|------|------|------|------|------|------|------|
|      | PEG  | PEG  | PUP  | SER  | UMA  | UMA  |
| MAX  | 9.9  | 10.0 | 11.3 | 11.4 | 10.1 | 9.2  |
| MIN  | 10.9 | 10.8 | 12.8 | 13.0 | 11.2 | 10.2 |
| RISE | 2    | 3    | 3    | 2    | 3    | 3    |

|       |      |      |     |      |      |      |
|-------|------|------|-----|------|------|------|
| 0- 1  |      |      |     | 7.0  | 7.0  | 10.5 |
| 1- 2  | 9.5  |      |     | 4.0  | 5.5  |      |
| 2- 3  |      |      |     | 11.5 | 3.5  | 3.0  |
| 3- 4  |      |      |     | 8.5  | 2.0  | 5.5  |
| 4- 5  |      |      |     | 5.5  | 0.5  | 8.5  |
| 5- 6  |      |      |     |      | 10.5 | 11.0 |
| 6- 7  | 11.5 |      |     | 10.0 | 9.0  | 0.5  |
| 7- 8  |      |      |     | 7.0  | 7.5  | 3.0  |
| 8- 9  | 10.5 |      |     | 4.0  | 6.0  | 6.0  |
| 9-10  |      |      |     | 11.5 | 4.0  | 9.0  |
| 10-11 |      |      |     | 9.0  | 2.5  | 11.5 |
| 11-12 |      |      |     | 6.0  | 1.0  | 1.0  |
| 12-13 |      | 12.0 |     |      | 11.0 | 3.5  |
| 13-14 | 12.0 |      |     | 10.5 | 9.5  | 6.5  |
| 14-15 |      |      |     | 7.5  | 8.0  | 9.0  |
| 15-16 | 11.0 |      | 0.5 | 4.5  | 6.5  | 12.0 |
| 16-17 |      |      |     | 12.0 | 4.5  | 1.5  |
| 17-18 | 10.0 |      | 1.0 | 9.0  | 3.0  | 4.0  |
| 18-19 |      |      |     | 6.0  | 1.5  | 7.0  |
| 19-20 |      |      | 1.5 |      | 11.5 | 9.5  |
| 20-21 |      |      |     | 10.5 | 10.0 | 12.5 |
| 21-22 |      | 11.5 | 2.0 | 7.5  | 8.5  | 2.0  |
| 22-23 | 11.5 |      |     | 4.5  | 7.0  | 4.5  |
| 23-24 |      |      | 2.5 | 12.0 | 5.0  | 7.5  |
| 24-25 | 10.5 |      |     | 9.0  | 3.5  | 10.0 |
| 25-26 |      |      | 3.0 | 6.0  | 2.0  |      |
| 26-27 |      |      |     |      | 0.5  | 2.5  |
| 27-28 |      |      | 3.5 | 10.5 | 10.5 | 5.0  |
| 28-29 |      |      |     | 7.5  | 9.0  | 8.0  |
| 29-30 | 12.5 |      | 4.0 | 4.5  | 7.5  | 10.5 |
| 30-31 |      |      |     | 12.0 | 5.5  |      |