



Ephemeriden für Sternfreunde

von Karl-Heinz Bücke

www.buecke-info.de

Mars

Januar 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_v | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|-------|-------|------|--------|-------|-------|-------|-------|--------|------|-------|
| 1 | 8:20 | 23.5° | 3.9° | 0.657 | 14.2" | -1.0 | 12.9° | 0.987 | 0.2" | -7.8° | 12.7° | 93° | 9.9° | 23.7° | 109.2° | 1.6° | 1.613 |
| 3 | 8:18 | 23.8° | 4.0° | 0.653 | 14.3" | -1.0 | 11.3° | 0.990 | 0.1" | -8.2° | 12.4° | 91° | 10.3° | 24.6° | 110.2° | 1.6° | 1.615 |
| 5 | 8:15 | 24.0° | 4.0° | 0.649 | 14.4" | -1.1 | 9.7° | 0.993 | 0.1" | -8.7° | 12.1° | 88° | 10.7° | 25.6° | 111.1° | 1.6° | 1.616 |
| 7 | 8:12 | 24.2° | 4.1° | 0.646 | 14.5" | -1.1 | 8.1° | 0.995 | 0.1" | -9.1° | 11.7° | 85° | 11.0° | 26.5° | 112.0° | 1.6° | 1.618 |
| 9 | 8:08 | 24.4° | 4.2° | 0.644 | 14.5" | -1.1 | 6.6° | 0.997 | 0.0" | -9.6° | 11.4° | 80° | 11.4° | 27.4° | 112.9° | 1.7° | 1.620 |
| 11 | 8:05 | 24.6° | 4.2° | 0.643 | 14.6" | -1.1 | 5.1° | 0.998 | 0.0" | -10.1° | 11.1° | 72° | 11.7° | 28.3° | 113.9° | 1.7° | 1.622 |
| 13 | 8:02 | 24.8° | 4.2° | 0.643 | 14.6" | -1.2 | 3.7° | 0.999 | 0.0" | -10.6° | 10.7° | 57° | 12.1° | 29.3° | 114.8° | 1.7° | 1.624 |
| 15 | 7:58 | 25.0° | 4.3° | 0.643 | 14.6" | -1.2 | 2.8° | 0.999 | 0.0" | -11.1° | 10.4° | 31° | 12.4° | 30.2° | 115.7° | 1.7° | 1.625 |
| 17 | 7:55 | 25.2° | 4.3° | 0.645 | 14.5" | -1.2 | 2.7° | 0.999 | 0.0" | -11.6° | 10.1° | -6° | 12.8° | 31.1° | 116.6° | 1.7° | 1.627 |
| 19 | 7:52 | 25.4° | 4.3° | 0.647 | 14.5" | -1.1 | 3.6° | 0.999 | 0.0" | -12.0° | 9.8° | -33° | 13.1° | 32.0° | 117.5° | 1.7° | 1.629 |
| 21 | 7:48 | 25.5° | 4.3° | 0.650 | 14.4" | -1.1 | 4.9° | 0.998 | 0.0" | -12.5° | 9.4° | -48° | 13.4° | 32.9° | 118.5° | 1.7° | 1.630 |
| 23 | 7:45 | 25.6° | 4.3° | 0.655 | 14.3" | -1.1 | 6.4° | 0.997 | 0.0" | -13.0° | 9.1° | -57° | 13.8° | 33.8° | 119.4° | 1.7° | 1.632 |
| 25 | 7:42 | 25.8° | 4.3° | 0.660 | 14.2" | -1.0 | 7.9° | 0.995 | 0.1" | -13.5° | 8.9° | -62° | 14.1° | 34.7° | 120.3° | 1.7° | 1.633 |
| 27 | 7:39 | 25.9° | 4.3° | 0.666 | 14.1" | -1.0 | 9.4° | 0.993 | 0.1" | -13.9° | 8.6° | -65° | 14.4° | 35.6° | 121.2° | 1.8° | 1.635 |
| 29 | 7:36 | 26.0° | 4.3° | 0.672 | 13.9" | -0.9 | 10.9° | 0.991 | 0.1" | -14.3° | 8.3° | -68° | 14.8° | 36.5° | 122.1° | 1.8° | 1.636 |
| 31 | 7:33 | 26.0° | 4.3° | 0.680 | 13.8" | -0.9 | 12.4° | 0.988 | 0.2" | -14.7° | 8.1° | -70° | 15.1° | 37.4° | 123.0° | 1.8° | 1.638 |

Februar 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_v | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|-------|-------|------|--------|-------|-------|-------|-------|--------|------|-------|
| 1 | 7:31 | 26.1° | 4.3° | 0.684 | 13.7" | -0.9 | 13.2° | 0.987 | 0.2" | -14.9° | 8.0° | -71° | 15.2° | 37.9° | 123.4° | 1.8° | 1.639 |
| 3 | 7:29 | 26.1° | 4.2° | 0.693 | 13.5" | -0.8 | 14.6° | 0.984 | 0.2" | -15.2° | 7.8° | -73° | 15.5° | 38.8° | 124.3° | 1.8° | 1.640 |
| 5 | 7:27 | 26.2° | 4.2° | 0.702 | 13.3" | -0.8 | 16.0° | 0.981 | 0.3" | -15.6° | 7.6° | -74° | 15.8° | 39.7° | 125.2° | 1.8° | 1.641 |
| 7 | 7:25 | 26.2° | 4.1° | 0.712 | 13.1" | -0.7 | 17.3° | 0.977 | 0.3" | -15.8° | 7.5° | -75° | 16.1° | 40.6° | 126.1° | 1.8° | 1.643 |
| 9 | 7:23 | 26.2° | 4.1° | 0.723 | 12.9" | -0.6 | 18.6° | 0.974 | 0.3" | -16.1° | 7.3° | -76° | 16.4° | 41.5° | 127.0° | 1.8° | 1.644 |
| 11 | 7:21 | 26.2° | 4.1° | 0.735 | 12.7" | -0.6 | 19.9° | 0.970 | 0.4" | -16.3° | 7.2° | -77° | 16.7° | 42.4° | 127.9° | 1.8° | 1.645 |
| 13 | 7:20 | 26.2° | 4.0° | 0.747 | 12.5" | -0.5 | 21.1° | 0.967 | 0.4" | -16.5° | 7.1° | -77° | 17.0° | 43.3° | 128.8° | 1.8° | 1.647 |
| 15 | 7:18 | 26.2° | 4.0° | 0.760 | 12.3" | -0.5 | 22.2° | 0.963 | 0.5" | -16.7° | 7.1° | -78° | 17.3° | 44.2° | 129.7° | 1.8° | 1.648 |
| 17 | 7:17 | 26.2° | 3.9° | 0.773 | 12.1" | -0.4 | 23.3° | 0.959 | 0.5" | -16.8° | 7.1° | -78° | 17.6° | 45.1° | 130.6° | 1.8° | 1.649 |
| 19 | 7:17 | 26.1° | 3.8° | 0.787 | 11.9" | -0.4 | 24.4° | 0.955 | 0.5" | -16.9° | 7.0° | -79° | 17.9° | 46.0° | 131.5° | 1.8° | 1.650 |
| 21 | 7:16 | 26.1° | 3.8° | 0.801 | 11.7" | -0.3 | 25.3° | 0.952 | 0.6" | -17.0° | 7.1° | -79° | 18.2° | 46.8° | 132.4° | 1.8° | 1.651 |
| 23 | 7:16 | 26.0° | 3.7° | 0.816 | 11.5" | -0.3 | 26.3° | 0.948 | 0.6" | -17.0° | 7.1° | -80° | 18.4° | 47.7° | 133.3° | 1.8° | 1.652 |
| 25 | 7:16 | 26.0° | 3.7° | 0.831 | 11.3" | -0.2 | 27.2° | 0.945 | 0.6" | -17.0° | 7.1° | -80° | 18.7° | 48.6° | 134.2° | 1.8° | 1.653 |
| 27 | 7:16 | 25.9° | 3.6° | 0.846 | 11.1" | -0.2 | 28.0° | 0.942 | 0.6" | -17.0° | 7.2° | -80° | 18.9° | 49.5° | 135.1° | 1.8° | 1.654 |

März 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_v | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|-------|-------|------|--------|-------|-------|-------|-------|--------|------|-------|
| 1 | 7:17 | 25.8° | 3.5° | 0.862 | 10.9" | -0.1 | 28.8° | 0.938 | 0.7" | -17.0° | 7.3° | -80° | 19.2° | 50.4° | 135.9° | 1.8° | 1.655 |
| 3 | 7:17 | 25.8° | 3.5° | 0.878 | 10.7" | 0.0 | 29.5° | 0.935 | 0.7" | -16.9° | 7.4° | -81° | 19.5° | 51.3° | 136.8° | 1.8° | 1.656 |
| 5 | 7:18 | 25.7° | 3.4° | 0.895 | 10.5" | 0.0 | 30.2° | 0.932 | 0.7" | -16.8° | 7.6° | -81° | 19.7° | 52.2° | 137.7° | 1.8° | 1.657 |
| 7 | 7:19 | 25.6° | 3.4° | 0.912 | 10.3" | 0.1 | 30.9° | 0.929 | 0.7" | -16.6° | 7.7° | -81° | 19.9° | 53.0° | 138.6° | 1.8° | 1.658 |
| 9 | 7:20 | 25.5° | 3.3° | 0.929 | 10.1" | 0.1 | 31.5° | 0.927 | 0.7" | -16.5° | 7.9° | -81° | 20.2° | 53.9° | 139.5° | 1.8° | 1.659 |
| 11 | 7:21 | 25.4° | 3.2° | 0.946 | 9.9" | 0.2 | 32.0° | 0.924 | 0.8" | -16.3° | 8.1° | -81° | 20.4° | 54.8° | 140.4° | 1.8° | 1.659 |
| 13 | 7:23 | 25.3° | 3.2° | 0.964 | 9.7" | 0.2 | 32.6° | 0.921 | 0.8" | -16.1° | 8.2° | -81° | 20.6° | 55.7° | 141.2° | 1.8° | 1.660 |
| 15 | 7:25 | 25.2° | 3.1° | 0.982 | 9.5" | 0.3 | 33.0° | 0.919 | 0.8" | -15.9° | 8.5° | -81° | 20.9° | 56.6° | 142.1° | 1.8° | 1.661 |
| 17 | 7:26 | 25.1° | 3.1° | 1.000 | 9.4" | 0.3 | 33.5° | 0.917 | 0.8" | -15.6° | 8.7° | -81° | 21.1° | 57.4° | 143.0° | 1.8° | 1.661 |
| 19 | 7:28 | 24.9° | 3.0° | 1.018 | 9.2" | 0.3 | 33.9° | 0.915 | 0.8" | -15.4° | 8.9° | -81° | 21.3° | 58.3° | 143.9° | 1.8° | 1.662 |
| 21 | 7:30 | 24.8° | 3.0° | 1.036 | 9.0" | 0.4 | 34.3° | 0.913 | 0.8" | -15.1° | 9.2° | -81° | 21.5° | 59.2° | 144.8° | 1.8° | 1.662 |
| 23 | 7:33 | 24.7° | 2.9° | 1.055 | 8.9" | 0.4 | 34.7° | 0.911 | 0.8" | -14.8° | 9.4° | -81° | 21.7° | 60.1° | 145.6° | 1.8° | 1.663 |
| 25 | 7:35 | 24.5° | 2.8° | 1.073 | 8.7" | 0.5 | 35.0° | 0.910 | 0.8" | -14.5° | 9.7° | -80° | 21.9° | 60.9° | 146.5° | 1.8° | 1.663 |
| 27 | 7:37 | 24.4° | 2.8° | 1.092 | 8.6" | 0.5 | 35.3° | 0.908 | 0.8" | -14.1° | 10.0° | -80° | 22.1° | 61.8° | 147.4° | 1.8° | 1.664 |
| 29 | 7:40 | 24.2° | 2.7° | 1.111 | 8.4" | 0.6 | 35.6° | 0.907 | 0.8" | -13.8° | 10.3° | -80° | 22.3° | 62.7° | 148.3° | 1.8° | 1.664 |
| 31 | 7:43 | 24.1° | 2.7° | 1.129 | 8.3" | 0.6 | 35.8° | 0.905 | 0.8" | -13.4° | 10.6° | -80° | 22.4° | 63.6° | 149.1° | 1.8° | 1.665 |

April 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_v | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|-------|-------|------|--------|-------|-------|-------|-------|--------|------|-------|
| 1 | 7:44 | 24.0° | 2.7° | 1.139 | 8.2" | 0.6 | 35.9° | 0.905 | 0.8" | -13.2° | 10.7° | -80° | 22.5° | 64.0° | 149.6° | 1.8° | 1.665 |
| 3 | 7:47 | 23.8° | 2.6° | 1.158 | 8.1" | 0.7 | 36.1° | 0.904 | 0.8" | -12.8° | 11.0° | -80° | 22.7° | 64.9° | 150.4° | 1.8° | 1.665 |
| 5 | 7:50 | 23.7° | 2.6° | 1.177 | 8.0" | 0.7 | 36.3° | 0.903 | 0.8" | -12.4° | 11.3° | -80° | 22.9° | 65.8° | 151.3° | 1.8° | 1.665 |
| 7 | 7:53 | 23.5° | 2.5° | 1.196 | 7.8" | 0.7 | 36.5° | 0.902 | 0.8" | -11.9° | 11.7° | -79° | 23.0° | 66.6° | 152.2° | 1.8° | 1.666 |
| 9 | 7:56 | 23.3° | 2.5° | 1.215 | 7.7" | 0.8 | 36.6° | 0.901 | 0.8" | -11.5° | 12.0° | -79° | 23.2° | 67.5° | 153.1° | 1.8° | 1.666 |
| 11 | 7:59 | 23.1° | 2.4° | 1.234 | 7.6" | 0.8 | 36.7° | 0.901 | 0.8" | -11.0° | 12.3° | -79° | 23.3° | 68.4° | 153.9° | 1.8° | 1.666 |
| 13 | 8:02 | 22.9° | 2.4° | 1.253 | 7.5" | 0.8 | 36.8° | 0.900 | 0.7" | -10.6° | 12.6° | -79° | 23.5° | 69.2° | 154.8° | 1.8° | 1.666 |
| 15 | 8:05 | 22.7° | 2.3° | 1.271 | 7.4" | 0.9 | 36.9° | 0.900 | 0.7" | -10.1° | 13.0° | -78° | 23.6° | 70.1° | 155.7° | 1.8° | 1.666 |
| 17 | 8:09 | 22.5° | 2.3° | 1.290 | 7.3" | 0.9 | 37.0° | 0.899 | 0.7" | -9.6° | 13.3° | -78° | 23.8° | 71.0° | 156.6° | 1.8° | 1.666 |
| 19 | 8:12 | 22.3° | 2.2° | 1.309 | 7.1" | 0.9 | 37.1° | 0.899 | 0.7" | -9.1° | 13.7° | -78° | 23.9° | 71.9° | 157.4° | 1.8° | 1.666 |
| 21 | 8:16 | 22.0° | 2.2° | 1.328 | 7.0" | 1.0 | 37.1° | 0.899 | 0.7" | -8.6° | 14.0° | -78° | 24.0° | 72.7° | 158.3° | 1.8° | 1.666 |
| 23 | 8:19 | 21.8° | 2.2° | 1.347 | 6.9" | 1.0 | 37.1° | 0.899 | 0.7" | -8.0° | 14.4° | -77° | 24.1° | 73.6° | 159.2° | 1.7° | 1.666 |
| 25 | 8:23 | 21.6° | 2.1° | 1.366 | 6.9" | 1.0 | 37.1° | 0.899 | 0.7" | -7.5° | 14.7° | -77° | 24.2° | 74.5° | 160.0° | 1.7° | 1.666 |
| 27 | 8:27 | 21.3° | 2.1° | 1.384 | 6.8" | 1.1 | 37.1° | 0.899 | 0.7" | -7.0° | 15.1° | -77° | 24.3° | 75.4° | 160.9° | 1.7° | 1.666 |
| 29 | 8:30 | 21.1° | 2.0° | 1.403 | 6.7" | 1.1 | 37.1° | 0.899 | 0.7" | -6.4° | 15.4° | -77° | 24.4° | 76.2° | 161.8° | 1.7° | 1.665 |

Mai 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_v | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|-------|-------|------|-------|-------|-------|-------|-------|--------|------|-------|
| 1 | 8:34 | 20.8° | 2.0° | 1.422 | 6.6" | 1.1 | 37.0° | 0.899 | 0.7" | -5.8° | 15.8° | -76° | 24.5° | 77.1° | 162.7° | 1.7° | 1.665 |
| 3 | 8:38 | 20.5° | 2.0° | 1.440 | 6.5" | 1.1 | 37.0° | 0.899 | 0.7" | -5.3° | 16.1° | -76° | 24.6° | 78.0° | 163.5° | 1.7° | 1.665 |
| 5 | 8:42 | 20.3° | 1.9° | 1.458 | 6.4" | 1.2 | 36.9° | 0.900 | 0.6" | -4.7° | 16.5° | -76° | 24.7° | 78.9° | 164.4° | 1.7° | 1.664 |
| 7 | 8:45 | 20.0° | 1.9° | 1.477 | 6.3" | 1.2 | 36.9° | 0.900 | 0.6" | -4.1° | 16.8° | -76° | 24.8° | 79.7° | 165.3° | 1.7° | 1.664 |
| 9 | 8:49 | 19.7° | 1.8° | 1.495 | 6.3" | 1.2 | 36.8° | 0.900 | 0.6" | -3.5° | 17.2° | -75° | 24.8° | 80.6° | 166.2° | 1.7° | 1.664 |
| 11 | 8:53 | 19.4° | 1.8° | 1.513 | 6.2" | 1.2 | 36.7° | 0.901 | 0.6" | -2.9° | 17.5° | -75° | 24.9° | 81.5° | 167.0° | 1.6° | 1.663 |
| 13 | 8:57 | 19.1° | 1.8° | 1.531 | 6.1" | 1.3 | 36.6° | 0.901 | 0.6" | -2.3° | 17.9° | -75° | 25.0° | 82.4° | 167.9° | 1.6° | 1.663 |
| 15 | 9:01 | 18.8° | 1.7° | 1.549 | 6.0" | 1.3 | 36.5° | 0.902 | 0.6" | -1.6° | 18.2° | -74° | 25.0° | 83.2° | 168.8° | 1.6° | 1.662 |
| 17 | 9:05 | 18.5° | 1.7° | 1.566 | 6.0" | 1.3 | 36.4° | 0.903 | 0.6" | -1.0° | 18.6° | -74° | 25.1° | 84.1° | 169.7° | 1.6° | 1.662 |
| 19 | 9:09 | 18.1° | 1.7° | 1.584 | 5.9" | 1.3 | 36.2° | 0.903 | 0.6" | -0.4° | 18.9° | -74° | 25.1° | 85.0° | 170.6° | 1.6° | 1.661 |
| 21 | 9:13 | 17.8° | 1.6° | 1.601 | 5.8" | 1.4 | 36.1° | 0.904 | 0.6" | 0.3° | 19.2° | -74° | 25.1° | 85.9° | 171.4° | 1.6° | 1.660 |
| 23 | 9:17 | 17.5° | 1.6° | 1.619 | 5.8" | 1.4 | 35.9° | 0.905 | 0.6" | 0.9° | 19.6° | -73° | 25.2° | 86.7° | 172.3° | 1.6° | 1.660 |
| 25 | 9:21 | 17.1° | 1.6° | 1.636 | 5.7" | 1.4 | 35.8° | 0.906 | 0.5" | 1.6° | 19.9° | -73° | 25.2° | 87.6° | 173.2° | 1.5° | 1.659 |
| 27 | 9:25 | 16.8° | 1.5° | 1.653 | 5.7" | 1.4 | 35.6° | 0.906 | 0.5" | 2.3° | 20.2° | -73° | 25.2° | 88.5° | 174.1° | 1.5° | 1.658 |
| 29 | 9:30 | 16.4° | 1.5° | 1.670 | 5.6" | 1.4 | 35.5° | 0.907 | 0.5" | 2.9° | 20.5° | -73° | 25.2° | 89.4° | 175.0° | 1.5° | 1.657 |
| 31 | 9:34 | 16.0° | 1.5° | 1.687 | 5.5" | 1.5 | 35.3° | 0.908 | 0.5" | 3.6° | 20.8° | -72° | 25.2° | 90.3° | 175.8° | 1.5° | 1.656 |

Juni 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_v | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|-------|-------|------|-------|-------|-------|-------|--------|--------|------|-------|
| 1 | 9:36 | 15.8° | 1.5° | 1.695 | 5.5" | 1.5 | 35.2° | 0.909 | 0.5" | 3.9° | 21.0° | -72° | 25.2° | 90.7° | 176.3° | 1.5° | 1.656 |
| 3 | 9:40 | 15.5° | 1.4° | 1.711 | 5.5" | 1.5 | 35.0° | 0.910 | 0.5" | 4.6° | 21.3° | -72° | 25.2° | 91.6° | 177.2° | 1.5° | 1.655 |
| 5 | 9:44 | 15.1° | 1.4° | 1.728 | 5.4" | 1.5 | 34.8° | 0.910 | 0.5" | 5.3° | 21.6° | -72° | 25.2° | 92.5° | 178.0° | 1.5° | 1.654 |
| 7 | 9:48 | 14.7° | 1.4° | 1.744 | 5.4" | 1.5 | 34.6° | 0.911 | 0.5" | 6.0° | 21.9° | -72° | 25.1° | 93.4° | 178.9° | 1.4° | 1.653 |
| 9 | 9:52 | 14.3° | 1.3° | 1.760 | 5.3" | 1.5 | 34.4° | 0.912 | 0.5" | 6.7° | 22.1° | -71° | 25.1° | 94.3° | 179.8° | 1.4° | 1.652 |
| 11 | 9:57 | 13.9° | 1.3° | 1.776 | 5.3" | 1.5 | 34.2° | 0.913 | 0.5" | 7.3° | 22.4° | -71° | 25.1° | 95.1° | 180.7° | 1.4° | 1.651 |
| 13 | 10:01 | 13.5° | 1.3° | 1.791 | 5.2" | 1.6 | 34.0° | 0.915 | 0.4" | 8.0° | 22.7° | -71° | 25.0° | 96.0° | 181.6° | 1.4° | 1.650 |
| 15 | 10:05 | 13.1° | 1.2° | 1.807 | 5.2" | 1.6 | 33.8° | 0.916 | 0.4" | 8.7° | 22.9° | -71° | 25.0° | 96.9° | 182.5° | 1.4° | 1.649 |
| 17 | 10:09 | 12.7° | 1.2° | 1.822 | 5.1" | 1.6 | 33.6° | 0.917 | 0.4" | 9.4° | 23.2° | -70° | 24.9° | 97.8° | 183.4° | 1.3° | 1.648 |
| 19 | 10:14 | 12.2° | 1.2° | 1.838 | 5.1" | 1.6 | 33.3° | 0.918 | 0.4" | 10.1° | 23.4° | -70° | 24.9° | 98.7° | 184.3° | 1.3° | 1.647 |
| 21 | 10:18 | 11.8° | 1.2° | 1.853 | 5.1" | 1.6 | 33.1° | 0.919 | 0.4" | 10.8° | 23.7° | -70° | 24.8° | 99.6° | 185.2° | 1.3° | 1.645 |
| 23 | 10:22 | 11.4° | 1.1° | 1.867 | 5.0" | 1.6 | 32.9° | 0.920 | 0.4" | 11.5° | 23.9° | -70° | 24.7° | 100.5° | 186.1° | 1.3° | 1.644 |
| 25 | 10:26 | 10.9° | 1.1° | 1.882 | 5.0" | 1.6 | 32.6° | 0.921 | 0.4" | 12.2° | 24.1° | -70° | 24.6° | 101.4° | 187.0° | 1.3° | 1.643 |
| 27 | 10:31 | 10.5° | 1.1° | 1.896 | 4.9" | 1.6 | 32.4° | 0.922 | 0.4" | 13.0° | 24.3° | -70° | 24.6° | 102.3° | 187.9° | 1.2° | 1.641 |
| 29 | 10:35 | 10.0° | 1.0° | 1.911 | 4.9" | 1.7 | 32.1° | 0.923 | 0.4" | 13.7° | 24.5° | -69° | 24.5° | 103.2° | 188.8° | 1.2° | 1.640 |

Juli 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_V | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|-------|-------|------|-------|-------|-------|-------|--------|--------|------|-------|
| 1 | 10:39 | 9.6° | 1.0° | 1.925 | 4.9" | 1.7 | 31.9° | 0.925 | 0.4" | 14.4° | 24.7° | -69° | 24.4° | 104.1° | 189.7° | 1.2° | 1.639 |
| 3 | 10:44 | 9.1° | 1.0° | 1.939 | 4.8" | 1.7 | 31.6° | 0.926 | 0.4" | 15.1° | 24.9° | -69° | 24.3° | 105.0° | 190.6° | 1.2° | 1.637 |
| 5 | 10:48 | 8.7° | 1.0° | 1.952 | 4.8" | 1.7 | 31.4° | 0.927 | 0.4" | 15.8° | 25.0° | -69° | 24.1° | 105.9° | 191.5° | 1.1° | 1.636 |
| 7 | 10:52 | 8.2° | 0.9° | 1.966 | 4.8" | 1.7 | 31.1° | 0.928 | 0.3" | 16.5° | 25.2° | -69° | 24.0° | 106.8° | 192.4° | 1.1° | 1.634 |
| 9 | 10:57 | 7.7° | 0.9° | 1.979 | 4.7" | 1.7 | 30.8° | 0.929 | 0.3" | 17.2° | 25.3° | -69° | 23.9° | 107.7° | 193.3° | 1.1° | 1.633 |
| 11 | 11:01 | 7.2° | 0.9° | 1.992 | 4.7" | 1.7 | 30.6° | 0.931 | 0.3" | 17.9° | 25.4° | -68° | 23.8° | 108.6° | 194.2° | 1.1° | 1.631 |
| 13 | 11:05 | 6.8° | 0.9° | 2.005 | 4.7" | 1.7 | 30.3° | 0.932 | 0.3" | 18.6° | 25.6° | -68° | 23.6° | 109.5° | 195.1° | 1.1° | 1.629 |
| 15 | 11:10 | 6.3° | 0.8° | 2.018 | 4.6" | 1.7 | 30.0° | 0.933 | 0.3" | 19.3° | 25.7° | -68° | 23.5° | 110.4° | 196.0° | 1.0° | 1.628 |
| 17 | 11:14 | 5.8° | 0.8° | 2.030 | 4.6" | 1.7 | 29.7° | 0.934 | 0.3" | 20.0° | 25.8° | -68° | 23.3° | 111.4° | 196.9° | 1.0° | 1.626 |
| 19 | 11:19 | 5.3° | 0.8° | 2.043 | 4.6" | 1.7 | 29.4° | 0.935 | 0.3" | 20.6° | 25.8° | -68° | 23.2° | 112.3° | 197.9° | 1.0° | 1.624 |
| 21 | 11:23 | 4.8° | 0.8° | 2.055 | 4.6" | 1.7 | 29.2° | 0.937 | 0.3" | 21.3° | 25.9° | -68° | 23.0° | 113.2° | 198.8° | 1.0° | 1.623 |
| 23 | 11:27 | 4.3° | 0.7° | 2.067 | 4.5" | 1.8 | 28.9° | 0.938 | 0.3" | 22.0° | 26.0° | -68° | 22.8° | 114.1° | 199.7° | 0.9° | 1.621 |
| 25 | 11:32 | 3.8° | 0.7° | 2.078 | 4.5" | 1.8 | 28.6° | 0.939 | 0.3" | 22.7° | 26.0° | -68° | 22.6° | 115.0° | 200.6° | 0.9° | 1.619 |
| 27 | 11:36 | 3.3° | 0.7° | 2.090 | 4.5" | 1.8 | 28.3° | 0.940 | 0.3" | 23.3° | 26.0° | -68° | 22.5° | 116.0° | 201.5° | 0.9° | 1.617 |
| 29 | 11:41 | 2.8° | 0.7° | 2.101 | 4.5" | 1.8 | 28.0° | 0.941 | 0.3" | 24.0° | 26.1° | -68° | 22.3° | 116.9° | 202.5° | 0.8° | 1.615 |
| 31 | 11:45 | 2.3° | 0.6° | 2.112 | 4.4" | 1.8 | 27.7° | 0.943 | 0.3" | 24.6° | 26.1° | -68° | 22.1° | 117.8° | 203.4° | 0.8° | 1.613 |

August 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_V | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|-------|-------|------|-------|-------|-------|-------|--------|--------|------|-------|
| 1 | 11:47 | 2.0° | 0.6° | 2.118 | 4.4" | 1.8 | 27.5° | 0.943 | 0.3" | 25.0° | 26.1° | -68° | 22.0° | 118.3° | 203.9° | 0.8° | 1.612 |
| 3 | 11:52 | 1.5° | 0.6° | 2.129 | 4.4" | 1.8 | 27.2° | 0.945 | 0.2" | 25.6° | 26.0° | -68° | 21.8° | 119.2° | 204.8° | 0.8° | 1.611 |
| 5 | 11:56 | 1.0° | 0.6° | 2.139 | 4.4" | 1.8 | 26.9° | 0.946 | 0.2" | 26.2° | 26.0° | -68° | 21.6° | 120.2° | 205.7° | 0.8° | 1.609 |
| 7 | 12:01 | 0.5° | 0.5° | 2.150 | 4.4" | 1.8 | 26.6° | 0.947 | 0.2" | 26.8° | 26.0° | -68° | 21.3° | 121.1° | 206.7° | 0.7° | 1.607 |
| 9 | 12:06 | 0.0° | 0.5° | 2.160 | 4.3" | 1.8 | 26.3° | 0.948 | 0.2" | 27.5° | 25.9° | -68° | 21.1° | 122.0° | 207.6° | 0.7° | 1.605 |
| 11 | 12:10 | -0.6° | 0.5° | 2.170 | 4.3" | 1.8 | 26.0° | 0.949 | 0.2" | 28.1° | 25.8° | -68° | 20.9° | 123.0° | 208.6° | 0.7° | 1.603 |
| 13 | 12:15 | -1.1° | 0.5° | 2.180 | 4.3" | 1.8 | 25.7° | 0.950 | 0.2" | 28.6° | 25.8° | -68° | 20.6° | 123.9° | 209.5° | 0.6° | 1.600 |
| 15 | 12:19 | -1.6° | 0.4° | 2.189 | 4.3" | 1.8 | 25.4° | 0.952 | 0.2" | 29.2° | 25.7° | -68° | 20.4° | 124.9° | 210.4° | 0.6° | 1.598 |
| 17 | 12:24 | -2.1° | 0.4° | 2.198 | 4.3" | 1.8 | 25.1° | 0.953 | 0.2" | 29.8° | 25.6° | -68° | 20.1° | 125.8° | 211.4° | 0.6° | 1.596 |
| 19 | 12:28 | -2.6° | 0.4° | 2.208 | 4.2" | 1.8 | 24.8° | 0.954 | 0.2" | 30.3° | 25.4° | -68° | 19.9° | 126.8° | 212.3° | 0.6° | 1.594 |
| 21 | 12:33 | -3.2° | 0.4° | 2.217 | 4.2" | 1.8 | 24.4° | 0.955 | 0.2" | 30.9° | 25.3° | -68° | 19.6° | 127.7° | 213.3° | 0.5° | 1.592 |
| 23 | 12:38 | -3.7° | 0.4° | 2.225 | 4.2" | 1.8 | 24.1° | 0.956 | 0.2" | 31.4° | 25.1° | -68° | 19.4° | 128.7° | 214.3° | 0.5° | 1.590 |
| 25 | 12:42 | -4.2° | 0.3° | 2.234 | 4.2" | 1.8 | 23.8° | 0.957 | 0.2" | 31.9° | 25.0° | -68° | 19.1° | 129.6° | 215.2° | 0.5° | 1.588 |
| 27 | 12:47 | -4.7° | 0.3° | 2.242 | 4.2" | 1.8 | 23.5° | 0.959 | 0.2" | 32.4° | 24.8° | -68° | 18.8° | 130.6° | 216.2° | 0.4° | 1.585 |
| 29 | 12:52 | -5.3° | 0.3° | 2.250 | 4.2" | 1.8 | 23.2° | 0.960 | 0.2" | 32.9° | 24.6° | -68° | 18.5° | 131.6° | 217.1° | 0.4° | 1.583 |
| 31 | 12:57 | -5.8° | 0.3° | 2.258 | 4.1" | 1.8 | 22.8° | 0.961 | 0.2" | 33.4° | 24.4° | -68° | 18.2° | 132.5° | 218.1° | 0.4° | 1.581 |

September 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_V | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|-------|-------|------|-------|-------|-------|-------|--------|--------|-------|-------|
| 1 | 12:59 | -6.0° | 0.2° | 2.262 | 4.1" | 1.8 | 22.7° | 0.961 | 0.2" | 33.6° | 24.3° | -68° | 18.1° | 133.0° | 218.6° | 0.4° | 1.580 |
| 3 | 13:04 | -6.6° | 0.2° | 2.270 | 4.1" | 1.8 | 22.3° | 0.962 | 0.2" | 34.0° | 24.0° | -68° | 17.8° | 134.0° | 219.6° | 0.3° | 1.577 |
| 5 | 13:09 | -7.1° | 0.2° | 2.277 | 4.1" | 1.8 | 22.0° | 0.964 | 0.1" | 34.5° | 23.8° | -68° | 17.5° | 135.0° | 220.5° | 0.3° | 1.575 |
| 7 | 13:14 | -7.6° | 0.2° | 2.285 | 4.1" | 1.8 | 21.7° | 0.965 | 0.1" | 34.9° | 23.5° | -69° | 17.2° | 135.9° | 221.5° | 0.3° | 1.573 |
| 9 | 13:18 | -8.1° | 0.2° | 2.292 | 4.1" | 1.8 | 21.3° | 0.966 | 0.1" | 35.3° | 23.2° | -69° | 16.8° | 136.9° | 222.5° | 0.2° | 1.570 |
| 11 | 13:23 | -8.6° | 0.1° | 2.298 | 4.1" | 1.8 | 21.0° | 0.967 | 0.1" | 35.6° | 23.0° | -69° | 16.5° | 137.9° | 223.5° | 0.2° | 1.568 |
| 13 | 13:28 | -9.1° | 0.1° | 2.305 | 4.1" | 1.8 | 20.7° | 0.968 | 0.1" | 36.0° | 22.7° | -69° | 16.2° | 138.9° | 224.5° | 0.2° | 1.565 |
| 15 | 13:33 | -9.6° | 0.1° | 2.312 | 4.0" | 1.8 | 20.3° | 0.969 | 0.1" | 36.3° | 22.3° | -69° | 15.8° | 139.9° | 225.5° | 0.1° | 1.563 |
| 17 | 13:38 | -10.1° | 0.1° | 2.318 | 4.0" | 1.8 | 20.0° | 0.970 | 0.1" | 36.6° | 22.0° | -69° | 15.5° | 140.9° | 226.5° | 0.1° | 1.561 |
| 19 | 13:43 | -10.6° | 0.0° | 2.324 | 4.0" | 1.8 | 19.7° | 0.971 | 0.1" | 36.9° | 21.7° | -70° | 15.2° | 141.9° | 227.5° | 0.1° | 1.558 |
| 21 | 13:48 | -11.1° | 0.0° | 2.330 | 4.0" | 1.8 | 19.3° | 0.972 | 0.1" | 37.2° | 21.3° | -70° | 14.8° | 142.9° | 228.4° | 0.0° | 1.556 |
| 23 | 13:53 | -11.6° | 0.0° | 2.335 | 4.0" | 1.8 | 19.0° | 0.973 | 0.1" | 37.4° | 21.0° | -70° | 14.5° | 143.9° | 229.5° | 0.0° | 1.553 |
| 25 | 13:59 | -12.1° | 0.0° | 2.341 | 4.0" | 1.8 | 18.6° | 0.974 | 0.1" | 37.7° | 20.6° | -70° | 14.1° | 144.9° | 230.5° | 0.0° | 1.551 |
| 27 | 14:04 | -12.6° | 0.0° | 2.346 | 4.0" | 1.8 | 18.3° | 0.975 | 0.1" | 37.9° | 20.2° | -70° | 13.7° | 145.9° | 231.5° | -0.1° | 1.548 |
| 29 | 14:09 | -13.1° | -0.1° | 2.351 | 4.0" | 1.8 | 18.0° | 0.976 | 0.1" | 38.0° | 19.8° | -71° | 13.4° | 146.9° | 232.5° | -0.1° | 1.546 |

Oktober 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_v | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|-------|-------|------|-------|-------|-------|-------|--------|--------|-------|-------|
| 1 | 14:14 | -13.6° | -0.1° | 2.356 | 4.0" | 1.8 | 17.6° | 0.977 | 0.1" | 38.2° | 19.4° | -71° | 13.0° | 147.9° | 233.5° | -0.1° | 1.543 |
| 3 | 14:19 | -14.0° | -0.1° | 2.361 | 4.0" | 1.8 | 17.3° | 0.977 | 0.1" | 38.3° | 19.0° | -71° | 12.6° | 148.9° | 234.5° | -0.2° | 1.540 |
| 5 | 14:25 | -14.5° | -0.1° | 2.365 | 4.0" | 1.8 | 16.9° | 0.978 | 0.1" | 38.5° | 18.5° | -72° | 12.2° | 150.0° | 235.5° | -0.2° | 1.538 |
| 7 | 14:30 | -14.9° | -0.1° | 2.370 | 3.9" | 1.8 | 16.6° | 0.979 | 0.1" | 38.5° | 18.1° | -72° | 11.8° | 151.0° | 236.6° | -0.2° | 1.535 |
| 9 | 14:35 | -15.4° | -0.2° | 2.374 | 3.9" | 1.7 | 16.2° | 0.980 | 0.1" | 38.6° | 17.6° | -72° | 11.4° | 152.0° | 237.6° | -0.3° | 1.533 |
| 11 | 14:41 | -15.8° | -0.2° | 2.378 | 3.9" | 1.7 | 15.9° | 0.981 | 0.1" | 38.6° | 17.1° | -72° | 11.0° | 153.1° | 238.6° | -0.3° | 1.530 |
| 13 | 14:46 | -16.3° | -0.2° | 2.382 | 3.9" | 1.7 | 15.5° | 0.982 | 0.1" | 38.7° | 16.7° | -73° | 10.6° | 154.1° | 239.7° | -0.3° | 1.528 |
| 15 | 14:52 | -16.7° | -0.2° | 2.385 | 3.9" | 1.7 | 15.2° | 0.983 | 0.1" | 38.7° | 16.2° | -73° | 10.2° | 155.1° | 240.7° | -0.4° | 1.525 |
| 17 | 14:57 | -17.1° | -0.2° | 2.389 | 3.9" | 1.7 | 14.8° | 0.983 | 0.1" | 38.6° | 15.7° | -73° | 9.8° | 156.2° | 241.7° | -0.4° | 1.522 |
| 19 | 15:03 | -17.5° | -0.3° | 2.392 | 3.9" | 1.7 | 14.5° | 0.984 | 0.1" | 38.6° | 15.2° | -74° | 9.4° | 157.2° | 242.8° | -0.4° | 1.520 |
| 21 | 15:09 | -17.9° | -0.3° | 2.395 | 3.9" | 1.7 | 14.1° | 0.985 | 0.1" | 38.5° | 14.6° | -74° | 9.0° | 158.3° | 243.8° | -0.4° | 1.517 |
| 23 | 15:14 | -18.3° | -0.3° | 2.398 | 3.9" | 1.7 | 13.8° | 0.986 | 0.1" | 38.4° | 14.1° | -74° | 8.6° | 159.3° | 244.9° | -0.5° | 1.515 |
| 25 | 15:20 | -18.7° | -0.3° | 2.401 | 3.9" | 1.7 | 13.4° | 0.986 | 0.1" | 38.2° | 13.6° | -75° | 8.1° | 160.4° | 245.9° | -0.5° | 1.512 |
| 27 | 15:26 | -19.1° | -0.3° | 2.403 | 3.9" | 1.7 | 13.1° | 0.987 | 0.1" | 38.1° | 13.0° | -75° | 7.7° | 161.4° | 247.0° | -0.5° | 1.509 |
| 29 | 15:32 | -19.5° | -0.4° | 2.406 | 3.9" | 1.7 | 12.7° | 0.988 | 0.0" | 37.9° | 12.5° | -76° | 7.3° | 162.5° | 248.1° | -0.6° | 1.507 |
| 31 | 15:37 | -19.8° | -0.4° | 2.408 | 3.9" | 1.7 | 12.4° | 0.988 | 0.0" | 37.7° | 11.9° | -76° | 6.8° | 163.6° | 249.1° | -0.6° | 1.504 |

November 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_v | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|-------|-------|------|-------|-------|-------|-------|--------|--------|-------|-------|
| 1 | 15:40 | -20.0° | -0.4° | 2.409 | 3.9" | 1.7 | 12.2° | 0.989 | 0.0" | 37.6° | 11.6° | -76° | 6.6° | 164.1° | 249.7° | -0.6° | 1.503 |
| 3 | 15:46 | -20.3° | -0.4° | 2.411 | 3.9" | 1.7 | 11.8° | 0.989 | 0.0" | 37.3° | 11.0° | -77° | 6.2° | 165.2° | 250.7° | -0.7° | 1.500 |
| 5 | 15:52 | -20.6° | -0.4° | 2.413 | 3.9" | 1.7 | 11.5° | 0.990 | 0.0" | 37.1° | 10.5° | -77° | 5.7° | 166.3° | 251.8° | -0.7° | 1.498 |
| 7 | 15:58 | -21.0° | -0.5° | 2.415 | 3.9" | 1.7 | 11.1° | 0.991 | 0.0" | 36.8° | 9.9° | -77° | 5.3° | 167.4° | 252.9° | -0.7° | 1.495 |
| 9 | 16:04 | -21.3° | -0.5° | 2.416 | 3.9" | 1.6 | 10.8° | 0.991 | 0.0" | 36.4° | 9.3° | -78° | 4.8° | 168.4° | 254.0° | -0.8° | 1.492 |
| 11 | 16:10 | -21.5° | -0.5° | 2.417 | 3.9" | 1.6 | 10.4° | 0.992 | 0.0" | 36.1° | 8.7° | -78° | 4.4° | 169.5° | 255.1° | -0.8° | 1.490 |
| 13 | 16:17 | -21.8° | -0.5° | 2.419 | 3.9" | 1.6 | 10.1° | 0.992 | 0.0" | 35.7° | 8.1° | -79° | 3.9° | 170.6° | 256.2° | -0.8° | 1.487 |
| 15 | 16:23 | -22.1° | -0.5° | 2.420 | 3.9" | 1.6 | 9.7° | 0.993 | 0.0" | 35.3° | 7.4° | -79° | 3.4° | 171.7° | 257.3° | -0.9° | 1.485 |
| 17 | 16:29 | -22.3° | -0.5° | 2.421 | 3.9" | 1.6 | 9.4° | 0.993 | 0.0" | 34.9° | 6.8° | -79° | 3.0° | 172.8° | 258.4° | -0.9° | 1.482 |
| 19 | 16:35 | -22.6° | -0.6° | 2.422 | 3.9" | 1.6 | 9.0° | 0.994 | 0.0" | 34.5° | 6.2° | -80° | 2.5° | 173.9° | 259.5° | -0.9° | 1.479 |
| 21 | 16:41 | -22.8° | -0.6° | 2.422 | 3.9" | 1.6 | 8.7° | 0.994 | 0.0" | 34.0° | 5.6° | -80° | 2.0° | 175.0° | 260.6° | -0.9° | 1.477 |
| 23 | 16:48 | -23.0° | -0.6° | 2.423 | 3.9" | 1.6 | 8.3° | 0.995 | 0.0" | 33.5° | 4.9° | -81° | 1.6° | 176.1° | 261.7° | -1.0° | 1.474 |
| 25 | 16:54 | -23.2° | -0.6° | 2.423 | 3.9" | 1.6 | 8.0° | 0.995 | 0.0" | 33.0° | 4.3° | -81° | 1.1° | 177.3° | 262.8° | -1.0° | 1.472 |
| 27 | 17:00 | -23.4° | -0.6° | 2.424 | 3.9" | 1.6 | 7.6° | 0.996 | 0.0" | 32.4° | 3.6° | -81° | 0.6° | 178.4° | 263.9° | -1.0° | 1.469 |
| 29 | 17:07 | -23.5° | -0.6° | 2.424 | 3.9" | 1.6 | 7.3° | 0.996 | 0.0" | 31.9° | 3.0° | -82° | 0.1° | 179.5° | 265.1° | -1.1° | 1.467 |

Dezember 2025 (0^h UT)

| Tag | α | δ | b_{geoz} | Δ | \emptyset | m_v | i | k | q | P | D_e | P_s | D_s | L_s | l | b | r |
|-----|----------|----------|-------------------|----------|-------------|-------|------|-------|------|-------|-------|-------|-------|--------|--------|-------|-------|
| 1 | 17:13 | -23.7° | -0.7° | 2.424 | 3.9" | 1.6 | 6.9° | 0.996 | 0.0" | 31.3° | 2.4° | -82° | -0.4° | 180.6° | 266.2° | -1.1° | 1.464 |
| 3 | 17:20 | -23.8° | -0.7° | 2.424 | 3.9" | 1.5 | 6.6° | 0.997 | 0.0" | 30.7° | 1.7° | -83° | -0.8° | 181.8° | 267.3° | -1.1° | 1.462 |
| 5 | 17:26 | -23.9° | -0.7° | 2.423 | 3.9" | 1.5 | 6.2° | 0.997 | 0.0" | 30.1° | 1.0° | -83° | -1.3° | 182.9° | 268.5° | -1.2° | 1.459 |
| 7 | 17:33 | -24.0° | -0.7° | 2.423 | 3.9" | 1.5 | 5.8° | 0.997 | 0.0" | 29.4° | 0.4° | -83° | -1.8° | 184.0° | 269.6° | -1.2° | 1.457 |
| 9 | 17:39 | -24.1° | -0.7° | 2.423 | 3.9" | 1.5 | 5.5° | 0.998 | 0.0" | 28.8° | -0.3° | -83° | -2.3° | 185.2° | 270.7° | -1.2° | 1.455 |
| 11 | 17:46 | -24.1° | -0.7° | 2.422 | 3.9" | 1.5 | 5.1° | 0.998 | 0.0" | 28.1° | -0.9° | -84° | -2.8° | 186.3° | 271.9° | -1.2° | 1.452 |
| 13 | 17:52 | -24.2° | -0.8° | 2.422 | 3.9" | 1.5 | 4.8° | 0.998 | 0.0" | 27.4° | -1.6° | -84° | -3.3° | 187.5° | 273.0° | -1.3° | 1.450 |
| 15 | 17:59 | -24.2° | -0.8° | 2.421 | 3.9" | 1.5 | 4.5° | 0.998 | 0.0" | 26.7° | -2.2° | -84° | -3.7° | 188.6° | 274.2° | -1.3° | 1.448 |
| 17 | 18:06 | -24.2° | -0.8° | 2.420 | 3.9" | 1.5 | 4.1° | 0.999 | 0.0" | 25.9° | -2.9° | -84° | -4.2° | 189.8° | 275.3° | -1.3° | 1.445 |
| 19 | 18:12 | -24.2° | -0.8° | 2.419 | 3.9" | 1.5 | 3.8° | 0.999 | 0.0" | 25.2° | -3.6° | -83° | -4.7° | 191.0° | 276.5° | -1.3° | 1.443 |
| 21 | 18:19 | -24.2° | -0.8° | 2.418 | 3.9" | 1.5 | 3.4° | 0.999 | 0.0" | 24.4° | -4.2° | -83° | -5.2° | 192.1° | 277.7° | -1.4° | 1.441 |
| 23 | 18:26 | -24.1° | -0.8° | 2.417 | 3.9" | 1.5 | 3.1° | 0.999 | 0.0" | 23.6° | -4.9° | -82° | -5.7° | 193.3° | 278.8° | -1.4° | 1.438 |
| 25 | 18:32 | -24.1° | -0.8° | 2.416 | 3.9" | 1.4 | 2.7° | 0.999 | 0.0" | 22.8° | -5.5° | -82° | -6.2° | 194.5° | 280.0° | -1.4° | 1.436 |
| 27 | 18:39 | -24.0° | -0.9° | 2.414 | 3.9" | 1.4 | 2.4° | 1.000 | 0.0" | 22.0° | -6.2° | -80° | -6.7° | 195.6° | 281.2° | -1.4° | 1.434 |
| 29 | 18:46 | -23.9° | -0.9° | 2.413 | 3.9" | 1.4 | 2.1° | 1.000 | 0.0" | 21.1° | -6.8° | -78° | -7.2° | 196.8° | 282.4° | -1.5° | 1.432 |
| 31 | 18:52 | -23.8° | -0.9° | 2.411 | 3.9" | 1.4 | 1.7° | 1.000 | 0.0" | 20.3° | -7.5° | -75° | -7.6° | 198.0° | 283.6° | -1.5° | 1.430 |

α δ $b_{\text{geoz.}}$... Rektaszension, Deklination
und geoz. ekliptikale Breite (Äquinotium des Datums)

k ... beleuchteter Teil

P_s ... Positionswinkel des Sonnenlichtes

D_s ... Deklination der Sonne

Mit L_s wird der Beginn der Jahreszeiten bezogen auf die Nordhalbkugel definiert:
0° = Frühlingsanfang, 90° = Sommersanfang, 180° = Herbstanfang und 270° = Wintersanfang.

l, b und r ... heliozentrische Koordinaten

Δ ... Abstand von der Erde

\emptyset ... scheinbarer Durchmesser

D_e ... Deklination der Erde

L_s ... Länge der Sonne in der Bahnebene,
vom aufsteigenden Knoten der Bahnebene im Äquator
gemessen

m_v ... visuelle Helligkeit

q ... Breite des unbeleuchteten Teils

P ... Positionswinkel der Rotationsachse

i ... Phasenwinkel