

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

| 21/22 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | 45° | -26° | 21/22 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | 45° | -26° | | |
|---|-----------------|-----------------|----------|-------|---------|------|--------|-----|------|---|-----------------|-----------------|----------|----------|---------|-------|--------|------|------|-----|-----|
| 152667 1998 FR ₁₁ (continuation) | | | | | | | | | | 283369 2000 EX ₁₃ (continuation) | | | | | | | | | | | |
| 1 | 16 | 19 7.70 | -20 41.9 | 1.788 | 0.836 | 11.6 | 17.9 | 10W | 1* | 2* | 9 | 23 | 13 36.92 | -13 7.8 | 2.314 | 1.497 | 18.0 | 21.0 | 27E | 2* | 21* |
| 1 | 21 | 19 36.13 | -20 10.4 | 1.789 | 0.827 | 9.8 | 17.8 | 8W | - | 1* | 10 | 3 | 14 6.03 | -15 52.0 | 2.322 | 1.480 | 16.8 | 21.0 | 25E | 1* | 19* |
| 488450 1994 JX | | | | | | | | | | 326742 2003 QN ₄₇ | | | | | | | | | | | |
| 7 | 25 | 10 27.18 | +32 5.4 | 2.583 | 1.798 | 17.2 | 21.4 | 32E | 23* | 12* | 7 | 25 | 11 35.25 | -20 42.8 | 1.603 | 1.459 | 38.4 | 21.5 | 63E | - | 55* |
| 8 | 4 | 10 50.79 | +28 40.1 | 2.547 | 1.727 | 16.4 | 21.3 | 29E | 20* | 11* | 8 | 4 | 11 55.90 | -23 21.0 | 1.611 | 1.408 | 38.5 | 21.4 | 60E | - | 51* |
| 9856 1991 EE | | | | | | | | | | 142561 2002 TX ₆₈ | | | | | | | | | | | |
| 7 | 25 | 10 39.38 | + 9 53.9 | 2.345 | 1.632 | 21.3 | 21.4 | 36E | 10* | 28* | 7 | 25 | 11 39.52 | +13 26.3 | 1.811 | 1.374 | 33.8 | 21.5 | 49E | 23* | 37* |
| 8 | 4 | 11 0.94 | + 8 12.4 | 2.310 | 1.542 | 20.2 | 21.2 | 32E | 8* | 25* | 8 | 4 | 12 6.52 | +11 0.6 | 1.815 | 1.337 | 33.4 | 21.4 | 46E | 22* | 36* |
| 482650 2013 BK ₁₈ | | | | | | | | | | 152828 1999 VT ₂₅ | | | | | | | | | | | |
| 7 | 25 | 12 44.93 | +27 49.9 | 0.816 | 0.947 | 69.9 | 21.5 | 61E | 44* | 33* | 7 | 25 | 13 42.67 | + 9 27.6 | 0.256 | 0.998 | 86.6 | 21.2 | 79E | 41* | 54* |
| 7 | 30 | 13 13.64 | +24 28.5 | 0.798 | 0.979 | 68.8 | 21.5 | 64E | 45* | 36* | 7 | 27 | 14 5.35 | + 7 33.7 | 0.260 | 1.017 | 82.4 | 21.1 | 83E | 42* | 56* |
| 138258 2000 GD ₂ | | | | | | | | | | 497245 2005 FH | | | | | | | | | | | |
| 7 | 25 | 10 47.17 | -12 26.6 | 1.256 | 0.967 | 52.5 | 21.5 | 49E | - | 42* | 7 | 25 | 21 7.26 | - 6 1.4 | 2.640 | 3.619 | 5.1 | 22.7 | 162W | 39 | 70 |
| 8 | 4 | 11 6.89 | -15 49.1 | 1.225 | 0.900 | 54.5 | 21.3 | 46E | - | 37* | 8 | 4 | 20 58.11 | - 7 20.5 | 2.571 | 3.574 | 2.8 | 22.5 | 170W | 38 | 71 |
| 283369 2000 EX ₁₃ | | | | | | | | | | 97245 2005 FH | | | | | | | | | | | |
| 7 | 25 | 11 7.45 | + 3 34.5 | 2.247 | 1.682 | 25.1 | 21.4 | 45E | 11* | 38* | 8 | 4 | 20 58.11 | - 7 20.5 | 2.571 | 3.574 | 2.8 | 22.5 | 170W | 38 | 71 |
| 8 | 4 | 11 29.76 | + 0 59.6 | 2.266 | 1.644 | 24.0 | 21.4 | 41E | 8* | 35* | 8 | 4 | 20 58.11 | - 7 20.5 | 2.571 | 3.574 | 2.8 | 22.5 | 170W | 38 | 71 |

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

| 21/22 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | 45° | -26° | 21/22 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | 45° | -26° |
|-------------------------------------|-----------------|-----------------|----------|-------|---------|------|--------|------------|-------------|------------------------------------|-----------------|-----------------|----------|-------|---------|------|--------|------------|-------------|
| 163250 2002 GH₁ | | | | | | | | | | 376246 2011 ES₇₇ | | | | | | | | | |
| <i>(continuation)</i> | | | | | | | | | | | | | | | | | | | |
| 9 3 | 21 47.23 | +3 17.5 | 3.070 | 4.039 | 4.6 | 21.4 | 161 E | 48 | 61 | 7 25 | 22 25.33 | -10 9.2 | 2.614 | 3.514 | 8.9 | 22.2 | 148 W | 35 | 74 |
| 9 13 | 21 40.53 | +1 47.4 | 3.127 | 4.053 | 6.3 | 21.5 | 154 E | 47 | 62 | 8 4 | 22 19.14 | -11 8.1 | 2.539 | 3.505 | 6.0 | 22.0 | 159 W | 34 | 75 |
| 137044 1998 UC₅₀ | | | | | | | | | | 306431 1998 SR₄₉ | | | | | | | | | |
| 7 25 | 22 16.35 | -12 8.2 | 2.324 | 3.246 | 8.9 | 21.6 | 150 W | 33 | 76 | 7 25 | 22 31.94 | -55 58.7 | 1.844 | 2.668 | 15.4 | 21.5 | 136 W | — | 60 |
| 8 4 | 22 8.20 | -12 46.9 | 2.264 | 3.244 | 5.5 | 21.4 | 162 W | 32 | 77 | 8 4 | 22 25.04 | -56 48.1 | 1.808 | 2.641 | 15.3 | 21.4 | 137 W | — | 59 |
| 8 14 | 21 58.78 | -13 29.9 | 2.232 | 3.241 | 1.9 | 21.1 | 174 W | 32 | 77 | 8 9 | 22 16.88 | -57 30.6 | 1.778 | 2.614 | 15.3 | 21.4 | 137 W | — | 58 |
| 8 24 | 21 48.87 | -14 12.9 | 2.230 | 3.237 | 1.9 | 21.1 | 174 E | 31 | 78 | 8 9 | 22 7.60 | -58 4.3 | 1.753 | 2.586 | 15.6 | 21.3 | 137 W | — | 58 |
| 9 3 | 21 39.29 | -14 51.8 | 2.258 | 3.232 | 5.6 | 21.4 | 162 E | 30 | 79 | 8 14 | 21 57.45 | -58 27.3 | 1.733 | 2.558 | 16.0 | 21.3 | 136 W | — | 58 |
| 9 13 | 21 30.86 | -15 23.2 | 2.314 | 3.225 | 9.0 | 21.6 | 150 E | 30 | 79 | 8 19 | 21 46.77 | -58 38.2 | 1.718 | 2.530 | 16.7 | 21.3 | 134 E | — | 57 |
| 450138 1998 BO₂₆ | | | | | | | | | | 494697 2004 SW₅₅ | | | | | | | | | |
| 7 25 | 22 16.44 | -11 10.2 | 2.238 | 3.159 | 9.2 | 22.1 | 150 W | 34 | 75 | 7 25 | 22 19.17 | -32 24.7 | 0.538 | 1.505 | 19.8 | 21.2 | 150 W | 13 | 84 |
| 8 4 | 22 8.27 | -11 46.5 | 2.197 | 3.176 | 5.8 | 21.9 | 162 W | 33 | 76 | 7 30 | 22 16.58 | -34 28.4 | 0.505 | 1.483 | 18.3 | 21.0 | 153 W | 11 | 82 |
| 8 14 | 21 58.96 | -12 27.4 | 2.184 | 3.193 | 2.0 | 21.7 | 174 W | 33 | 76 | 8 4 | 22 12.34 | -36 39.7 | 0.477 | 1.459 | 17.5 | 20.8 | 154 W | 8 | 79 |
| 8 24 | 21 49.32 | -13 8.5 | 2.201 | 3.208 | 1.8 | 21.7 | 174 E | 32 | 77 | 8 9 | 22 6.33 | -38 54.6 | 0.453 | 1.436 | 17.7 | 20.7 | 154 W | 6 | 77 |
| 9 3 | 21 40.17 | -13 45.7 | 2.247 | 3.223 | 5.5 | 21.9 | 162 E | 31 | 78 | 8 14 | 21 58.57 | -41 7.8 | 0.433 | 1.412 | 19.2 | 20.6 | 153 W | 4 | 75 |
| 9 13 | 21 32.27 | -14 16.0 | 2.321 | 3.236 | 8.8 | 22.2 | 151 E | 31 | 78 | 8 19 | 21 49.23 | -43 13.4 | 0.416 | 1.387 | 21.6 | 20.6 | 150 E | 2 | 73 |
| 503274 2015 QE₉ | | | | | | | | | | 525338 2005 AU₂₈ | | | | | | | | | |
| 7 25 | 22 34.10 | -10 2.4 | 0.914 | 1.843 | 18.2 | 21.5 | 146 W | 35 | 74 | 7 25 | 22 34.90 | -29 1.2 | 1.840 | 2.751 | 11.5 | 21.8 | 147 W | 16 | 87 |
| 8 4 | 22 27.99 | -12 21.0 | 0.841 | 1.820 | 12.5 | 21.1 | 157 W | 33 | 76 | 7 30 | 22 30.22 | -29 19.3 | 1.798 | 2.737 | 10.0 | 21.7 | 152 W | 16 | 87 |
| 8 14 | 22 18.09 | -15 11.3 | 0.789 | 1.795 | 6.0 | 20.6 | 169 W | 30 | 79 | 8 4 | 22 24.84 | -29 35.7 | 1.762 | 2.722 | 8.6 | 21.6 | 156 W | 15 | 86 |
| 8 24 | 22 5.47 | -18 16.5 | 0.760 | 1.768 | 4.1 | 20.4 | 173 E | 27 | 82 | 8 9 | 22 18.86 | -29 49.5 | 1.733 | 2.708 | 7.4 | 21.5 | 160 W | 15 | 86 |
| 9 3 | 21 58.69 | -19 47.5 | 0.755 | 1.754 | 7.3 | 20.5 | 167 E | 25 | 84 | 8 14 | 22 12.39 | -29 59.5 | 1.711 | 2.693 | 6.6 | 21.4 | 162 W | 15 | 86 |
| 9 3 | 21 51.99 | -21 13.5 | 0.755 | 1.740 | 10.9 | 20.7 | 161 E | 24 | 85 | 8 19 | 22 5.59 | -30 4.8 | 1.695 | 2.678 | 6.5 | 21.4 | 163 W | 15 | 86 |
| 9 8 | 21 45.66 | -22 32.1 | 0.761 | 1.725 | 14.6 | 20.8 | 154 E | 22 | 87 | 8 24 | 21 58.64 | -30 4.7 | 1.687 | 2.663 | 7.1 | 21.4 | 161 E | 15 | 86 |
| 9 13 | 21 40.00 | -23 41.2 | 0.772 | 1.711 | 18.1 | 20.9 | 148 E | 21 | 88 | 9 3 | 21 51.71 | -29 58.8 | 1.685 | 2.647 | 8.3 | 21.4 | 158 E | 15 | 86 |
| 9 18 | 21 35.27 | -24 39.8 | 0.787 | 1.695 | 21.4 | 21.1 | 142 E | 20 | 89 | 9 8 | 21 44.98 | -29 46.8 | 1.690 | 2.631 | 9.9 | 21.5 | 153 E | 15 | 86 |
| 9 23 | 21 31.62 | -25 27.5 | 0.805 | 1.680 | 24.4 | 21.2 | 136 E | 20 | 89 | 9 8 | 21 38.63 | -29 28.7 | 1.702 | 2.615 | 11.6 | 21.6 | 149 E | 16 | 87 |
| 9 28 | 21 29.18 | -26 4.4 | 0.827 | 1.664 | 27.2 | 21.3 | 131 E | 19 | 90 | 9 13 | 21 32.82 | -29 4.9 | 1.720 | 2.599 | 13.3 | 21.6 | 144 E | 16 | 87 |
| 10 3 | 21 28.01 | -26 31.0 | 0.852 | 1.648 | 29.7 | 21.4 | 125 E | 18 | 89 | 9 18 | 21 27.68 | -28 35.8 | 1.743 | 2.583 | 15.0 | 21.7 | 138 E | 16 | 87 |
| 523613 2006 SJ₁₉₈ | | | | | | | | | | | | | | | | | | | |
| 7 25 | 22 35.31 | -5 37.4 | 1.913 | 2.796 | 12.5 | 22.1 | 144 W | 39 | 70 | 7 25 | 22 35.31 | -5 37.4 | 1.913 | 2.796 | 12.5 | 22.1 | 144 W | 39 | 70 |
| 8 4 | 22 27.82 | -6 9.9 | 1.816 | 2.768 | 8.9 | 21.8 | 155 W | 39 | 70 | 8 4 | 22 27.82 | -6 9.9 | 1.816 | 2.768 | 8.9 | 21.8 | 155 W | 39 | 70 |
| 8 14 | 22 18.22 | -6 55.9 | 1.743 | 2.739 | 4.8 | 21.5 | 167 W | 38 | 71 | 8 14 | 22 18.22 | -6 55.9 | 1.743 | 2.739 | 4.8 | 21.5 | 167 W | 38 | 71 |
| 8 24 | 22 7.24 | -7 51.5 | 1.698 | 2.708 | 1.3 | 21.2 | 177 E | 37 | 72 | 8 24 | 22 7.24 | -7 51.5 | 1.698 | 2.708 | 1.3 | 21.2 | 177 E | 37 | 72 |
| 9 3 | 21 55.87 | -8 51.2 | 1.682 | 2.675 | 4.8 | 21.4 | 167 E | 36 | 73 | 9 3 | 21 55.87 | -8 51.2 | 1.682 | 2.675 | 4.8 | 21.4 | 167 E | 36 | 73 |
| 9 13 | 21 45.26 | -9 49.0 | 1.695 | 2.641 | 9.3 | 21.6 | 155 E | 35 | 74 | 9 13 | 21 45.26 | -9 49.0 | 1.695 | 2.641 | 9.3 | 21.6 | 155 E | 35 | 74 |

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

Table with columns for date (21/22, 2021), alpha_2000, delta_2000, Delta, r, beta, V, psi, 45-26 degrees. It lists data for several minor planets: 89958 2002 LY45, 143257 2003 AE, 424965 2009 AM15, 508932 2004 JY11, 302156 2001 SF286, 182260 2001 GA3, 60886 2000 JB10, 373834 2002 XD113, and 480883 2001 YE4. Each entry includes multiple rows of numerical data and position/velocity indicators.

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

| 21/22 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | 45° | -26° | 21/22 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | 45° | -26° |
|------------------------------------|-----------------|-----------------|----------|-------|---------|------|--------|-----|------|---|-----------------|-----------------|----------|-------|---------|------|--------|-----|------|
| 513165 2004 CK₃₉ | | | | | | | | | | 387793 2003 WL₂₅ (continuation) | | | | | | | | | |
| 8 4 | 9 31.47 | +18 12.2 | 2.183 | 1.189 | 7.2 | 21.5 | 8 E | — | 1* | 9 23 | 11 16.35 | -11 39.8 | 2.664 | 1.721 | 9.2 | 20.4 | 16 W | — | 9* |
| 8 9 | 9 45.44 | +16 37.2 | 2.112 | 1.113 | 6.6 | 21.3 | 7 E | — | — | 10 3 | 11 40.19 | -14 1.0 | 2.543 | 1.613 | 10.5 | 20.2 | 17 W | — | 11* |
| 8 14 | 10 0.19 | +14 51.7 | 2.037 | 1.036 | 6.2 | 21.0 | 6 E | — | — | 10 13 | 12 6.54 | -16 32.0 | 2.415 | 1.501 | 12.1 | 20.0 | 18 W | — | 12* |
| 168710 2000 HE₄₁ | | | | | | | | | | 249799 2000 YX₈₁ | | | | | | | | | |
| 8 4 | 9 34.07 | +14 57.5 | 3.327 | 2.332 | 4.1 | 21.4 | 9 E | — | 3* | 8 4 | 9 54.70 | +11 10.5 | 3.397 | 2.434 | 6.4 | 21.5 | 15 E | — | 9* |
| 8 14 | 9 52.62 | +13 31.6 | 3.306 | 2.298 | 2.0 | 21.2 | 5 E | — | — | 8 14 | 10 11.83 | +9 35.5 | 3.450 | 2.461 | 4.3 | 21.4 | 10 E | — | 4* |
| 8 24 | 10 11.39 | +11 58.6 | 3.274 | 2.263 | 0.3 | 21.0 | 1 E | — | — | 8 24 | 10 28.62 | +7 57.8 | 3.491 | 2.486 | 2.2 | 21.3 | 5 E | — | — |
| 31845 2000 DK₁₇ | | | | | | | | | | 423022 2003 TJ₂ | | | | | | | | | |
| 8 4 | 9 35.19 | +14 14.1 | 3.583 | 2.590 | 3.9 | 21.5 | 10 E | — | 4* | 8 4 | 10 33.58 | +4 57.6 | 1.880 | 1.077 | 25.2 | 21.5 | 27 E | — | 21* |
| 8 14 | 9 51.51 | +12 55.8 | 3.584 | 2.575 | 1.8 | 21.3 | 4 E | — | — | 8 14 | 11 1.93 | +0 44.6 | 1.808 | 0.996 | 26.1 | 21.3 | 26 E | — | 20* |
| 8 24 | 10 7.83 | +11 32.6 | 3.571 | 2.560 | 0.4 | 21.2 | 1 W | — | — | 8 24 | 11 32.71 | -3 51.0 | 1.724 | 0.917 | 28.1 | 21.0 | 25 E | — | 19* |
| 387793 2003 WL₂₅ | | | | | | | | | | 306857 2001 SR₁₆₉ | | | | | | | | | |
| 8 4 | 9 41.12 | -2 49.3 | 3.106 | 2.208 | 10.3 | 21.3 | 23 E | — | 13* | 8 4 | 10 27.94 | +22 50.0 | 3.726 | 2.813 | 7.8 | 21.5 | 22 E | — | 13* |
| 8 14 | 9 57.77 | -4 11.6 | 3.045 | 2.117 | 9.2 | 21.2 | 20 E | — | 7* | 8 14 | 10 41.78 | +20 47.1 | 3.722 | 2.771 | 6.2 | 21.4 | 17 E | — | 10* |
| 8 24 | 10 15.45 | -5 45.7 | 2.969 | 2.023 | 8.4 | 21.0 | 17 E | — | 2* | 8 24 | 10 55.82 | +18 41.7 | 3.704 | 2.729 | 4.8 | 21.2 | 13 E | — | 7* |
| 9 3 | 10 34.30 | -7 31.8 | 2.879 | 1.926 | 8.1 | 20.8 | 16 W | — | 4* | 9 3 | 11 10.04 | +16 33.7 | 3.672 | 2.686 | 3.9 | 21.1 | 10 E | — | 4* |
| 9 13 | 10 54.52 | -9 29.9 | 2.777 | 1.826 | 8.3 | 20.6 | 15 W | — | 6* | 9 13 | 11 24.44 | +14 23.3 | 3.625 | 2.642 | 4.0 | 21.1 | 10 E | — | 2* |
| | | | | | | | | | | 9 23 | 11 38.97 | +12 10.4 | 3.564 | 2.597 | 5.0 | 21.1 | 13 W | — | 6* |
| | | | | | | | | | | 10 3 | 11 53.66 | +9 55.1 | 3.489 | 2.551 | 6.7 | 21.1 | 17 W | — | 11* |
| | | | | | | | | | | 10 13 | 12 8.50 | +7 37.4 | 3.401 | 2.505 | 8.6 | 21.0 | 22 W | — | 16* |
| | | | | | | | | | | 10 23 | 12 23.48 | +5 17.5 | 3.301 | 2.458 | 10.6 | 21.0 | 27 W | — | 21* |
| | | | | | | | | | | 11 2 | 12 38.62 | +2 55.1 | 3.189 | 2.410 | 12.7 | 21.0 | 32 W | — | 25* |
| | | | | | | | | | | 11 12 | 12 53.91 | +0 30.3 | 3.066 | 2.362 | 14.8 | 20.9 | 38 W | — | 29* |
| | | | | | | | | | | 11 22 | 13 9.38 | -1 57.0 | 2.934 | 2.313 | 17.0 | 20.9 | 43 W | — | 32* |
| | | | | | | | | | | 12 2 | 13 25.02 | -4 27.3 | 2.793 | 2.264 | 19.0 | 20.8 | 49 W | — | 34* |
| | | | | | | | | | | 12 12 | 13 40.85 | -7 1.0 | 2.645 | 2.215 | 21.1 | 20.7 | 54 W | — | 35* |
| | | | | | | | | | | 12 22 | 13 56.86 | -9 38.8 | 2.491 | 2.165 | 23.0 | 20.6 | 59 W | — | 34* |
| | | | | | | | | | | 1 1 | 14 13.08 | -12 21.8 | 2.334 | 2.115 | 24.9 | 20.4 | 65 W | — | 32* |
| | | | | | | | | | | 1 11 | 14 29.50 | -15 11.3 | 2.174 | 2.066 | 26.7 | 20.3 | 71 W | — | 30* |
| | | | | | | | | | | 1 21 | 14 46.14 | -18 9.0 | 2.014 | 2.017 | 28.3 | 20.1 | 76 W | — | 27* |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

| 2021 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | 45° | -26° | 21/22 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | 45° | -26° | |
|-------------------------------------|-----------------|-----------------|----------|-----|---------|-------|--------|------------|-------------|--|-----------------|-----------------|----------|-----|---------|-----|--------|------------|-------------|--|
| 418083 2007 VV₃₀₇ | | | | | | | | | | | | | | | | | | | | |
| 8 | 4 | 22 | 43.25 | +21 | 21.2 | 2.387 | 3.170 | 13.5 | 21.5 | 133 W | 66 | 43 | | | | | | | | |
| | | | | | | | | | | 249615 1999 TB₅ (continuation) | | | | | | | | | | |
| 9 | 18 | 22 | 17.14 | +24 | 56.7 | 0.680 | 1.615 | 20.3 | 20.2 | 146 E | 70 | 39 | | | | | | | | |
| 455263 2001 UM₂₂₁ | | | | | | | | | | | | | | | | | | | | |
| 8 | 4 | 22 | 43.56 | -40 | 34.6 | 1.997 | 2.902 | 10.9 | 22.3 | 147 W | 4 | 75 | | | | | | | | |
| 544235 2014 TB₃₄ | | | | | | | | | | | | | | | | | | | | |
| 8 | 4 | 22 | 44.81 | +33 | 8.7 | 1.298 | 2.039 | 24.6 | 21.7 | 123 W | 78 | 31 | | | | | | | | |
| 376883 2001 XE₁ | | | | | | | | | | | | | | | | | | | | |
| 8 | 4 | 22 | 55.08 | +31 | 20.4 | 1.179 | 1.934 | 25.9 | 22.2 | 124 W | 76 | 33 | | | | | | | | |
| 200701 2001 UN₇₉ | | | | | | | | | | | | | | | | | | | | |
| 8 | 4 | 22 | 58.88 | -42 | 46.0 | 2.021 | 2.901 | 12.0 | 21.7 | 144 W | 2 | 73 | | | | | | | | |
| 465271 2007 TF₁₀₇ | | | | | | | | | | | | | | | | | | | | |
| 8 | 4 | 22 | 46.67 | -30 | 25.1 | 1.707 | 2.644 | 10.5 | 21.6 | 152 W | 15 | 86 | | | | | | | | |
| 526802 2007 BC | | | | | | | | | | | | | | | | | | | | |
| 8 | 4 | 23 | 2.04 | -47 | 35.6 | 2.710 | 3.550 | 10.5 | 22.2 | 140 W | - | 68 | | | | | | | | |
| 292220 2006 SU₄₉ | | | | | | | | | | | | | | | | | | | | |
| 8 | 4 | 22 | 50.52 | -5 | 13.2 | 0.904 | 1.852 | 16.1 | 21.4 | 150 W | 40 | 69 | | | | | | | | |
| 203217 2001 FX₉ | | | | | | | | | | | | | | | | | | | | |
| 8 | 4 | 23 | 4.44 | -2 | 38.6 | 1.451 | 2.357 | 14.2 | 22.1 | 145 W | 42 | 67 | | | | | | | | |
| 249615 1999 TB₅ | | | | | | | | | | | | | | | | | | | | |
| 8 | 4 | 22 | 51.58 | +34 | 6.9 | 1.102 | 1.849 | 27.8 | 21.8 | 122 W | 79 | 30 | | | | | | | | |
| 344756 2003 VO₂ | | | | | | | | | | | | | | | | | | | | |
| 8 | 4 | 23 | 10.98 | +12 | 27.6 | 0.536 | 1.446 | 29.6 | 21.5 | 135 W | 57 | 52 | | | | | | | | |

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

| 21/22 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | 45°-26° | 21/22 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | 45°-26° | | | | |
|-------------------------------------|-----------------|-----------------|----------|-------|---------|------|--------|---------|-----------------------|-----------------|-----------------|----------|----------|----------|-------|--------|---------|------|-------|----|----|
| 344756 2003 VO₂ | | | | | | | | | <i>(continuation)</i> | | | | | | | | | | | | |
| 9 | 3 | 22 30.48 | +14 40.9 | 0.449 | 1.433 | 15.8 | 20.7 | 157 E | 60 | 49 | 10 | 8 | 22 18.47 | + 5 21.9 | 0.269 | 1.221 | 30.7 | 18.2 | 141 E | 50 | 59 |
| 9 | 8 | 22 21.73 | +14 10.3 | 0.447 | 1.430 | 15.8 | 20.7 | 157 E | 59 | 50 | 10 | 13 | 22 6.44 | - 0 20.1 | 0.257 | 1.188 | 37.9 | 18.2 | 133 E | 45 | 64 |
| 154991 Vinciguerra | | | | | | | | | <i>(continuation)</i> | | | | | | | | | | | | |
| 8 | 4 | 23 13.61 | + 4 59.9 | 1.386 | 2.255 | 17.0 | 21.8 | 139 W | 50 | 59 | 10 | 15 | 22 1.91 | - 2 43.8 | 0.253 | 1.175 | 41.0 | 18.3 | 129 E | 42 | 67 |
| 477588 2010 JD₈₇ | | | | | | | | | <i>(continuation)</i> | | | | | | | | | | | | |
| 8 | 4 | 23 16.94 | -12 30.4 | 1.162 | 2.080 | 16.0 | 22.2 | 146 W | 32 | 77 | 10 | 17 | 21 57.56 | - 5 10.1 | 0.250 | 1.161 | 44.1 | 18.3 | 126 E | 40 | 69 |
| 507261 2011 CO₄₆ | | | | | | | | | <i>(continuation)</i> | | | | | | | | | | | | |
| 8 | 4 | 23 17.40 | + 0 12.5 | 1.276 | 2.162 | 17.2 | 21.3 | 141 W | 45 | 64 | 10 | 19 | 21 53.39 | - 7 38.1 | 0.248 | 1.148 | 47.3 | 18.4 | 122 E | 37 | 72 |
| 413303 2003 UC₂₂₃ | | | | | | | | | <i>(continuation)</i> | | | | | | | | | | | | |
| 8 | 4 | 23 17.99 | +25 17.9 | 2.159 | 2.865 | 16.8 | 21.4 | 125 W | 70 | 39 | 10 | 21 | 21 49.42 | -10 7.2 | 0.246 | 1.134 | 50.5 | 18.4 | 119 E | 35 | 74 |
| 154278 2002 TB₉ | | | | | | | | | <i>(continuation)</i> | | | | | | | | | | | | |
| 8 | 4 | 23 33.16 | +20 49.0 | 2.151 | 2.865 | 16.7 | 21.3 | 126 W | 66 | 43 | 10 | 23 | 21 45.64 | -12 36.6 | 0.245 | 1.120 | 53.7 | 18.5 | 115 E | 32 | 77 |
| 297300 1998 SC₁₅ | | | | | | | | | <i>(continuation)</i> | | | | | | | | | | | | |
| 8 | 4 | 23 48.46 | +24 4.7 | 0.790 | 1.574 | 33.5 | 21.2 | 121 W | 69 | 40 | 10 | 28 | 21 36.96 | -18 47.6 | 0.244 | 1.086 | 61.7 | 18.6 | 106 E | 26 | 83 |
| 505590 2014 CA₅ | | | | | | | | | <i>(continuation)</i> | | | | | | | | | | | | |
| 8 | 14 | 0 2.15 | - 6 47.0 | 1.494 | 2.382 | 14.9 | 21.3 | 143 W | 38 | 71 | 10 | 28 | 21 29.22 | -24 50.0 | 0.244 | 1.051 | 69.5 | 18.8 | 97 E | 20 | 89 |

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

Table with columns for date (21/22), alpha (alpha2000), delta (delta2000), delta (delta), r, beta, V, psi, and longitude (45° -26°). It contains data for several minor planets: 400980 2010 XJ56 (continuation), 337119 1999 TK12, 457499 2008 VD4, 176425 2001 VQ67, 275533 1998 MR17, and 284763 2008 WL68. Each entry lists orbital parameters and position coordinates.

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

Table with columns for date (21/22), alpha 2000, delta 2000, Delta, r, beta, V, psi, and right ascension/declination. It lists data for several minor planets including 399526 2003 AA17, 136849 1998 CS1, 470310 2007 LB15, 478980 2012 XU111, 511114 2013 WX24, 136849 1998 CS1, and 137099 1998 YW3.

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

| 21/22 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | $45^\circ-26^\circ$ | 21/22 | α_{2000} | δ_{2000} | Δ | r | β | V | ψ | $45^\circ-26^\circ$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|-----------------|-----------------|----------|-------|---------|------|--------|---------------------|------------------------------------|-----------------|-----------------|----------|-------|---------|------|--------|---------------------|-----|-------|----------|----------|----------|-------|-------|------|------|-----|-----|-------|----------|----------|---------|-------|-------|------|------|------|-------|----------|----------|----------|----------|-------|-------|------|------|------|-------|----------|----------|----------|----------|-------|-------|------|------|------|------|----------|----------|---------|-------|-------|------|------|-----|-----|------|----------|----------|---------|-------|-------|------|------|------|-----|------|----------|----------|---------|-------|-------|------|------|------|-----|------|----------|----------|---------|-------|-------|------|------|------|-----|-------|---------|----------|---------|-------|-------|------|------|------|-----|-------|----------|----------|--------|-------|-------|------|------|------|-----|-------|----------|----------|---------|-------|-------|------|------|------|-----|-------|----------|----------|---------|-------|-------|------|------|------|-----|-------|----------|----------|---------|-------|-------|------|------|------|-----|-------|----------|----------|----------|-------|-------|------|------|------|-----|-------|----------|----------|----------|-------|-------|------|------|------|-----|-------|----------|----------|----------|-------|-------|------|------|------|-----|-------|----------|----------|----------|-------|-------|------|------|------|-----|-------|----------|----------|----------|-------|-------|------|------|------|-----|-------|----------|---------|----------|-------|-------|------|------|-----|-----|------|----------|----------|---------|-------|-------|------|------|-----|-----|------|----------|----------|----------|-------|-------|------|------|-----|-----|------|----------|----------|----------|-------|-------|------|------|------|-----|------|----------|----------|----------|-------|-------|------|------|------|-----|-------|----------|----------|---------|-------|-------|------|------|------|-----|-------|----------|----------|---------|-------|-------|------|------|------|-----|-------|----------|----------|--------|-------|-------|------|------|------|-----|-------|----------|----------|---------|-------|-------|------|------|------|-----|-------|---------|----------|---------|-------|-------|------|------|------|-----|-----|----------|----------|---------|-------|-------|------|------|------|-----|----------------------------------|------|----------|--------|-------|-------|------|------|------|-----|-----|-------|----------|--------|-------|-------|------|------|------|-----|-----|-------|----------|--------|-------|-------|------|------|------|-----|-----|-----|----------|---------|-------|-------|------|------|------|----|-----|------|----------|---------|-------|-------|------|------|------|----|-----|------|----------|---------|-------|-------|------|------|------|----|-----|------|---------|----------|-------|-------|-----|------|-----|----|---|------|----------|---------|-------|-------|-----|------|-----|----|---|------|----------|---------|-------|-------|-----|------|-----|----|---|------|----------|----------|-------|-------|-----|------|-----|---|---|-----|---------|----------|-------|-------|-----|------|-----|---|---|-----|----------|---------|-------|-------|-----|------|-----|---|---|------|----------|---------|-------|-------|-----|------|-----|---|---|------|----------|---------|-------|-------|-----|------|-----|---|---|------|----------|---------|-------|-------|-----|------|-----|---|---|------|----------|---------|-------|-------|-----|------|-----|---|---|-------|----------|---------|-------|-------|------|------|------|---|----|-------|----------|----------|-------|-------|------|------|------|---|-----|------|----------|----------|-------|-------|-----|------|------|----|----|------|----------|---------|-------|-------|-----|------|-----|----|---|-----|----------|----------|-------|-------|-----|------|-----|---|---|------|----------|---------|-------|-------|-----|------|-----|----|---|------|----------|---------|-------|-------|-----|------|------|----|---|------|----------|--------|-------|-------|-----|------|------|-----|----|-----------------------------------|--|--|--|--|--|--|--|--|
| 68372 2001 PM₉ | | | | | | | | | 235700 2004 TR₁₃ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>(continuation)</i> | | | | | | | | | <i>(continuation)</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 3 | 12 13.29 | -5 39.0 | 1.988 | 0.998 | 5.9 | 20.8 | 6 W | — | 10 25 | 14 59.27 | -23 56.8 | 1.382 | 0.547 | 36.2 | 19.4 | 19 E | — | 12* | 10 27 | 15 13.44 | -25 13.4 | 1.358 | 0.550 | 39.2 | 19.4 | 20 E | — | 14* | 10 23 | 13 37.43 | -13 17.7 | 1.941 | 0.950 | 3.8 | 20.5 | 4 W | — | 10 29 | 15 28.09 | -26 24.5 | 1.334 | 0.555 | 42.0 | 19.5 | 22 E | — | 16* | 10 31 | 15 43.21 | -27 29.1 | 1.312 | 0.564 | 44.6 | 19.6 | 24 E | — | 17* | 11 2 | 15 58.75 | -28 26.7 | 1.291 | 0.575 | 47.0 | 19.6 | 25 E | — | 19* | 11 4 | 16 14.69 | -29 16.4 | 1.271 | 0.588 | 49.2 | 19.7 | 27 E | — | 20* | 11 6 | 16 30.96 | -29 57.8 | 1.253 | 0.603 | 51.0 | 19.8 | 28 E | — | 22* | 11 8 | 16 47.49 | -30 30.4 | 1.237 | 0.621 | 52.5 | 19.9 | 30 E | — | 24* | 11 10 | 17 4.23 | -30 53.9 | 1.223 | 0.639 | 53.8 | 19.9 | 31 E | 1* | 25* | 11 12 | 17 21.08 | -31 8.1 | 1.211 | 0.660 | 54.7 | 20.0 | 33 E | 3* | 27* | 11 14 | 17 37.95 | -31 13.0 | 1.202 | 0.681 | 55.4 | 20.1 | 35 E | 4* | 29* | 11 16 | 17 54.75 | -31 8.6 | 1.194 | 0.703 | 55.8 | 20.1 | 36 E | 5* | 30* | 11 18 | 18 11.39 | -30 55.4 | 1.189 | 0.726 | 56.0 | 20.2 | 38 E | 6* | 31* | 11 20 | 18 27.79 | -30 33.7 | 1.187 | 0.750 | 56.0 | 20.3 | 39 E | 7* | 33* | 11 22 | 18 43.86 | -30 4.1 | 1.187 | 0.775 | 55.8 | 20.3 | 40 E | 9* | 34* | 11 24 | 18 59.55 | -29 27.2 | 1.189 | 0.799 | 55.5 | 20.4 | 42 E | 10* | 35* | 11 26 | 19 14.78 | -28 43.7 | 1.193 | 0.825 | 55.0 | 20.5 | 43 E | 11* | 36* | 11 28 | 19 29.53 | -27 54.5 | 1.200 | 0.850 | 54.4 | 20.5 | 44 E | 13* | 37* | 11 30 | 19 47.75 | -27 0.4 | 1.209 | 0.876 | 53.6 | 20.6 | 46 E | 14* | 38* | 12 2 | 19 57.43 | -26 2.1 | 1.220 | 0.901 | 52.8 | 20.6 | 47 E | 15* | 39* | 12 4 | 20 10.57 | -25 0.4 | 1.233 | 0.927 | 52.0 | 20.7 | 48 E | 17* | 39* | 12 6 | 20 23.16 | -23 56.1 | 1.248 | 0.953 | 51.1 | 20.8 | 49 E | 19* | 40* | 12 8 | 20 35.20 | -22 49.8 | 1.265 | 0.979 | 50.1 | 20.8 | 50 E | 20* | 40* | 12 10 | 20 46.72 | -21 42.2 | 1.283 | 1.005 | 49.2 | 20.9 | 51 E | 21* | 40* | 12 12 | 20 57.73 | -20 33.7 | 1.303 | 1.030 | 48.2 | 20.9 | 51 E | 22* | 40* | 12 17 | 21 23.18 | -17 41.7 | 1.360 | 1.094 | 45.7 | 21.1 | 53 E | 25* | 40* | 12 22 | 21 45.98 | -14 52.9 | 1.425 | 1.157 | 43.2 | 21.3 | 54 E | 28* | 39* | 12 27 | 22 6.52 | -12 10.5 | 1.497 | 1.219 | 40.9 | 21.4 | 54 E | 30* | 38* | 1 1 | 22 25.16 | -9 36.4 | 1.574 | 1.280 | 38.6 | 21.6 | 54 E | 33* | 36* | 83992 2002 MG₃ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 14 | 9 55.59 | +12 35.0 | 3.250 | 2.244 | 2.5 | 21.4 | 6 E | — | 8 14 | 10 8.56 | +11 33.7 | 3.998 | 3.001 | 3.0 | 21.4 | 9 E | — | 3* | 8 24 | 10 14.72 | +10 55.5 | 3.221 | 2.210 | 0.4 | 21.2 | 1 E | — | — | 9 3 | 10 34.06 | +9 9.2 | 3.182 | 2.177 | 1.7 | 21.2 | 4 W | — | — | 9 9 | 10 17.77 | +10 45.7 | 3.498 | 2.558 | 6.9 | 21.7 | 18 W | 10* | 6* | 9 13 | 10 33.98 | +9 18.5 | 3.423 | 2.533 | 9.0 | 21.7 | 23 W | 16* | 9* | 9 13 | 10 53.62 | +7 16.8 | 3.134 | 2.143 | 3.8 | 21.3 | 8 W | 2* | — | 9 23 | 11 13.43 | +5 18.9 | 3.076 | 2.109 | 6.0 | 21.3 | 13 W | 6* | 2* | 10 3 | 11 33.53 | +3 16.5 | 3.010 | 2.074 | 8.1 | 21.3 | 17 W | 10* | 5* | 10 13 | 11 53.95 | +1 10.3 | 2.936 | 2.040 | 10.3 | 21.3 | 21 W | 14* | 8* | 10 23 | 12 14.74 | +0 58.4 | 2.855 | 2.006 | 12.4 | 21.3 | 26 W | 18* | 11* | 11 2 | 12 35.97 | +3 8.6 | 2.769 | 1.973 | 14.6 | 21.3 | 30 W | 21* | 14* | 11 12 | 12 57.68 | +5 18.9 | 2.677 | 1.940 | 16.7 | 21.3 | 34 W | 24* | 17* | 11 22 | 13 19.93 | +7 27.6 | 2.580 | 1.907 | 18.7 | 21.2 | 38 W | 26* | 21* | 12 2 | 13 42.78 | +9 33.4 | 2.481 | 1.875 | 20.8 | 21.2 | 42 W | 28* | 25* | 12 12 | 14 6.28 | +11 34.4 | 2.379 | 1.844 | 22.8 | 21.1 | 46 W | 30* | 30* | 12 22 | 14 30.44 | +13 28.5 | 2.275 | 1.815 | 24.7 | 21.0 | 50 W | 32* | 35* | 1 1 | 14 55.30 | +15 13.8 | 2.171 | 1.787 | 26.6 | 20.9 | 54 W | 28* | 40* | 1 11 | 15 20.81 | +16 48.3 | 2.066 | 1.760 | 28.4 | 20.9 | 58 W | 27* | 46* | 1 21 | 15 46.91 | +18 10.0 | 1.963 | 1.735 | 30.1 | 20.8 | 62 W | 26* | 51* | 8 14 | 10 0.14 | +15 18.6 | 3.869 | 2.864 | 2.2 | 21.4 | 6 E | — | — | 8 24 | 10 15.09 | +14 6.1 | 3.849 | 2.840 | 1.1 | 21.3 | 3 E | — | — | 9 3 | 10 30.12 | +12 50.3 | 3.815 | 2.815 | 2.4 | 21.3 | 7 W | 1* | — | 9 13 | 10 45.21 | +11 31.9 | 3.765 | 2.790 | 4.4 | 21.4 | 12 W | 6* | — | 9 23 | 11 0.31 | +10 11.4 | 3.701 | 2.763 | 6.4 | 21.4 | 18 W | 12* | 3* | 10 3 | 11 15.43 | +8 49.6 | 3.622 | 2.735 | 8.4 | 21.5 | 24 W | 17* | 6* | 10 13 | 11 30.53 | +7 27.2 | 3.530 | 2.707 | 10.5 | 21.5 | 30 W | 23* | 10* | 10 23 | 11 45.58 | +6 5.2 | 3.425 | 2.678 | 12.4 | 21.5 | 35 W | 28* | 14* | 11 2 | 12 0.57 | +4 44.5 | 3.309 | 2.647 | 14.4 | 21.4 | 41 W | 33* | 18* | 11 12 | 12 15.46 | +3 25.9 | 3.181 | 2.616 | 16.2 | 21.4 | 48 W | 37* | 23* | 11 22 | 12 30.19 | +2 10.8 | 3.044 | 2.585 | 17.9 | 21.3 | 54 W | 41* | 28* | 12 2 | 12 44.71 | +1 0.0 | 2.898 | 2.552 | 19.5 | 21.2 | 60 W | 43* | 33* | 12 12 | 12 58.94 | +0 4.9 | 2.746 | 2.519 | 21.0 | 21.1 | 66 W | 44* | 39* | 12 22 | 13 12.77 | +1 2.7 | 2.588 | 2.485 | 22.2 | 21.0 | 73 W | 44* | 46* | 1 1 | 13 26.08 | +1 52.1 | 2.426 | 2.450 | 23.3 | 20.9 | 80 W | 43 | 52* | 1 11 | 13 38.68 | +2 31.3 | 2.263 | 2.414 | 24.0 | 20.7 | 87 W | 42 | 59* | 1 21 | 13 50.37 | +2 59.0 | 2.100 | 2.378 | 24.4 | 20.5 | 94 W | 42 | 64* | 8 14 | 10 5.96 | +18 50.8 | 2.294 | 1.302 | 6.8 | 21.4 | 9 E | 2* | — | 8 19 | 10 19.48 | +17 2.7 | 2.238 | 1.242 | 6.3 | 21.2 | 8 E | 1* | — | 8 24 | 10 33.48 | +15 5.7 | 2.179 | 1.180 | 5.7 | 21.0 | 7 E | 1* | — | 8 29 | 10 48.02 | +12 58.9 | 2.118 | 1.118 | 5.2 | 20.8 | 6 E | — | — | 9 3 | 11 3.18 | +10 41.5 | 2.056 | 1.054 | 4.7 | 20.6 | 5 E | — | — | 9 8 | 11 19.05 | +8 12.5 | 1.993 | 0.990 | 4.2 | 20.3 | 4 E | — | — | 9 13 | 11 35.75 | +5 31.2 | 1.928 | 0.926 | 3.7 | 20.1 | 3 E | — | — | 9 18 | 11 53.44 | +2 36.6 | 1.863 | 0.861 | 3.5 | 19.9 | 3 E | — | — | 9 23 | 12 12.28 | +0 31.6 | 1.798 | 0.798 | 4.1 | 19.7 | 3 E | — | — | 10 3 | 12 54.42 | +7 28.6 | 1.667 | 0.680 | 8.7 | 19.4 | 6 E | — | — | 10 13 | 13 44.60 | +15 6.0 | 1.536 | 0.587 | 18.7 | 19.2 | 11 E | — | 4* | 10 23 | 14 45.60 | +22 35.3 | 1.407 | 0.546 | 33.1 | 19.3 | 17 E | — | 11* | 8 14 | 10 30.75 | +15 38.8 | 3.693 | 2.719 | 5.1 | 21.4 | 14 E | 4* | 6* | 8 24 | 10 44.04 | +14 8.1 | 3.717 | 2.721 | 3.2 | 21.3 | 9 E | 2* | — | 9 3 | 10 57.28 | +12 36.7 | 3.723 | 2.721 | 2.0 | 21.3 | 5 E | — | — | 9 13 | 11 10.47 | +11 4.8 | 3.711 | 2.718 | 2.9 | 21.3 | 8 W | 1* | — | 9 23 | 11 23.56 | +9 33.0 | 3.681 | 2.713 | 4.8 | 21.4 | 13 W | 7* | — | 10 3 | 11 36.54 | +8 1.6 | 3.631 | 2.704 | 6.9 | 21.5 | 19 W | 13* | 2* | 33836 2000 FB₃₉ | | | | | | | | |
| 8 14 | 10 33.43 | +18 36.4 | 4.085 | 3.116 | 4.8 | 21.4 | 15 E | 7* | 5* | 8 24 | 10 46.51 | +17 5.3 | 4.092 | 3.103 | 3.4 | 21.3 | 10 E | 4* | — | 9 3 | 10 59.62 | +15 33.4 | 4.084 | 3.089 | 2.7 | 21.3 | 8 E | 2* | — | 9 13 | 11 12.73 | +14 1.1 | 4.058 | 3.074 | 3.4 | 21.3 | 10 W | 3* | — | 9 23 | 11 25.80 | +12 28.8 | 4.017 | 3.059 | 4.9 | 21.4 | 15 W | 9* | — | 10 3 | 11 38.79 | +10 57.0 | 3.959 | 3.042 | 6.6 | 21.4 | 20 W | 14* | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

