

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> | | |
|--------|----------|-------------------|-------------------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----------|---------|------|
| 372001 | 2008 | HL ₂₇ | 16.8 ^m | X | 182.93945 | 207.15740 | 97.55246 | 8.14268 | 0.2440482 | 0.21544705 | 2.7557661 | 20 | 1 8.2 | 21.6 |
| 372002 | 2008 | HN ₂₈ | 17.0 | X | 327.45824 | 197.99355 | 10.19249 | 5.33802 | 0.1930728 | 0.23706571 | 2.5855735 | 20 | 1 26.5 | 20.1 |
| 372003 | 2008 | HW ₄₄ | 18.0 | X | 278.55145 | 83.65365 | 177.23422 | 3.50868 | 0.1641413 | 0.23498382 | 2.6008227 | 20 | 2 4.6 | 21.8 |
| 372004 | 2008 | HP ₄₇ | 17.0 | X | 230.42378 | 89.09375 | 190.89090 | 12.30564 | 0.2513351 | 0.22218762 | 2.6997454 | 20 | 1 11.4 | 22.0 |
| 372005 | 2008 | JF ₅ | 17.5 | X | 43.22768 | 226.53411 | 340.39005 | 4.22307 | 0.1505020 | 0.25738498 | 2.4476383 | 20 | 6 21.6 | 20.0 |
| 372006 | 2008 | JV ₈ | 17.3 | X | 302.14973 | 93.48759 | 124.11502 | 5.85843 | 0.2305177 | 0.23238907 | 2.6201466 | 20 | — | — |
| 372007 | 2008 | JW ₃₀ | 17.5 | X | 294.64219 | 122.93166 | 138.55375 | 5.15109 | 0.0554619 | 0.23694309 | 2.5864655 | 20 | 3 12.4 | 20.8 |
| 372008 | 2008 | JM ₃₁ | 16.5 | X | 318.83674 | 75.00974 | 159.61410 | 12.58242 | 0.1506879 | 0.23642984 | 2.5902073 | 20 | 2 22.6 | 19.5 |
| 372009 | 2008 | JJ ₃₄ | 16.7 | X | 188.43945 | 81.03123 | 216.59306 | 15.05462 | 0.2726775 | 0.21421417 | 2.7663296 | 20 | 1 2.8 | 21.9 |
| 372010 | 2008 | JE ₃₈ | 16.7 | X | 204.61015 | 112.31167 | 209.18460 | 16.53313 | 0.2027948 | 0.22368700 | 2.6876676 | 20 | 2 6.3 | 21.6 |
| 372011 | 2008 | KJ ₁₂ | 16.1 | X | 162.46630 | 170.36373 | 235.93079 | 21.41248 | 0.0553985 | 0.23936994 | 2.5689539 | 20 | 4 4.3 | 20.1 |
| 372012 | 2008 | KN ₂₄ | 16.5 | X | 288.50055 | 97.66938 | 152.80364 | 12.84334 | 0.1408888 | 0.23033538 | 2.6356978 | 20 | 2 5.9 | 20.3 |
| 372013 | 2008 | KQ ₃₇ | 17.2 | X | 294.82473 | 10.01749 | 244.67586 | 2.92644 | 0.1415256 | 0.23436119 | 2.6054270 | 20 | 2 17.7 | 20.8 |
| 372014 | 2008 | LA ₇ | 16.9 | X | 45.10092 | 313.65152 | 200.51056 | 14.52993 | 0.0899093 | 0.23726701 | 2.5841109 | 20 | 3 30.1 | 20.0 |
| 372015 | 2008 | LX ₇ | 17.6 | X | 274.43888 | 81.22242 | 189.77573 | 12.38145 | 0.1436591 | 0.23158820 | 2.6261837 | 20 | 2 13.4 | 21.6 |
| 372016 | 2008 | LD ₁₃ | 16.3 | X | 334.64840 | 346.72650 | 232.13686 | 11.82009 | 0.1974898 | 0.23634150 | 2.5908527 | 20 | 2 13.2 | 19.5 |
| 372017 | 2008 | LN ₁₆ | 16.6 | X | 220.89493 | 233.74199 | 85.61252 | 12.89247 | 0.1963133 | 0.22986816 | 2.6392681 | 20 | 2 26.2 | 21.2 |
| 372018 | 2008 | LU ₁₇ | 15.5 | X | 161.91425 | 65.67225 | 242.28288 | 12.31196 | 0.0844855 | 0.19290000 | 2.9665242 | 20 | — | — |
| 372019 | 2008 | NS ₄ | 17.3 | X | 241.23914 | 339.38019 | 301.26155 | 2.49098 | 0.1645104 | 0.21720026 | 2.7409166 | 20 | 1 26.4 | 21.7 |
| 372020 | 2008 | OC ₁₂ | 16.5 | X | 167.87118 | 78.72148 | 283.96261 | 5.08653 | 0.1480636 | 0.21610695 | 2.7501532 | 20 | 2 25.5 | 20.9 |
| 372021 | 2008 | OQ ₁₃ | 16.3 | X | 162.57762 | 184.39980 | 167.06687 | 14.98154 | 0.2384372 | 0.21011590 | 2.8021847 | 20 | 2 13.9 | 21.1 |
| 372022 | 2008 | PK ₂₀ | 16.6 | X | 90.68975 | 187.19623 | 177.30720 | 2.27957 | 0.1125915 | 0.19459780 | 2.9492445 | 20 | — | — |
| 372023 | 2008 | PU ₂₀ | 15.7 | X | 173.73154 | 281.06056 | 96.25619 | 10.13902 | 0.2086951 | 0.21463470 | 2.7627150 | 20 | 3 28.9 | 20.5 |
| 372024 | 2008 | Ayapani | 16.2 | X | 69.01090 | 220.03042 | 132.28294 | 14.89253 | 0.2150402 | 0.18847188 | 3.0128095 | 20 | — | — |
| 372025 | 2008 | QX ₈ | 16.0 | X | 111.62656 | 91.46050 | 341.30201 | 8.90366 | 0.1371847 | 0.21177817 | 2.7875025 | 20 | 3 23.7 | 19.9 |
| 372026 | 2008 | QV ₂₈ | 16.0 | X | 233.45364 | 311.36364 | 345.61545 | 13.39110 | 0.0968487 | 0.21767484 | 2.7369313 | 20 | 2 14.1 | 20.2 |
| 372027 | 2008 | QU ₃₇ | 16.9 | X | 110.40569 | 339.65895 | 352.71340 | 8.31207 | 0.1439039 | 0.19076751 | 2.9885907 | 20 | — | — |
| 372028 | 2008 | QC ₄₂ | 17.0 | X | 67.89528 | 231.00025 | 174.52561 | 2.13689 | 0.1031464 | 0.19585691 | 2.9365910 | 20 | — | — |
| 372029 | 2008 | QB ₄₅ | 15.7 | X | 160.72013 | 86.96779 | 193.18451 | 10.14455 | 0.0684095 | 0.18791124 | 3.0187991 | 20 | — | — |
| 372030 | 2008 | RT ₉ | 16.5 | X | 110.46838 | 341.87919 | 344.80620 | 8.54851 | 0.0497777 | 0.18543891 | 3.0455715 | 20 | — | — |
| 372031 | 2008 | RV ₁₇ | 17.1 | X | 10.19507 | 117.31713 | 316.33784 | 4.91889 | 0.1644190 | 0.18464903 | 3.0542508 | 20 | — | — |
| 372032 | 2008 | RW ₁₇ | 16.6 | X | 166.11798 | 173.28674 | 216.94254 | 5.41414 | 0.0348323 | 0.21453993 | 2.7635286 | 20 | 3 22.6 | 20.4 |
| 372033 | 2008 | RJ ₁₈ | 16.1 | X | 77.21069 | 19.38255 | 337.15314 | 10.86870 | 0.0329026 | 0.18601726 | 3.0392555 | 20 | — | — |
| 372034 | 2008 | RR ₂₂ | 16.4 | X | 168.31883 | 170.33355 | 173.89838 | 11.98066 | 0.1634841 | 0.20911825 | 2.8110900 | 20 | 2 5.8 | 21.1 |
| 372035 | 2008 | RP ₃₀ | 16.2 | X | 32.49723 | 48.89287 | 356.59048 | 10.92992 | 0.0643116 | 0.18569534 | 3.0427671 | 20 | — | — |
| 372036 | 2008 | RS ₃₈ | 16.6 | X | 59.96433 | 305.20004 | 84.47304 | 0.17832 | 0.1974804 | 0.18759044 | 3.0222398 | 20 | — | — |
| 372037 | 2008 | RC ₃₉ | 15.9 | X | 122.61136 | 323.43680 | 2.36691 | 11.43215 | 0.0641424 | 0.18996774 | 2.9969729 | 20 | — | — |
| 372038 | 2008 | RC ₄₀ | 16.9 | X | 109.85184 | 137.05896 | 170.57377 | 0.93020 | 0.0926677 | 0.18325536 | 3.0697164 | 20 | — | — |
| 372039 | 2008 | RZ ₄₀ | 16.2 | X | 64.13938 | 280.26779 | 170.59573 | 2.15674 | 0.0307909 | 0.20313624 | 2.8660105 | 20 | 2 2.6 | 19.9 |
| 372040 | 2008 | RF ₄₃ | 16.1 | X | 33.33923 | 25.06484 | 10.57896 | 8.90780 | 0.1856849 | 0.18167679 | 3.0874724 | 20 | — | — |
| 372041 | 2008 | RD ₆₅ | 16.2 | X | 41.85685 | 246.08920 | 157.28065 | 10.35506 | 0.0643022 | 0.18816464 | 3.0160883 | 20 | — | — |
| 372042 | 2008 | RD ₆₈ | 16.6 | X | 72.72257 | 313.53233 | 55.43055 | 3.99108 | 0.1298043 | 0.18626934 | 3.0365129 | 20 | — | — |
| 372043 | 2008 | RM ₇₄ | 16.6 | X | 72.53068 | 254.58541 | 100.02203 | 1.90527 | 0.1397159 | 0.18542284 | 3.0457475 | 20 | — | — |
| 372044 | 2008 | RS ₇₇ | 16.6 | X | 112.70558 | 266.14293 | 97.01830 | 1.87803 | 0.0946670 | 0.19623423 | 2.9328254 | 20 | — | — |
| 372045 | 2008 | RN ₈₀ | 16.5 | X | 59.80172 | 179.33508 | 195.42669 | 7.07749 | 0.1343143 | 0.18560435 | 3.0437614 | 20 | — | — |
| 372046 | 2008 | RY ₈₈ | 16.3 | X | 132.72210 | 124.04800 | 204.46334 | 13.32170 | 0.1601739 | 0.19306422 | 2.9648417 | 20 | — | — |
| 372047 | 2008 | RR ₈₉ | 16.1 | X | 145.03325 | 243.24503 | 344.67113 | 11.21402 | 0.0888928 | 0.17041825 | 3.2219983 | 20 | 10 29.8 | 21.2 |
| 372048 | 2008 | RF ₉₀ | 16.8 | X | 142.57027 | 351.03138 | 291.83213 | 4.70917 | 0.1171690 | 0.18424446 | 3.0587202 | 20 | — | — |
| 372049 | 2008 | RO ₉₂ | 16.4 | X | 146.50999 | 115.64847 | 179.69996 | 20.05171 | 0.1228099 | 0.18941999 | 3.0027477 | 20 | — | — |
| 372050 | 2008 | RN ₉₆ | 16.7 | X | 32.75825 | 196.56863 | 199.83049 | 5.29473 | 0.1446214 | 0.18033505 | 3.1027678 | 20 | — | — |
| 372051 | 2008 | RS ₉₆ | 15.5 | X | 77.59222 | 10.54994 | 9.98548 | 9.62501 | 0.1261944 | 0.18789738 | 3.0189475 | 20 | — | — |
| 372052 | 2008 | RC ₉₇ | 16.9 | X | 139.91907 | 85.74144 | 212.35400 | 2.73719 | 0.1447931 | 0.18662353 | 3.0326697 | 20 | — | — |
| 372053 | 2008 | RX ₁₀₀ | 16.1 | X | 123.93202 | 4.71156 | 317.10031 | 8.94990 | 0.0272884 | 0.18736078 | 3.0247089 | 20 | — | — |
| 372054 | 2008 | RB ₁₀₆ | 15.5 | X | 95.43428 | 294.89312 | 28.07276 | 14.81289 | 0.2186785 | 0.18003939 | 3.1061638 | 20 | — | — |
| 372055 | 2008 | RP ₁₀₆ | 16.5 | X | 98.14538 | 340.97181 | 0.37264 | 11.40053 | 0.1309414 | 0.18936704 | 3.0033074 | 20 | — | — |
| 372056 | 2008 | RU ₁₀₇ | 16.8 | X | 341.59749 | 320.53170 | 233.93323 | 3.30897 | 0.0391590 | 0.21443233 | 2.7644530 | 20 | 2 19.6 | 20.5 |
| 372057 | 2008 | RA ₁₀₉ | 16.9 | X | 113.08060 | 147.48198 | 178.24123 | 0.88405 | 0.2164755 | 0.18847603 | 3.0127653 | 20 | — | — |
| 372058 | 2008 | RJ ₁₁₀ | 16.7 | X | 5.46686 | 105.56994 | 318.43663 | 3.62957 | 0.2125350 | 0.17981679 | 3.1087268 | 20 | — | — |
| 372059 | 2008 | RR ₁₁₀ | 16.5 | X | 350.78446 | 248.86407 | 172.99318 | 9.47263 | 0.0956881 | 0.17636201 | 3.1491935 | 20 | 12 26.7 | 20.7 |
| 372060 | 2008 | RG ₁₁₁ | 16.3 | X | 278.57963 | 122.61505 | 344.09880 | 6.82103 | 0.1110654 | 0.16964009 | 3.2318440 | 20 | 10 31.1 | 20.6 |
| 372061 | 2008 | RZ ₁₁₄ | 16.7 | X | 45.23365 | 241.81179 | 165.45062 | 0.80718 | 0.1716307 | 0.18231979 | 3.0802089 | 20 | — | — |
| 372062 | 2008 | RJ ₁₂₃ | 16.7 | X | 156.26065 | 307.67860 | 2.92618 | 1.15551 | 0.1064848 | 0.19653950 | 2.9297877 | 20 | — | — |
| 372063 | 2008 | RQ ₁₂₃ | 16.3 | X | 301.71381 | 131.39322 | 1.63954 | 9.83546 | 0.0375667 | 0.18585257 | 3.0410508 | 20 | — | — |
| 372064 | 2008 | RK ₁₂₉ | 15.7 | X | 101.81227 | 317.52961 | 41.12682 | 14.06395 | 0.1708997 | 0.18520751 | 3.0481078 | 20 | — | — |
| 372065 | 2008 | RS ₁₂₉ | 16.8 | X | 34.82977 | 332.33867 | 55.03458 | 1.09198 | 0.2130332 | 0.17567143 | 3.1574413 | 20 | — | — |
| 372066 | 2008 | RR ₁₃₁ | 16.8 | X | 163.51267 | 226.20459 | 54.94186 | 1.50906 | 0.0416382 | 0.18827646 | 3.0148939 | 20 | — | — |
| 372067 | 2008 | RH ₁₃₆ | 15.7 | X | 127.71702 | 318.30240 | 331.09141 | 10.54877 | 0.1193333 | 0.18292301 | 3.0734336 | 20 | 12 31.7 | 20.7 |
| 372068 | 2008 | RJ ₁₄₁ | 16.3 | X | 94.44124 | 233.78609 | 151.91329 | 2.71323 | 0.2153800 | 0.19683667 | 2.9268382 | 20 | 1 19.3 | 20.2 |
| 372069 | 2008 | RX ₁₄₂ | 16.5 | X | 198.94896 | 63.08545 | 186.73797 | 9.76875 | 0.0389944 | 0.19001666 | 2.9964585 | 20 | — | — |
| 372070 | 2008 | SM | 17.9 | X | 260.31595 | 298.30329 | 355.34699 | 17.98171 | 0.0629589 | 0.38228795 | 1.8802213 | 20 | 2 26.1 | 19.9 |
| 372071 | 2008 | SP ₁ | 17.9 | X | 273.09339 | 356.51996 | 325.81144 | 15.86631 | 0.08 | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|-------------------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 372081 2008 SF ₄₀ | 16.6 ^m | X | 166.72262 | 341.35388 | 49.29190 | 4.13247 | 0.1004785 | 0.21091477 | 2.7951045 | 20 | 3 30.8 | 20.9 |
| 372082 2008 SK ₄₀ | 16.6 | X | 96.79668 | 252.16716 | 143.49125 | 2.83897 | 0.0740171 | 0.19534574 | 2.9417115 | 20 | 1 14.6 | 20.5 |
| 372083 2008 SO ₅₀ | 16.1 | X | 353.12743 | 276.21408 | 184.54548 | 10.77587 | 0.1069452 | 0.18672745 | 3.0315444 | 20 | — | — |
| 372084 2008 SQ ₅₂ | 16.3 | X | 311.81708 | 284.74304 | 190.69495 | 10.10163 | 0.0670112 | 0.18002456 | 3.1063344 | 20 | — | — |
| 372085 2008 SR ₅₂ | 16.7 | X | 148.62491 | 157.67789 | 187.33941 | 6.48787 | 0.0809689 | 0.19840924 | 2.9113524 | 20 | 1 13.8 | 21.0 |
| 372086 2008 SS ₅₃ | 16.7 | X | 130.11281 | 238.50863 | 45.92893 | 1.43264 | 0.1045266 | 0.18113070 | 3.0936749 | 20 | 12 26.3 | 21.6 |
| 372087 2008 SY ₅₃ | 16.5 | X | 124.41223 | 177.13427 | 189.94940 | 9.48338 | 0.0663983 | 0.19677993 | 2.9274008 | 20 | 1 11.1 | 20.9 |
| 372088 2008 SJ ₅₇ | 16.5 | X | 33.68872 | 188.32102 | 190.83585 | 2.32051 | 0.0686731 | 0.17692051 | 3.1425625 | 20 | 12 29.5 | 20.8 |
| 372089 2008 SV ₆₅ | 15.8 | X | 86.74054 | 149.93899 | 208.79256 | 12.24485 | 0.2210227 | 0.18516053 | 3.0486234 | 20 | — | — |
| 372090 2008 SV ₆₅ | 15.7 | X | 76.47281 | 316.88302 | 28.91969 | 11.23205 | 0.0860843 | 0.17775697 | 3.1326963 | 20 | — | — |
| 372091 2008 SP ₇₅ | 17.0 | X | 7.94487 | 215.95823 | 205.16745 | 4.40929 | 0.1125241 | 0.18201295 | 3.0836698 | 20 | — | — |
| 372092 2008 SZ ₈₉ | 15.5 | X | 329.97783 | 140.16004 | 357.38893 | 10.12736 | 0.0524553 | 0.18927254 | 3.0043070 | 20 | — | — |
| 372093 2008 SB ₉₀ | 15.8 | X | 135.03798 | 279.51544 | 1.41513 | 11.39111 | 0.2659915 | 0.18539532 | 3.0460489 | 20 | 12 30.0 | 21.4 |
| 372094 2008 SV ₉₃ | 16.6 | X | 26.94229 | 158.38592 | 229.09692 | 6.58242 | 0.1402658 | 0.17707396 | 3.1407467 | 20 | — | — |
| 372095 2008 SC ₉₄ | 16.5 | X | 14.32455 | 71.32934 | 334.80467 | 4.44342 | 0.1424085 | 0.17721063 | 3.1391316 | 20 | — | — |
| 372096 2008 SC ₉₇ | 15.9 | X | 261.16776 | 168.26234 | 13.34200 | 16.33963 | 0.0545142 | 0.18299875 | 3.0275855 | 20 | — | — |
| 372097 2008 SL ₉₇ | 15.9 | X | 90.48911 | 348.83761 | 4.74206 | 10.18702 | 0.1175837 | 0.18542317 | 3.0454738 | 20 | — | — |
| 372098 2008 SV ₁₀₀ | 15.5 | X | 23.66654 | 11.84674 | 34.06409 | 22.71102 | 0.0514664 | 0.17963653 | 3.1108061 | 20 | — | — |
| 372099 2008 ST ₁₀₂ | 16.3 | X | 84.32249 | 272.48184 | 36.67182 | 7.81171 | 0.1765607 | 0.17375468 | 3.1806195 | 20 | 12 14.9 | 21.4 |
| 372100 2008 SL ₁₀₄ | 16.3 | X | 347.83100 | 216.96015 | 207.83420 | 8.57903 | 0.0796612 | 0.17348564 | 3.1839069 | 20 | 12 23.8 | 20.5 |
| 372101 2008 SA ₁₀₅ | 16.4 | X | 109.38550 | 270.73828 | 39.23072 | 5.57969 | 0.1587391 | 0.17965891 | 3.1105477 | 20 | — | — |
| 372102 2008 SR ₁₁₉ | 16.8 | X | 163.00672 | 168.14832 | 205.67049 | 1.43567 | 0.0899044 | 0.20520840 | 2.8466842 | 20 | 3 4.2 | 21.0 |
| 372103 2008 SK ₁₂₀ | 16.6 | X | 171.52971 | 162.13810 | 185.74818 | 1.80741 | 0.0855205 | 0.20175728 | 2.8790547 | 20 | 2 10.9 | 21.1 |
| 372104 2008 SZ ₁₂₂ | 16.8 | X | 357.56733 | 41.69146 | 2.69022 | 2.10374 | 0.0412646 | 0.17251464 | 3.1958428 | 20 | 12 9.4 | 21.0 |
| 372105 2008 SK ₁₂₈ | 15.9 | X | 299.29088 | 266.35087 | 220.27953 | 15.44730 | 0.1241813 | 0.17417334 | 3.1755206 | 20 | 12 25.7 | 20.1 |
| 372106 2008 ST ₁₂₈ | 16.4 | X | 117.22498 | 351.69388 | 309.02782 | 2.99516 | 0.1442255 | 0.17923663 | 3.1154315 | 20 | — | — |
| 372107 2008 SJ ₁₂₉ | 16.2 | X | 112.83973 | 84.69505 | 281.57441 | 2.74045 | 0.0750265 | 0.19073368 | 2.9889441 | 20 | — | — |
| 372108 2008 SK ₁₂₉ | 16.7 | X | 30.81882 | 66.48649 | 302.71461 | 2.44432 | 0.0675443 | 0.17204511 | 3.2016547 | 20 | 12 12.7 | 21.1 |
| 372109 2008 SX ₁₂₉ | 16.4 | X | 73.43018 | 105.62442 | 224.08254 | 8.44571 | 0.0529269 | 0.17307325 | 3.1889625 | 20 | 12 14.8 | 21.1 |
| 372110 2008 SC ₁₃₁ | 16.3 | X | 122.04505 | 297.60384 | 359.97457 | 4.39777 | 0.1023112 | 0.17870295 | 3.1216310 | 20 | — | — |
| 372111 2008 SR ₁₃₂ | 17.9 | X | 332.36324 | 12.09504 | 204.34808 | 21.41206 | 0.0114103 | 0.37650669 | 1.8994196 | 20 | 2 11.4 | 20.3 |
| 372112 2008 SU ₁₃₂ | 17.1 | X | 72.24269 | 193.26519 | 224.31547 | 4.16763 | 0.1716530 | 0.19071420 | 2.9891476 | 20 | 1 21.6 | 20.9 |
| 372113 2008 SM ₁₃₄ | 16.1 | X | 292.61986 | 152.26886 | 325.42307 | 9.76703 | 0.0561755 | 0.17930731 | 3.1146127 | 20 | 12 26.8 | 20.4 |
| 372114 2008 SP ₁₃₆ | 16.5 | X | 351.66673 | 138.95709 | 318.65838 | 5.57484 | 0.2182838 | 0.18083711 | 3.0970224 | 20 | — | — |
| 372115 2008 SF ₁₄₂ | 16.9 | X | 6.89052 | 296.28318 | 118.98727 | 2.08263 | 0.1689628 | 0.17502210 | 3.1652460 | 20 | — | — |
| 372116 2008 SM ₁₄₅ | 15.9 | X | 54.53743 | 21.88253 | 27.48057 | 12.21344 | 0.0879367 | 0.18666312 | 3.0322409 | 20 | — | — |
| 372117 2008 SV ₁₄₆ | 15.7 | X | 57.27597 | 88.33055 | 278.40929 | 9.63805 | 0.0644089 | 0.17910108 | 3.1170038 | 20 | — | — |
| 372118 2008 SE ₁₆₁ | 16.6 | X | 72.69874 | 192.44459 | 183.12354 | 13.35718 | 0.1455532 | 0.18783240 | 3.0196432 | 20 | — | — |
| 372119 2008 SB ₁₆₂ | 15.4 | X | 130.41385 | 264.14794 | 17.01652 | 11.69144 | 0.1276189 | 0.18221015 | 3.0814444 | 20 | 12 23.3 | 20.5 |
| 372120 2008 SJ ₁₆₄ | 16.2 | X | 49.30121 | 18.85142 | 35.63702 | 6.32437 | 0.2530027 | 0.18599306 | 3.0395192 | 20 | — | — |
| 372121 2008 SM ₁₆₇ | 16.1 | X | 84.85757 | 322.97512 | 36.14353 | 12.08803 | 0.2011951 | 0.18567094 | 3.0430336 | 20 | — | — |
| 372122 2008 SV ₁₆₉ | 16.7 | X | 80.51781 | 185.04701 | 190.17098 | 12.04175 | 0.0686729 | 0.19116396 | 2.9844573 | 20 | — | — |
| 372123 2008 SZ ₁₇₉ | 16.3 | X | 49.66727 | 2.92842 | 38.75384 | 3.81629 | 0.1675721 | 0.18419573 | 3.0592597 | 20 | — | — |
| 372124 2008 SJ ₁₈₀ | 16.1 | X | 46.86426 | 219.35548 | 196.19767 | 7.96499 | 0.1961053 | 0.18560353 | 3.0437704 | 20 | — | — |
| 372125 2008 SF ₁₈₂ | 16.4 | X | 100.74749 | 110.06538 | 198.55106 | 8.40446 | 0.0630856 | 0.17437898 | 3.1730235 | 20 | 12 21.2 | 21.2 |
| 372126 2008 SA ₁₉₃ | 15.8 | X | 8.98208 | 35.37175 | 34.09897 | 17.57694 | 0.2148770 | 0.17872017 | 3.1214305 | 20 | — | — |
| 372127 2008 SY ₁₉₆ | 16.5 | X | 327.34102 | 30.17173 | 53.60139 | 4.33434 | 0.1598142 | 0.17085915 | 3.2164530 | 20 | 12 17.7 | 20.0 |
| 372128 2008 SA ₁₉₈ | 16.3 | X | 39.85780 | 189.59521 | 203.16871 | 15.90709 | 0.0664662 | 0.17810693 | 3.1285913 | 20 | — | — |
| 372129 2008 SC ₁₉₈ | 16.5 | X | 39.60335 | 241.13939 | 199.16539 | 10.36257 | 0.1080064 | 0.18710129 | 3.0275049 | 20 | — | — |
| 372130 2008 ST ₂₀₆ | 15.5 | X | 26.71945 | 346.39689 | 58.49902 | 11.75798 | 0.0871586 | 0.17749551 | 3.1357719 | 20 | — | — |
| 372131 2008 SC ₂₂₀ | 16.2 | X | 82.47856 | 160.64106 | 208.59149 | 4.14752 | 0.1782666 | 0.18859321 | 3.0115172 | 20 | — | — |
| 372132 2008 SH ₂₂₆ | 16.4 | X | 59.94792 | 251.48035 | 108.15549 | 2.82378 | 0.2232915 | 0.17870131 | 3.1216501 | 20 | — | — |
| 372133 2008 SE ₂₃₆ | 18.1 | X | 266.45116 | 67.02549 | 201.64839 | 22.17790 | 0.0464326 | 0.37626685 | 1.9002267 | 20 | 1 19.2 | 20.9 |
| 372134 2008 SM ₂₃₇ | 16.6 | X | 88.19061 | 356.59205 | 355.51025 | 5.57589 | 0.1537180 | 0.18795150 | 3.0183680 | 20 | — | — |
| 372135 2008 SF ₂₄₀ | 16.0 | X | 15.30628 | 322.98903 | 108.11550 | 5.38223 | 0.1631442 | 0.18080581 | 3.0973798 | 20 | — | — |
| 372136 2008 SP ₂₄₁ | 16.3 | X | 75.10386 | 253.33171 | 86.83745 | 3.63549 | 0.1612422 | 0.18164246 | 3.0878613 | 20 | — | — |
| 372137 2008 SH ₂₄₃ | 15.9 | X | 10.28660 | 346.96580 | 62.27466 | 5.49528 | 0.1996371 | 0.17461002 | 3.1702239 | 20 | — | — |
| 372138 2008 SG ₂₄₄ | 16.0 | X | 25.89272 | 286.69314 | 118.91152 | 2.14355 | 0.1765289 | 0.18012411 | 3.1051898 | 20 | — | — |
| 372139 2008 SJ ₂₄₈ | 16.4 | X | 118.68138 | 116.24412 | 198.56014 | 9.15793 | 0.1600591 | 0.18708819 | 3.0276463 | 20 | — | — |
| 372140 2008 SW ₂₄₉ | 16.6 | X | 51.43708 | 43.31636 | 341.62626 | 9.01038 | 0.1348577 | 0.18286606 | 3.0740716 | 20 | — | — |
| 372141 2008 SA ₂₅₃ | 16.2 | X | 111.03368 | 134.94754 | 218.71018 | 8.97648 | 0.1133750 | 0.18996394 | 2.9970129 | 20 | — | — |
| 372142 2008 SV ₂₅₆ | 16.3 | X | 20.71645 | 258.11067 | 151.15730 | 12.00054 | 0.3390080 | 0.17845583 | 3.1245121 | 20 | — | — |
| 372143 2008 SP ₂₆₁ | 15.5 | X | 113.80760 | 253.40829 | 53.78822 | 13.28960 | 0.1478227 | 0.17950941 | 3.1122745 | 20 | — | — |
| 372144 2008 SH ₂₆₅ | 15.8 | X | 94.16210 | 268.86081 | 60.56577 | 10.47002 | 0.0762582 | 0.17845859 | 3.1244799 | 20 | — | — |
| 372145 2008 SR ₂₆₅ | 16.3 | X | 48.77690 | 269.21765 | 127.98854 | 4.67877 | 0.1128867 | 0.18566289 | 3.0431217 | 20 | — | — |
| 372146 2008 SH ₂₆₇ | 15.7 | X | 120.25088 | 282.32915 | 5.47466 | 16.71673 | 0.2667364 | 0.18174505 | 3.0866993 | 20 | 12 27.0 | 21.4 |
| 372147 2008 SQ ₂₆₇ | 15.8 | X | 5.68938 | 47.16969 | 359.02877 | 8.99919 | 0.0761030 | 0.17459393 | 3.1704187 | 20 | 12 26.9 | 20.2 |
| 372148 2008 SQ ₂₇₁ | 15.5 | X | 43.40153 | 26.86227 | 2.63630 | 10.57425 | 0.1114179 | 0.17817457 | 3.1277995 | 20 | — | — |
| 372149 2008 SU ₂₇₃ | 16.5 | X | 195.53911 | 116.67307 | 141.64095 | 1.02858 | 0.0306465 | 0.19046247 | 2.9917808 | 20 | — | — |
| 372150 2008 SJ ₂₇₉ | 16.4 | X | 107.03791 | 338.95609 | 1.62767 | 9.22967 | 0.0772970 | 0.18932076 | 3.0037968 | 20 | — | — |
| 372151 2008 SQ ₂₈₂ | 15.7 | X | 279.73551 | 268.49122 | 247.00028 | 6.24866 | 0.1850779 | 0.17536025 | 3.1611755 | 20 | 12 25.9 | 19.7 |
| 372152 2008 SV ₂₈₄ | 16.0 | X | 5.35467 | 72.75483 | 13.12864 | 13.34954 | 0.1490025 | 0.18017856 | 3.1045642 | 20 | — | — |
| 372153 2008 SD ₂₈₉ | 16.6 | X | 299.23307 | 126.53683 | 341.14005 | 4.48075 | 0.1597983 | 0.17110435 | 3.2133794 | 20 | 11 28.3 | 20.4 |
| 372154 2008 SG ₂₉₃ | 17.8 | X | 271.13955 | 64.60529 | 222.85656 | 20.39841 | 0.0729855 | 0.38250073 | 1.8795240 | 20 | 2 15.7 | 20.5 |
| 372155 2008 SM ₂₉₃ | 15.9 | X | 51.01433 | 343.95340 | 52.54444 | 14.33491 | 0. | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 372161 2008 TB ₃ | 16.2 | X | 17.90588 | 202.00913 | 251.80616 | 6.17415 | 0.1127743 | 0.19620327 | 2.9331339 | 20 | — | — |
| 372162 2008 TZ ₅ | 16.5 | X | 95.85531 | 46.50344 | 292.72549 | 1.34640 | 0.2012683 | 0.18539937 | 3.0460045 | 20 | — | — |
| 372163 2008 TT ₈ | 16.0 | X | 88.60137 | 143.23549 | 200.76823 | 10.25568 | 0.0246580 | 0.18215191 | 3.0821012 | 20 | — | — |
| 372164 2008 TV ₁₃ | 15.5 | X | 141.08228 | 273.71586 | 6.20240 | 18.47439 | 0.1864550 | 0.18584018 | 3.0411859 | 20 | — | — |
| 372165 2008 TZ ₁₃ | 16.2 | X | 346.75253 | 269.42994 | 203.48424 | 5.29506 | 0.2577649 | 0.18318035 | 3.0705544 | 20 | — | — |
| 372166 2008 TG ₁₆ | 16.8 | X | 18.57250 | 97.09572 | 339.94916 | 3.72273 | 0.1200266 | 0.18611499 | 3.0381915 | 20 | — | — |
| 372167 2008 TH ₂₄ | 16.1 | X | 34.18279 | 38.40156 | 341.21778 | 9.31061 | 0.0908137 | 0.17804758 | 3.1292865 | 20 | — | — |
| 372168 2008 TO ₃₄ | 16.2 | X | 76.49584 | 329.57308 | 60.65801 | 5.79051 | 0.0343596 | 0.18783251 | 3.0196425 | 20 | — | — |
| 372169 2008 TL ₃₈ | 16.2 | X | 58.70342 | 286.81386 | 96.98279 | 7.86339 | 0.2844453 | 0.18497300 | 3.0506835 | 20 | — | — |
| 372170 2008 TL ₄₂ | 15.7 | X | 337.23783 | 124.10870 | 300.49049 | 8.35126 | 0.0372448 | 0.17370609 | 3.1812126 | 20 | 12 7.3 | 20.0 |
| 372171 2008 TE ₄₆ | 16.2 | X | 86.17659 | 200.47214 | 166.87694 | 4.98758 | 0.1155978 | 0.18474574 | 3.0531849 | 20 | — | — |
| 372172 2008 TH ₅₁ | 16.4 | X | 71.24192 | 223.44616 | 184.43780 | 5.78056 | 0.1639697 | 0.19102699 | 2.9858838 | 20 | 1 6.9 | 20.1 |
| 372173 2008 TN ₅₃ | 15.8 | X | 249.07898 | 1.87128 | 187.41947 | 11.87244 | 0.0366426 | 0.18297455 | 3.0728563 | 20 | — | — |
| 372174 2008 TB ₅₅ | 16.2 | X | 287.81861 | 275.30761 | 207.61939 | 4.00716 | 0.1171222 | 0.17310288 | 3.1885986 | 20 | 12 6.2 | 20.3 |
| 372175 2008 TX ₅₅ | 16.8 | X | 85.36289 | 128.98184 | 207.64145 | 4.65400 | 0.1432327 | 0.18108951 | 3.0941440 | 20 | — | — |
| 372176 2008 TW ₅₇ | 17.1 | X | 12.45276 | 265.70631 | 166.09995 | 0.78634 | 0.1662262 | 0.18110345 | 3.0939852 | 20 | — | — |
| 372177 2008 TH ₆₃ | 16.6 | X | 118.37596 | 29.32532 | 310.74938 | 0.35798 | 0.0868884 | 0.18806892 | 3.0171116 | 20 | — | — |
| 372178 2008 TD ₆₃ | 15.4 | X | 109.08938 | 268.52279 | 62.82440 | 11.01729 | 0.1062356 | 0.18816012 | 3.0161366 | 20 | — | — |
| 372179 2008 TZ ₆₃ | 16.7 | X | 351.39597 | 284.31084 | 162.82331 | 0.59465 | 0.1656370 | 0.17804143 | 3.1235587 | 20 | — | — |
| 372180 2008 TP ₆₆ | 15.9 | X | 93.03325 | 280.20356 | 43.74156 | 10.42002 | 0.0557339 | 0.17713676 | 3.1400044 | 20 | 12 31.2 | 20.6 |
| 372181 2008 TW ₇₃ | 15.9 | X | 70.15051 | 311.97366 | 30.57463 | 11.87528 | 0.0647191 | 0.17457382 | 3.1706622 | 20 | 12 28.1 | 20.6 |
| 372182 2008 TS ₇₇ | 16.0 | X | 16.49412 | 77.21572 | 19.35137 | 8.68162 | 0.0991033 | 0.18996633 | 2.9969877 | 20 | — | — |
| 372183 2008 TA ₈₀ | 16.7 | X | 96.97083 | 313.30190 | 53.77064 | 2.78307 | 0.1929611 | 0.19106980 | 2.9854377 | 20 | — | — |
| 372184 2008 TB ₈₄ | 16.3 | X | 53.10945 | 195.25940 | 205.25472 | 8.00797 | 0.1926704 | 0.18543699 | 3.0455925 | 20 | — | — |
| 372185 2008 TB ₈₅ | 16.4 | X | 169.51210 | 38.95670 | 290.44471 | 4.96423 | 0.0459930 | 0.19989447 | 2.8969135 | 20 | 1 15.7 | 20.5 |
| 372186 2008 TV ₈₅ | 16.2 | X | 286.04446 | 149.04626 | 12.35563 | 5.69638 | 0.0694899 | 0.18562972 | 3.0434842 | 20 | — | — |
| 372187 2008 TY ₈₅ | 16.9 | X | 58.08343 | 28.27544 | 12.52787 | 1.38628 | 0.1566784 | 0.18788381 | 3.0190929 | 20 | — | — |
| 372188 2008 TR ₈₉ | 15.9 | X | 4.81845 | 32.38712 | 28.82786 | 6.34161 | 0.1864999 | 0.17598989 | 3.1536312 | 20 | — | — |
| 372189 2008 TS ₈₉ | 16.5 | X | 338.87565 | 84.56720 | 28.46895 | 9.76301 | 0.1932904 | 0.17871164 | 3.1215299 | 20 | — | — |
| 372190 2008 TH ₉₈ | 16.6 | X | 73.17586 | 316.95956 | 30.74209 | 4.19284 | 0.1143437 | 0.18083285 | 3.0970710 | 20 | — | — |
| 372191 2008 TC ₉₉ | 15.8 | X | 76.25237 | 310.01101 | 25.91768 | 11.72780 | 0.0484728 | 0.17780456 | 3.1321372 | 20 | 12 25.8 | 20.5 |
| 372192 2008 TX ₁₀₅ | 16.0 | X | 124.82155 | 130.23417 | 208.01885 | 9.63843 | 0.1142437 | 0.18980036 | 2.9987345 | 20 | — | — |
| 372193 2008 TU ₁₀₆ | 16.5 | X | 94.28706 | 329.12544 | 39.25060 | 6.56057 | 0.1777019 | 0.19076458 | 2.9886214 | 20 | — | — |
| 372194 2008 TZ ₁₁₀ | 15.8 | X | 70.99718 | 30.79124 | 9.40146 | 10.04486 | 0.1098884 | 0.18879745 | 3.0093449 | 20 | — | — |
| 372195 2008 TS ₁₂₃ | 16.2 | X | 348.72430 | 67.30393 | 24.80812 | 5.64576 | 0.2154276 | 0.18438601 | 3.0571546 | 20 | — | — |
| 372196 2008 TX ₁₂₇ | 16.6 | X | 60.53839 | 52.13903 | 350.67381 | 8.31250 | 0.1382336 | 0.18799820 | 3.0178682 | 20 | — | — |
| 372197 2008 TN ₁₃₀ | 16.2 | X | 301.82680 | 112.96975 | 5.06294 | 7.30475 | 0.1611054 | 0.17277008 | 3.1292920 | 20 | 12 16.8 | 20.1 |
| 372198 2008 TC ₁₃₁ | 16.4 | X | 203.62079 | 292.54640 | 276.94867 | 3.90306 | 0.0110974 | 0.17541267 | 3.1605457 | 20 | 12 19.3 | 20.8 |
| 372199 2008 TM ₁₃₃ | 16.6 | X | 128.69603 | 159.24953 | 169.33182 | 2.81580 | 0.0591142 | 0.19006763 | 2.9959228 | 20 | — | — |
| 372200 2008 TA ₁₄₂ | 16.4 | X | 298.76717 | 352.64677 | 152.93165 | 2.31064 | 0.0463142 | 0.18478696 | 3.0527307 | 20 | — | — |
| 372201 2008 TE ₁₄₃ | 16.6 | X | 39.67364 | 7.39737 | 30.94716 | 2.90162 | 0.1167011 | 0.18354412 | 3.0664960 | 20 | — | — |
| 372202 2008 TZ ₁₄₃ | 16.7 | X | 146.77556 | 112.17698 | 172.03119 | 2.01266 | 0.2292228 | 0.18880382 | 3.0092773 | 20 | — | — |
| 372203 2008 TD ₁₄₈ | 17.0 | X | 163.15015 | 171.62057 | 116.10299 | 2.34511 | 0.1225301 | 0.19043617 | 2.9920563 | 20 | — | — |
| 372204 2008 TJ ₁₅₂ | 16.3 | X | 348.73636 | 230.75110 | 176.46930 | 10.50250 | 0.0407127 | 0.17418219 | 3.1754130 | 20 | 12 3.3 | 20.8 |
| 372205 2008 TO ₁₅₄ | 15.6 | X | 156.53671 | 26.11508 | 283.04188 | 7.61927 | 0.0728434 | 0.19009071 | 2.9956802 | 20 | — | — |
| 372206 2008 TD ₁₅₈ | 15.4 | X | 35.47342 | 143.37924 | 280.43951 | 9.37132 | 0.1113970 | 0.18249993 | 3.0781816 | 20 | — | — |
| 372207 2008 TT ₁₆₀ | 16.3 | X | 111.87642 | 282.47822 | 27.95583 | 0.59397 | 0.1509459 | 0.18157755 | 3.0885973 | 20 | — | — |
| 372208 2008 TC ₁₆₃ | 15.6 | X | 1.92846 | 277.11026 | 164.57749 | 16.58468 | 0.2498786 | 0.17887437 | 3.1196364 | 20 | — | — |
| 372209 2008 TT ₁₆₉ | 16.6 | X | 60.56037 | 292.73281 | 69.28052 | 2.59756 | 0.0866805 | 0.17764411 | 3.1340229 | 20 | — | — |
| 372210 2008 TB ₁₇₀ | 16.3 | X | 31.66553 | 271.63522 | 132.81639 | 7.86876 | 0.2520734 | 0.18045260 | 3.1014202 | 20 | — | — |
| 372211 2008 TR ₁₇₃ | 15.8 | X | 48.99581 | 277.49175 | 124.45991 | 12.23665 | 0.1192517 | 0.18525481 | 3.0475889 | 20 | — | — |
| 372212 2008 TV ₁₇₇ | 15.7 | X | 55.63411 | 313.38299 | 92.32209 | 11.46118 | 0.1021919 | 0.18943790 | 3.0025585 | 20 | — | — |
| 372213 2008 TY ₁₈₉ | 14.5 | X | 19.56706 | 140.49527 | 269.69193 | 25.95488 | 0.1287020 | 0.17627978 | 3.1501728 | 20 | — | — |
| 372214 2008 UM ₂ | 15.7 | X | 44.39865 | 282.49009 | 115.47886 | 20.13514 | 0.1492357 | 0.17906479 | 3.1174243 | 20 | — | — |
| 372215 2008 UU ₁₁ | 15.9 | X | 231.84643 | 341.47562 | 226.70680 | 11.46293 | 0.0724118 | 0.18392323 | 3.0622806 | 20 | — | — |
| 372216 2008 UH ₁₂ | 16.4 | X | 42.61776 | 123.10789 | 259.45679 | 5.65390 | 0.0499301 | 0.18015018 | 3.1048902 | 20 | — | — |
| 372217 2008 UR ₁₂ | 16.9 | X | 122.29085 | 143.88704 | 180.84991 | 8.81774 | 0.1316519 | 0.18906424 | 3.0065133 | 20 | — | — |
| 372218 2008 UA ₂₂ | 17.1 | X | 89.42424 | 9.08263 | 23.80260 | 0.19275 | 0.2120582 | 0.19203157 | 2.9754612 | 20 | 1 22.3 | 20.7 |
| 372219 2008 UN ₂₉ | 15.3 | X | 64.88235 | 331.33847 | 47.69176 | 16.94844 | 0.1761672 | 0.18169273 | 3.0872918 | 20 | — | — |
| 372220 2008 UJ ₃₂ | 15.7 | X | 351.11666 | 213.28157 | 212.35093 | 14.82742 | 0.0053531 | 0.17322257 | 3.1871297 | 20 | 12 23.4 | 20.4 |
| 372221 2008 UQ ₃₃ | 16.4 | X | 54.10171 | 244.13135 | 158.37101 | 2.77336 | 0.1557174 | 0.18575242 | 3.0421437 | 20 | — | — |
| 372222 2008 UL ₃₆ | 16.2 | X | 37.14300 | 153.79738 | 239.45895 | 11.32561 | 0.1339088 | 0.17669990 | 3.1451777 | 20 | — | — |
| 372223 2008 UA ₄₆ | 15.8 | X | 262.52350 | 270.32259 | 264.63759 | 6.88399 | 0.0352300 | 0.17430969 | 3.1738643 | 20 | — | — |
| 372224 2008 US ₅₀ | 16.4 | X | 115.67203 | 247.22614 | 42.43900 | 1.50191 | 0.1858637 | 0.17756642 | 3.1349371 | 20 | 12 21.6 | 21.6 |
| 372225 2008 UB ₅₇ | 16.7 | X | 84.07164 | 224.20990 | 89.64454 | 2.54400 | 0.0931036 | 0.17288206 | 3.1913132 | 20 | 12 12.5 | 21.4 |
| 372226 2008 UB ₆₆ | 15.9 | X | 74.03594 | 121.45939 | 248.66886 | 11.42559 | 0.1067802 | 0.17983617 | 3.1085034 | 20 | — | — |
| 372227 2008 UJ ₇₁ | 15.9 | X | 62.66462 | 87.29135 | 297.48235 | 4.38506 | 0.1390039 | 0.17941247 | 3.1133955 | 20 | — | — |
| 372228 2008 UL ₇₇ | 15.3 | X | 21.87048 | 6.57512 | 50.36239 | 19.25068 | 0.1855063 | 0.17552895 | 3.1591498 | 20 | — | — |
| 372229 2008 UT ₇₉ | 16.3 | X | 90.40386 | 128.94654 | 225.30142 | 16.05033 | 0.1285876 | 0.18445363 | 3.0564074 | 20 | — | — |
| 372230 2008 UO ₈₀ | 15.7 | X | 106.26314 | 283.75016 | 308.04838 | 6.20583 | 0.0943389 | 0.15446881 | 3.4401352 | 20 | 9 24.9 | 21.0 |
| 372231 2008 UG ₈₆ | 16.7 | X | 62.61330 | 200.31258 | 203.13335 | 0.85217 | 0.2532067 | 0.18457384 | 3.0550802 | 20 | 1 1.1 | 20.0 |
| 372232 2008 UR ₉₁ | 14.9 | X | 60.40665 | 118.37484 | 270.44128 | 16.74580 | 0.1451896 | 0.17836228 | 3.1256046 | 20 | — | — |
| 372233 2008 UF ₁₀₀ | 16.3 | X | 43.13339 | 205.59780 | 219.11222 | 3.13446 | 0.2379729 | 0.18372126 | 3.0645246 | 20 | — | — |
| 372234 2008 UC ₁₀₇ | 16.4 | X | 63.27498 | 283.77086 | 65.74086 | 6.48246 | 0.1274756 | 0.17638943 | 3.1488673 | 20 | — | — |
| 372235 2008 UU ₁₁₁ | 15.7 | X | 87.19304 | 308.95488 | 25.91772 | 16.08154 | 0.0654856 | 0.17711947 | 3.1402087 | 20 | — | — |
| 372236 2008 UL ₁₁₆ | 16.1 | X | 101.83718 | 320.39641 | 350.12743 | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 372241 2008 UV ₁₂₄ | 16.0 | X | 68.26105 | 80.98714 | 303.18012 | 7.54219 | 0.0874494 | 0.18036841 | 3.1023852 | 20 | — | — |
| 372242 2008 UV ₁₂₅ | 15.5 | X | 68.83888 | 147.87110 | 272.18198 | 8.33961 | 0.1179529 | 0.18663531 | 3.0325421 | 20 | 1 13.7 | 19.2 |
| 372243 2008 US ₁₃₃ | 16.3 | X | 325.21313 | 268.27008 | 227.01903 | 5.52156 | 0.1374396 | 0.17932579 | 3.1143987 | 20 | — | — |
| 372244 2008 UL ₁₃₇ | 16.1 | X | 111.29511 | 77.89155 | 221.42312 | 9.46315 | 0.2287994 | 0.17749126 | 3.1358220 | 20 | 12 29.8 | 21.5 |
| 372245 2008 UY ₁₃₉ | 16.0 | X | 40.13442 | 352.21426 | 44.87211 | 5.55585 | 0.1340514 | 0.17817706 | 3.1277703 | 20 | — | — |
| 372246 2008 UP ₁₄₂ | 16.2 | X | 62.93788 | 304.88398 | 62.64017 | 4.80932 | 0.1239547 | 0.17733572 | 3.1376553 | 20 | — | — |
| 372247 2008 UE ₁₅₁ | 16.3 | X | 90.20391 | 175.26808 | 208.90975 | 1.36992 | 0.2215285 | 0.18791816 | 3.0187250 | 20 | 1 14.4 | 20.1 |
| 372248 2008 UJ ₁₅₅ | 16.7 | X | 2.52857 | 298.81056 | 123.64646 | 0.73617 | 0.1973280 | 0.17258421 | 3.1949839 | 20 | — | — |
| 372249 2008 UG ₁₅₈ | 16.2 | X | 62.55354 | 120.89869 | 225.41260 | 15.20326 | 0.2206631 | 0.17456316 | 3.1707913 | 20 | — | — |
| 372250 2008 UT ₁₅₉ | 16.1 | X | 63.03648 | 314.60891 | 38.44169 | 5.97420 | 0.1915293 | 0.17337754 | 3.1852302 | 20 | — | — |
| 372251 2008 UW ₁₆₁ | 16.9 | X | 35.09048 | 359.54407 | 9.77244 | 9.01994 | 0.0759681 | 0.17320161 | 3.1873868 | 20 | 12 19.3 | 21.4 |
| 372252 2008 UL ₁₆₂ | 16.0 | X | 79.67986 | 1.39393 | 334.24574 | 4.29311 | 0.0395109 | 0.17556484 | 3.1587192 | 20 | 12 28.2 | 20.5 |
| 372253 2008 UJ ₁₈₂ | 16.9 | X | 10.65675 | 269.84851 | 154.16376 | 1.98707 | 0.1512404 | 0.17781700 | 3.1319912 | 20 | — | — |
| 372254 2008 UL ₁₈₉ | 17.1 | X | 43.33900 | 262.04083 | 149.00270 | 0.82383 | 0.1226929 | 0.18724608 | 3.0259440 | 20 | — | — |
| 372255 2008 UF ₁₉₂ | 15.8 | X | 42.98055 | 2.21974 | 63.89549 | 5.32016 | 0.1126303 | 0.18389320 | 3.0626140 | 20 | — | — |
| 372256 2008 UX ₂₀₈ | 15.7 | X | 348.89016 | 208.82056 | 234.45355 | 6.43098 | 0.1450774 | 0.17516032 | 3.1635805 | 20 | — | — |
| 372257 2008 UJ ₂₀₉ | 16.1 | X | 222.62918 | 22.38993 | 226.04703 | 9.13970 | 0.0369499 | 0.18758275 | 3.0223224 | 20 | — | — |
| 372258 2008 UG ₂₁₆ | 16.3 | X | 3.38137 | 253.83908 | 176.82586 | 1.13787 | 0.1470161 | 0.17293567 | 3.1906536 | 20 | — | — |
| 372259 2008 US ₂₂₀ | 16.0 | X | 327.46286 | 220.68889 | 244.60785 | 3.89852 | 0.1527000 | 0.17310898 | 3.1885237 | 20 | — | — |
| 372260 2008 UJ ₂₃₆ | 15.4 | X | 41.46690 | 150.05732 | 257.27193 | 9.03638 | 0.1509591 | 0.18026620 | 3.1035578 | 20 | — | — |
| 372261 2008 UL ₂₄₂ | 16.0 | X | 27.09723 | 242.74179 | 140.12538 | 12.28644 | 0.1046221 | 0.17514861 | 3.1637215 | 20 | 12 30.4 | 20.4 |
| 372262 2008 UK ₂₄₅ | 16.1 | X | 23.06881 | 321.81197 | 18.91438 | 6.17438 | 0.0497176 | 0.15861646 | 3.3799003 | 20 | 10 23.9 | 20.7 |
| 372263 2008 UR ₂₅₃ | 16.2 | X | 25.14184 | 358.96402 | 43.28659 | 3.86218 | 0.1046043 | 0.17559988 | 3.1582990 | 20 | — | — |
| 372264 2008 UE ₂₅₄ | 16.2 | X | 110.50826 | 83.38636 | 230.75674 | 1.49141 | 0.1598096 | 0.17857023 | 3.1231775 | 20 | — | — |
| 372265 2008 UA ₂₅₈ | 16.1 | X | 9.32509 | 358.86296 | 46.36975 | 6.91659 | 0.1176152 | 0.17132908 | 3.2105689 | 20 | — | — |
| 372266 2008 UM ₂₇₇ | 15.7 | X | 322.13634 | 249.39410 | 217.94919 | 11.60843 | 0.0645483 | 0.17586874 | 3.1550793 | 20 | — | — |
| 372267 2008 UF ₂₈₂ | 16.7 | X | 19.80118 | 262.11518 | 152.99796 | 1.15765 | 0.1694337 | 0.17512402 | 3.1640177 | 20 | — | — |
| 372268 2008 UR ₂₈₅ | 16.5 | X | 15.15798 | 199.63026 | 179.39220 | 1.64834 | 0.0804952 | 0.16984648 | 3.2292253 | 20 | 12 5.6 | 20.9 |
| 372269 2008 UQ ₂₉₂ | 16.3 | X | 166.91479 | 9.84996 | 346.12723 | 8.66588 | 0.1672493 | 0.21153307 | 2.7896553 | 20 | 2 21.4 | 20.7 |
| 372270 2008 UR ₂₉₆ | 17.1 | X | 350.33680 | 77.19948 | 29.23279 | 3.22267 | 0.3020210 | 0.17582827 | 3.1556535 | 20 | — | — |
| 372271 2008 UC ₃₀₄ | 15.6 | X | 18.34346 | 186.81460 | 253.57398 | 9.70814 | 0.2386623 | 0.18157978 | 3.0885719 | 20 | — | — |
| 372272 2008 UG ₃₀₇ | 16.1 | X | 74.74296 | 55.69559 | 306.44788 | 6.74002 | 0.0322659 | 0.17691865 | 3.1425845 | 20 | — | — |
| 372273 2008 UN ₃₁₀ | 15.7 | X | 64.37741 | 104.90290 | 291.55099 | 9.68821 | 0.0839952 | 0.18519452 | 3.0482503 | 20 | — | — |
| 372274 2008 UH ₃₂₄ | 15.4 | X | 20.22081 | 64.01441 | 343.77656 | 8.88634 | 0.0764306 | 0.17720155 | 3.1392390 | 20 | — | — |
| 372275 2008 UG ₃₃₁ | 16.5 | X | 49.79340 | 41.72392 | 9.08915 | 8.60587 | 0.0755825 | 0.18606429 | 3.0387434 | 20 | — | — |
| 372276 2008 UQ ₃₃₇ | 16.4 | X | 102.40076 | 288.03202 | 45.67520 | 3.51238 | 0.0940160 | 0.18264344 | 3.0765691 | 20 | — | — |
| 372277 2008 UK ₃₄₁ | 16.0 | X | 96.39442 | 118.91930 | 216.78930 | 6.61504 | 0.1856654 | 0.17778270 | 3.1323939 | 20 | — | — |
| 372278 2008 UF ₃₄₃ | 15.5 | X | 100.83555 | 305.92949 | 9.68323 | 9.99638 | 0.2134797 | 0.17536605 | 3.1611059 | 20 | — | — |
| 372279 2008 UQ ₃₄₃ | 15.6 | X | 61.45151 | 135.87953 | 224.60422 | 8.03111 | 0.1313696 | 0.17429819 | 3.1740040 | 20 | — | — |
| 372280 2008 UH ₃₄₅ | 16.5 | X | 52.55867 | 313.52211 | 47.30006 | 1.81147 | 0.1681196 | 0.17378584 | 3.1802393 | 20 | — | — |
| 372281 2008 UZ ₃₅₀ | 16.1 | X | 29.35519 | 266.27400 | 173.94285 | 3.04210 | 0.0980963 | 0.18138603 | 3.0907710 | 20 | — | — |
| 372282 2008 UW ₃₅₁ | 15.8 | X | 3.20567 | 278.00329 | 135.49833 | 13.00804 | 0.2673382 | 0.16408739 | 3.3043490 | 20 | — | — |
| 372283 2008 UN ₃₅₂ | 15.6 | X | 39.99811 | 289.47038 | 90.80666 | 10.89064 | 0.2240532 | 0.17433393 | 3.1735701 | 20 | — | — |
| 372284 2008 UZ ₃₆₀ | 15.9 | X | 44.07891 | 3.16884 | 45.11236 | 6.11374 | 0.1320721 | 0.18086687 | 3.0966827 | 20 | — | — |
| 372285 2008 UF ₃₆₁ | 15.7 | X | 3.95113 | 299.73379 | 149.48195 | 16.23112 | 0.2403018 | 0.17986166 | 3.1082097 | 20 | — | — |
| 372286 2008 UN ₃₆₈ | 16.2 | X | 26.89204 | 317.46580 | 97.68435 | 2.01662 | 0.0604942 | 0.17531440 | 3.1617267 | 20 | — | — |
| 372287 2008 UU ₃₆₈ | 16.3 | X | 351.05650 | 259.60192 | 176.71496 | 5.04004 | 0.1865254 | 0.17167314 | 3.2062779 | 20 | — | — |
| 372288 2008 VU ₁ | 15.5 | X | 81.68213 | 355.16988 | 6.81392 | 14.28912 | 0.1530218 | 0.18351901 | 3.0667757 | 20 | — | — |
| 372289 2008 VL ₃ | 15.4 | X | 350.03841 | 194.61804 | 239.13162 | 27.42901 | 0.1797373 | 0.17357302 | 3.1828382 | 20 | — | — |
| 372290 2008 VN ₅ | 15.4 | X | 304.41745 | 175.24020 | 308.94756 | 10.59290 | 0.0154150 | 0.17906636 | 3.1174061 | 20 | — | — |
| 372291 2008 VM ₈ | 15.6 | X | 39.86619 | 161.42572 | 266.11608 | 8.35195 | 0.0528508 | 0.18464102 | 3.0543391 | 20 | — | — |
| 372292 2008 VJ ₁₇ | 16.5 | X | 69.63441 | 349.85455 | 78.83275 | 2.76191 | 0.2712827 | 0.19007784 | 2.9958155 | 20 | 2 18.3 | 20.0 |
| 372293 2008 VR ₂₄ | 15.7 | X | 32.27005 | 340.05033 | 82.85892 | 10.74559 | 0.2214303 | 0.17835605 | 3.1256773 | 20 | — | — |
| 372294 2008 VE ₂₅ | 16.0 | X | 72.87079 | 329.74408 | 47.80530 | 19.58424 | 0.2155472 | 0.18456253 | 3.0552050 | 20 | — | — |
| 372295 2008 VN ₃₈ | 16.3 | X | 61.07412 | 107.85971 | 323.21664 | 2.42394 | 0.1641671 | 0.18685374 | 3.0301783 | 20 | 1 22.4 | 19.7 |
| 372296 2008 VD ₅₄ | 15.5 | X | 37.08156 | 153.27714 | 259.13704 | 15.41660 | 0.1030036 | 0.17801304 | 3.1296914 | 20 | — | — |
| 372297 2008 VF ₅₇ | 16.4 | X | 83.15444 | 146.79879 | 219.96901 | 7.76731 | 0.2657121 | 0.18434431 | 3.0576156 | 20 | — | — |
| 372298 2008 VQ ₅₉ | 15.5 | X | 77.24216 | 303.28367 | 53.21197 | 11.10242 | 0.2051090 | 0.18095169 | 3.0957149 | 20 | — | — |
| 372299 2008 VN ₇₃ | 16.0 | X | 199.80755 | 96.92071 | 72.67432 | 6.42538 | 0.0061059 | 0.15991457 | 3.3615844 | 20 | 10 27.8 | 20.9 |
| 372300 2008 VU ₇₇ | 15.9 | X | 43.58449 | 331.69343 | 63.03501 | 4.26235 | 0.2274142 | 0.17638052 | 3.1489732 | 20 | — | — |
| 372301 2008 WA ₁₂ | 16.1 | X | 102.52609 | 98.61048 | 229.22706 | 6.27776 | 0.1808937 | 0.17883374 | 3.1201088 | 20 | — | — |
| 372302 2008 WO ₁₅ | 16.7 | X | 85.53565 | 170.58613 | 144.23184 | 1.50922 | 0.1560981 | 0.17520221 | 3.1630762 | 20 | 12 21.6 | 21.6 |
| 372303 2008 WT ₅₈ | 17.2 | X | 238.61636 | 29.65619 | 248.14418 | 18.55727 | 0.0553026 | 0.36511719 | 1.9387175 | 20 | — | — |
| 372304 2008 WP ₆₀ | 15.2 | X | 13.04266 | 184.05428 | 235.79550 | 8.37812 | 0.0690800 | 0.17409890 | 3.1764257 | 20 | — | — |
| 372305 Bourdeille | 16.9 | X | 8.43463 | 295.42418 | 141.67013 | 0.47974 | 0.1812115 | 0.17759099 | 3.1346479 | 20 | — | — |
| 372306 2008 WB ₆₃ | 16.2 | X | 88.91570 | 91.00661 | 245.63435 | 19.45092 | 0.3075480 | 0.18071635 | 3.0984019 | 20 | — | — |
| 372307 2008 WR ₆₆ | 16.9 | X | 4.78798 | 292.47213 | 147.88494 | 0.60988 | 0.2101316 | 0.17444816 | 3.1721846 | 20 | — | — |
| 372308 2008 WT ₆₇ | 16.4 | X | 50.07251 | 226.05429 | 191.09108 | 1.20370 | 0.1848577 | 0.18140678 | 3.0905352 | 20 | — | — |
| 372309 2008 WV ₈₈ | 15.6 | X | 34.35475 | 149.01998 | 244.57271 | 11.77612 | 0.1052790 | 0.17327770 | 3.1864535 | 20 | — | — |
| 372310 2008 WR ₉₄ | 16.2 | X | 82.65740 | 300.22684 | 62.81098 | 1.71049 | 0.2826849 | 0.18282986 | 3.0744774 | 20 | — | — |
| 372311 2008 WM ₁₀₇ | 15.8 | X | 18.40679 | 157.53928 | 267.83081 | 9.62599 | 0.0574042 | 0.17668752 | 3.1453246 | 20 | — | — |
| 372312 2008 WL ₁₁₁ | 16.4 | X | 342.05494 | 58.13657 | 33.61139 | 1.18081 | 0.1535428 | 0.17098719 | 3.2148472 | 20 | — | — |
| 372313 2008 WT ₁₁₁ | 16.1 | X | 57.01372 | 72.06476 | 269.04161 | 3.61714 | 0.0559222 | 0.16527149 | 3.2885473 | 20 | 12 7.9 | 20.6 |
| 372314 2008 WN ₁₃₅ | 15.2 | X | 73.66284 | 120.67996 | 253.46047 | 16.61432 | 0.0684340 | 0.17530991 | 3.1617807 | 20 | — | — |
| 372315 2008 WT ₁₄₀ | 16.6 | X | 44.62244 | 232.87471 | 166.96527 | 13.46957 | 0.2617885 | 0.18044924 | 3.1014587 | 20 | — | — |
| 372316 2008 XM ₃ | 15.6 | X | 66.85295 | 82.93423 | 260.32039 | 14. | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 372321 2008 YR ₃ | 16.3 | X | 38.59562 | 344.97662 | 57.61381 | 2.21698 | 0.1676674 | 0.17669101 | 3.1452832 | 20 | — | — |
| 372322 2008 YD ₉ | 15.4 | X | 16.10613 | 163.34901 | 260.86555 | 17.30162 | 0.0757515 | 0.18038044 | 3.1022474 | 20 | — | — |
| 372323 2008 YO ₁₂ | 15.4 | X | 150.24544 | 45.03013 | 261.30701 | 10.41883 | 0.0696349 | 0.17826027 | 3.1267969 | 20 | — | — |
| 372324 2008 YN ₂₃ | 16.5 | X | 27.29838 | 250.83321 | 185.56226 | 0.56612 | 0.1849340 | 0.17706528 | 3.1408494 | 20 | — | — |
| 372325 2009 AV ₁₅ | 17.7 | X | 310.71468 | 173.27826 | 342.00052 | 7.01547 | 0.1919500 | 0.34254320 | 2.0229842 | 20 | — | — |
| 372326 2009 AN ₄₆ | 15.1 | X | 60.00751 | 252.66499 | 359.09030 | 5.82232 | 0.1294932 | 0.12587470 | 3.9431541 | 20 | 9 1.4 | 20.4 |
| 372327 2009 BQ ₁₄ | 15.9 | X | 34.09293 | 115.05846 | 288.52214 | 17.67994 | 0.2629906 | 0.17317621 | 3.1876984 | 20 | — | — |
| 372328 2009 BH ₆₈ | 17.9 | X | 113.32450 | 272.72989 | 322.45143 | 4.95346 | 0.1482703 | 0.30575712 | 2.1821520 | 20 | 11 1.0 | 21.2 |
| 372329 2009 BL ₇₅ | 18.2 | X | 128.11411 | 74.02264 | 311.40407 | 18.60368 | 0.0857194 | 0.35722276 | 1.9671764 | 20 | 1 18.3 | 20.1 |
| 372330 2009 BW ₇₆ | 17.3 | X | 355.57624 | 206.12216 | 307.09297 | 16.31423 | 0.0879319 | 0.35348255 | 1.9810285 | 20 | — | — |
| 372331 2009 BU ₁₄₂ | 17.9 | X | 110.72359 | 89.90139 | 322.79268 | 17.52855 | 0.1055001 | 0.35710401 | 1.9676124 | 20 | 2 4.5 | 19.5 |
| 372332 2009 BY ₁₇₈ | 17.6 | X | 73.27998 | 269.33434 | 357.72731 | 5.95141 | 0.1614488 | 0.29780225 | 2.2208407 | 20 | 11 1.7 | 20.7 |
| 372333 2009 CS ₂₄ | 15.4 | X | 304.78972 | 249.43751 | 329.61274 | 11.10554 | 0.1063111 | 0.17760610 | 3.1344701 | 20 | 2 12.9 | 19.7 |
| 372334 2009 CK ₅₃ | 17.4 | X | 319.76005 | 223.45710 | 319.14190 | 16.77242 | 0.0584209 | 0.35126705 | 1.9893496 | 20 | — | — |
| 372335 2009 DJ ₄ | 17.4 | X | 89.01615 | 65.25546 | 352.66187 | 19.98910 | 0.0642442 | 0.35160736 | 1.9880657 | 20 | 1 3.5 | 19.8 |
| 372336 2009 DQ ₁₃ | 18.1 | X | 121.38055 | 339.60770 | 256.88513 | 3.76158 | 0.1191991 | 0.30614105 | 2.1803272 | 20 | 11 11.8 | 21.2 |
| 372337 2009 DF ₈₂ | 18.0 | X | 28.90490 | 216.77607 | 56.19560 | 3.90380 | 0.1984256 | 0.28743370 | 2.2739326 | 20 | 9 20.6 | 20.2 |
| 372338 2009 DG ₈₂ | 17.8 | X | 101.73202 | 83.02792 | 160.44975 | 7.52868 | 0.1699480 | 0.30000435 | 2.2099597 | 20 | 11 5.2 | 21.2 |
| 372339 2009 DS ₈₂ | 18.1 | X | 182.96621 | 69.89982 | 124.56652 | 2.89985 | 0.0651801 | 0.31140072 | 2.1557065 | 20 | 11 30.9 | 20.6 |
| 372340 2009 DY ₉₃ | 17.2 | X | 60.90506 | 110.57563 | 151.94304 | 9.43789 | 0.1993760 | 0.29309686 | 2.2445465 | 20 | 10 22.0 | 20.3 |
| 372341 2009 DG ₉₄ | 17.6 | X | 123.89928 | 141.80867 | 67.66253 | 4.85594 | 0.1550889 | 0.29931235 | 2.2133646 | 20 | 10 12.5 | 20.9 |
| 372342 2009 DF ₉₇ | 17.3 | X | 344.12814 | 262.48616 | 0.52299 | 9.29614 | 0.3652746 | 0.27271947 | 2.3550057 | 20 | 4 8.7 | 18.6 |
| 372343 2009 EL ₂₅ | 18.4 | X | 66.33117 | 270.78412 | 338.53661 | 2.54472 | 0.1468285 | 0.29239330 | 2.2481456 | 20 | 9 29.2 | 21.1 |
| 372344 2009 EG ₂₈ | 17.7 | X | 10.71796 | 187.42491 | 94.23107 | 4.46570 | 0.2182339 | 0.28082234 | 2.3094839 | 20 | 9 1.1 | 19.4 |
| 372345 2009 FG ₂₁ | 18.4 | X | 155.65165 | 192.94015 | 2.21078 | 3.32467 | 0.0697533 | 0.30429620 | 2.1891307 | 20 | 10 25.7 | 21.3 |
| 372346 2009 FA ₂₃ | 18.1 | X | 70.70311 | 143.91012 | 118.75444 | 4.93648 | 0.1629741 | 0.29679525 | 2.2258612 | 20 | 10 28.4 | 21.1 |
| 372347 2009 FK ₃₁ | 17.0 | X | 25.56004 | 98.18059 | 183.31020 | 21.83789 | 0.2497627 | 0.28612812 | 2.2808445 | 20 | 10 5.8 | 19.3 |
| 372348 2009 FS ₃₆ | 19.0 | X | 131.60893 | 162.30221 | 71.89769 | 3.55995 | 0.1267707 | 0.30638085 | 2.1791893 | 20 | 11 20.2 | 22.0 |
| 372349 2009 FF ₄₆ | 17.7 | X | 42.54816 | 187.01302 | 58.33031 | 3.35814 | 0.1992629 | 0.28401577 | 2.2921397 | 20 | 8 31.5 | 20.4 |
| 372350 2009 FT ₄₇ | 17.6 | X | 45.63505 | 209.90389 | 76.13691 | 3.67601 | 0.2382247 | 0.29152402 | 2.2526125 | 20 | 11 7.3 | 20.1 |
| 372351 2009 FV ₆₆ | 17.8 | X | 89.61920 | 136.08839 | 94.53564 | 4.04720 | 0.0857105 | 0.29133805 | 2.2535710 | 20 | 9 27.3 | 20.8 |
| 372352 2009 FA ₇₁ | 18.7 | X | 70.18026 | 79.05230 | 185.41127 | 4.92930 | 0.1584470 | 0.29440488 | 2.2378933 | 20 | 10 27.9 | 21.8 |
| 372353 2009 FG ₇₁ | 18.1 | X | 33.62391 | 177.06653 | 93.89388 | 3.76210 | 0.2200466 | 0.28395084 | 2.2924891 | 20 | 9 28.6 | 20.6 |
| 372354 2009 FD ₇₄ | 18.3 | X | 88.07301 | 41.88763 | 201.75218 | 5.85918 | 0.1174979 | 0.29479450 | 2.2359210 | 20 | 10 14.9 | 21.3 |
| 372355 2009 HL ₁ | 17.9 | X | 43.54266 | 175.99584 | 71.94839 | 1.72461 | 0.1972317 | 0.28491356 | 2.2873220 | 20 | 9 4.8 | 20.4 |
| 372356 2009 HY ₅ | 18.1 | X | 95.02381 | 84.37167 | 140.63613 | 4.80904 | 0.1158912 | 0.29227385 | 2.2487581 | 20 | 9 28.9 | 21.1 |
| 372357 2009 HZ ₁₃ | 17.5 | X | 9.53586 | 109.50274 | 144.93217 | 10.03002 | 0.2052999 | 0.27450598 | 2.3447768 | 20 | 7 5.5 | 19.3 |
| 372358 2009 HR ₂₁ | 18.0 | X | 74.75302 | 19.10201 | 228.78847 | 2.53539 | 0.1530020 | 0.29253181 | 2.2474359 | 20 | 10 8.1 | 20.8 |
| 372359 2009 HN ₂₉ | 17.9 | X | 48.29670 | 173.21645 | 87.98924 | 6.96227 | 0.1204214 | 0.29045811 | 2.2581201 | 20 | 9 22.4 | 20.6 |
| 372360 2009 HO ₄₂ | 18.1 | X | 18.62750 | 166.70502 | 107.35089 | 2.87707 | 0.1497856 | 0.28224368 | 2.3017239 | 20 | 8 23.5 | 20.1 |
| 372361 2009 HC ₄₇ | 18.0 | X | 27.92857 | 272.79766 | 31.07064 | 6.68901 | 0.2231499 | 0.29268473 | 2.2466530 | 20 | 11 5.7 | 20.6 |
| 372362 2009 HK ₇₇ | 18.3 | X | 107.49023 | 248.85066 | 328.22650 | 0.35264 | 0.1813521 | 0.29389355 | 2.2404883 | 20 | 10 4.9 | 21.7 |
| 372363 2009 HX ₉₃ | 17.4 | X | 35.30625 | 99.82848 | 128.18281 | 8.58119 | 0.1903184 | 0.27501340 | 2.3418917 | 20 | 7 17.6 | 19.6 |
| 372364 2009 HE ₁₀₂ | 18.0 | X | 139.12281 | 138.65495 | 70.98152 | 2.16389 | 0.1485212 | 0.29755887 | 2.2220515 | 20 | 10 25.7 | 21.3 |
| 372365 2009 JH ₂ | 17.5 | X | 14.50427 | 208.43346 | 44.50088 | 5.92604 | 0.2066127 | 0.27593634 | 2.3366668 | 20 | 7 18.3 | 19.3 |
| 372366 2009 JQ ₆ | 17.2 | X | 9.12001 | 221.50261 | 106.72781 | 8.67612 | 0.2191909 | 0.28816955 | 2.2700599 | 20 | 11 13.9 | 19.5 |
| 372367 2009 KP ₇ | 17.9 | X | 42.45859 | 248.96288 | 46.97118 | 6.01469 | 0.1780761 | 0.29221469 | 2.2490616 | 20 | 11 7.7 | 20.4 |
| 372368 2009 KR ₂₀ | 17.5 | X | 2.83753 | 196.98990 | 87.20978 | 5.11811 | 0.1645374 | 0.27627709 | 2.3347404 | 20 | 8 8.3 | 19.4 |
| 372369 2009 LC | 16.0 | X | 270.67177 | 103.24941 | 264.14759 | 20.65908 | 0.3199157 | 0.25737952 | 2.4477296 | 20 | 5 22.3 | 19.7 |
| 372370 2009 LM ₁ | 17.6 | X | 336.34464 | 240.19524 | 151.91680 | 6.99843 | 0.1096353 | 0.29806170 | 2.2195517 | 20 | 12 5.0 | 19.8 |
| 372371 2009 MK | 16.5 | X | 315.76593 | 51.29842 | 281.98162 | 13.90201 | 0.1795529 | 0.26609947 | 2.3939039 | 20 | 7 6.3 | 18.6 |
| 372372 2009 OK ₄ | 17.6 | X | 293.49076 | 201.61432 | 108.37746 | 2.52519 | 0.1786167 | 0.25784190 | 2.4447459 | 20 | 4 24.4 | 20.5 |
| 372373 2009 OV ₄ | 17.1 | X | 312.73012 | 346.29239 | 153.97777 | 3.56351 | 0.1953617 | 0.26368675 | 2.4084844 | 20 | 6 22.5 | 19.3 |
| 372374 2009 OK ₂₁ | 17.0 | X | 274.09480 | 184.57707 | 346.36697 | 2.72868 | 0.1979294 | 0.25697441 | 2.4502447 | 20 | 5 8.4 | 20.4 |
| 372375 2009 OJ ₂₂ | 16.4 | X | 320.68949 | 10.63622 | 278.48103 | 14.13809 | 0.1336895 | 0.25670377 | 2.4519666 | 20 | 5 11.3 | 19.2 |
| 372376 2009 OC ₂₅ | 17.1 | X | 314.17632 | 315.83099 | 8.33556 | 10.47401 | 0.2656299 | 0.26243960 | 2.4161087 | 20 | 5 30.3 | 19.7 |
| 372377 2009 PN ₄ | 16.9 | X | 290.86215 | 199.17045 | 178.55415 | 8.65792 | 0.2787625 | 0.26344615 | 2.4099506 | 20 | 7 8.2 | 19.8 |
| 372378 2009 PP ₄ | 17.7 | X | 240.95453 | 87.17167 | 294.54581 | 7.94148 | 0.2628216 | 0.25203258 | 2.4821704 | 20 | 5 17.6 | 21.9 |
| 372379 2009 PW ₉ | 17.7 | X | 309.91052 | 142.84236 | 214.85861 | 5.48942 | 0.2885120 | 0.26549553 | 2.3975329 | 20 | 7 12.8 | 19.6 |
| 372380 2009 PQ ₁₁ | 16.6 | X | 300.08618 | 33.88850 | 339.64165 | 7.17127 | 0.1784971 | 0.26451747 | 2.4034392 | 20 | 8 9.9 | 18.7 |
| 372381 2009 PC ₁₂ | 17.1 | X | 282.39222 | 26.88761 | 320.42864 | 6.19325 | 0.1291526 | 0.25682979 | 2.4511645 | 20 | 6 6.8 | 20.2 |
| 372382 2009 PA ₁₄ | 17.3 | X | 317.25138 | 50.84243 | 260.36406 | 5.29348 | 0.1442178 | 0.26158642 | 2.4213594 | 20 | 6 9.2 | 19.8 |
| 372383 2009 PX ₁₆ | 16.2 | X | 6.56198 | 205.11959 | 348.51462 | 14.09504 | 0.0325879 | 0.23826027 | 2.5769241 | 20 | 3 21.2 | 19.6 |
| 372384 2009 PA ₂₀ | 17.9 | X | 232.20147 | 74.59929 | 340.57631 | 4.22389 | 0.2066191 | 0.25514047 | 2.4619722 | 20 | 6 28.8 | 21.8 |
| 372385 2009 QY ₉ | 16.8 | X | 208.69821 | 5.49656 | 336.98453 | 3.01320 | 0.2871381 | 0.23422664 | 2.6064248 | 20 | 3 7.8 | 21.5 |
| 372386 2009 QK ₁₂ | 17.7 | X | 235.82531 | 156.08966 | 208.17288 | 3.04694 | 0.1722340 | 0.24713407 | 2.5148629 | 20 | 4 30.0 | 21.7 |
| 372387 2009 QK ₁₄ | 17.9 | X | 254.40849 | 78.06226 | 203.30700 | 2.79134 | 0.2405178 | 0.23673982 | 2.5879458 | 20 | 1 31.0 | 22.4 |
| 372388 2009 QB ₁₅ | 17.9 | X | 257.10334 | 332.92602 | 339.75527 | 7.71206 | 0.2277430 | 0.24288802 | 2.5440871 | 20 | 3 11.0 | 22.1 |
| 372389 2009 QJ ₁₅ | 17.4 | X | 245.07660 | 137.50505 | 219.70613 | 0.66429 | 0.1119969 | 0.24685261 | 2.5167741 | 20 | 5 6.4 | 20.9 |
| 372390 2009 QH ₂₁ | 17.2 | X | 249.00905 | 3.82678 | 351.23650 | 4.04920 | 0.2013034 | 0.25052462 | 2.4921209 | 20 | 4 26.9 | 21.1 |
| 372391 2009 QK ₃₁ | 17.2 | X | 231.57734 | 332.14771 | 347.05865 | 9.56095 | 0.2075691 | 0.23759852 | 2.5817067 | 20 | 2 29.5 | 21.6 |
| 372392 2009 QC ₃₄ | 16.2 | X | 208.00074 | 20.06418 | 324.95291 | 17.08631 | 0.1881467 | 0.23217958 | 2.6217224 | 20 | 3 7.1 | 20.7 |
| 372393 2009 QM ₃₄ | 17.7 | X | 351.81024 | 332.62356 | 298.19532 | 1.11337 | 0.2228740 | 0.26180227 | 2.4200283 | 20 | 6 14.7 | 19.1 |
| 372394 2009 QW ₃₄ | 16.2 | X | | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

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| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|--------------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 372401 2009 <i>RX</i> ₉ | 16.6 | X | 141.26601 | 250.13800 | 189.79700 | 21.80492 | 0.0782074 | 0.23627010 | 2.5913746 | 20 | 5 2.3 | 20.5 |
| 372402 2009 <i>RZ</i> ₁₁ | 16.2 | X | 77.58422 | 92.30722 | 9.71749 | 14.37135 | 0.0507169 | 0.22649976 | 2.6653703 | 20 | 3 9.6 | 19.7 |
| 372403 2009 <i>RN</i> ₁₂ | 16.9 | X | 234.79548 | 266.40775 | 10.81234 | 12.95265 | 0.1263666 | 0.22427811 | 2.6829431 | 20 | 1 21.3 | 21.3 |
| 372404 2009 <i>RP</i> ₁₅ | 16.7 | X | 184.19156 | 344.62659 | 19.65087 | 5.04047 | 0.0933976 | 0.22990623 | 2.6389767 | 20 | 3 14.4 | 20.6 |
| 372405 2009 <i>RB</i> ₁₇ | 17.5 | X | 163.74412 | 333.65851 | 42.32002 | 2.51545 | 0.2060522 | 0.22753471 | 2.6572818 | 20 | 3 14.0 | 21.8 |
| 372406 2009 <i>RE</i> ₂₃ | 17.6 | X | 341.34199 | 47.89245 | 221.82268 | 5.88724 | 0.1004258 | 0.25690713 | 2.4506725 | 20 | 5 27.1 | 20.1 |
| 372407 2009 <i>RF</i> ₃₃ | 16.1 | X | 210.41882 | 350.33266 | 17.84408 | 13.40589 | 0.1763855 | 0.23615235 | 2.5922360 | 20 | 4 10.7 | 20.4 |
| 372408 2009 <i>RD</i> ₃₆ | 17.4 | X | 277.89128 | 66.82646 | 302.66798 | 5.24150 | 0.1253313 | 0.26114512 | 2.4240865 | 20 | 7 4.1 | 20.2 |
| 372409 2009 <i>RW</i> ₃₆ | 17.6 | X | 221.15281 | 31.85327 | 333.36423 | 14.12310 | 0.1936115 | 0.24261290 | 2.5640101 | 20 | 4 9.4 | 22.1 |
| 372410 2009 <i>RD</i> ₄₃ | 17.3 | X | 171.72680 | 44.07807 | 331.59254 | 5.05287 | 0.2256394 | 0.22970106 | 2.6405479 | 20 | 3 18.6 | 21.9 |
| 372411 2009 <i>RE</i> ₄₃ | 16.9 | X | 196.86025 | 8.94327 | 292.77504 | 3.97337 | 0.0065928 | 0.21705502 | 2.7421392 | 20 | 1 8.9 | 20.7 |
| 372412 2009 <i>RP</i> ₄₃ | 17.3 | X | 224.70503 | 53.68102 | 276.28887 | 3.17850 | 0.2316896 | 0.23571753 | 2.5954229 | 20 | 3 4.7 | 21.7 |
| 372413 2009 <i>RK</i> ₄₅ | 17.2 | X | 178.26914 | 104.24610 | 247.92451 | 1.76095 | 0.0831377 | 0.22525479 | 2.6751822 | 20 | 2 20.1 | 21.3 |
| 372414 2009 <i>RZ</i> ₄₆ | 17.2 | X | 109.09773 | 273.18817 | 196.10490 | 11.04293 | 0.2623822 | 0.22930619 | 2.6435784 | 20 | 5 24.1 | 21.4 |
| 372415 2009 <i>RX</i> ₄₇ | 16.3 | X | 283.14661 | 267.36967 | 11.45366 | 6.54112 | 0.0816765 | 0.23501888 | 2.6005640 | 20 | 3 16.3 | 19.7 |
| 372416 2009 <i>RN</i> ₄₉ | 16.2 | X | 148.35853 | 39.05134 | 12.28183 | 16.63137 | 0.1305012 | 0.22941039 | 2.6427779 | 20 | 4 5.2 | 20.2 |
| 372417 2009 <i>RP</i> ₄₉ | 17.3 | X | 156.61526 | 221.66248 | 195.86468 | 7.15965 | 0.2963968 | 0.23065334 | 2.6332750 | 20 | 5 1.1 | 22.0 |
| 372418 2009 <i>RD</i> ₅₁ | 17.3 | X | 181.32600 | 331.72856 | 24.34051 | 4.26397 | 0.0794463 | 0.22558741 | 2.6725519 | 20 | 3 1.4 | 21.3 |
| 372419 2009 <i>RE</i> ₆₀ | 16.3 | X | 176.63396 | 27.15357 | 323.60113 | 13.77776 | 0.1271361 | 0.22635679 | 2.6664925 | 20 | 2 18.7 | 20.5 |
| 372420 2009 <i>RP</i> ₆₁ | 17.2 | X | 282.11062 | 345.32054 | 49.84816 | 2.42955 | 0.2199989 | 0.26186898 | 2.4196173 | 20 | 8 1.8 | 19.7 |
| 372421 2009 <i>SO</i> ₁ | 17.3 | X | 230.10838 | 283.80440 | 21.75640 | 3.33050 | 0.2864788 | 0.23528129 | 2.5986300 | 20 | 2 10.2 | 22.1 |
| 372422 2009 <i>SP</i> ₁₆ | 17.0 | X | 201.71042 | 169.73774 | 185.13987 | 15.91850 | 0.1702337 | 0.23379646 | 2.6096209 | 20 | 3 17.9 | 21.3 |
| 372423 2009 <i>SG</i> ₂₅ | 17.0 | X | 101.95564 | 263.79420 | 190.33069 | 12.16229 | 0.1424364 | 0.22945552 | 2.6424313 | 20 | 4 11.1 | 20.5 |
| 372424 2009 <i>SB</i> ₃₁ | 17.8 | X | 178.75432 | 325.68261 | 95.56407 | 1.93738 | 0.0758368 | 0.24084519 | 2.5584527 | 20 | 5 18.7 | 21.5 |
| 372425 2009 <i>SM</i> ₃₄ | 17.4 | X | 231.57862 | 129.74840 | 205.60119 | 11.96688 | 0.2144108 | 0.23717855 | 2.5847512 | 20 | 3 16.6 | 21.8 |
| 372426 2009 <i>SP</i> ₃₅ | 16.7 | X | 225.00874 | 268.13090 | 3.87423 | 8.87295 | 0.1075589 | 0.21707035 | 2.7420101 | 20 | 1 4.8 | 21.1 |
| 372427 2009 <i>ST</i> ₃₅ | 16.1 | X | 211.40563 | 336.53455 | 6.57021 | 10.18766 | 0.1760105 | 0.23248242 | 2.6194452 | 20 | 3 14.3 | 20.3 |
| 372428 2009 <i>ST</i> ₃₆ | 17.6 | X | 241.37127 | 300.07535 | 354.58433 | 4.09315 | 0.2072018 | 0.23115984 | 2.6294270 | 20 | 2 9.3 | 22.0 |
| 372429 2009 <i>SE</i> ₃₆ | 16.8 | X | 66.89230 | 290.30439 | 210.03254 | 9.17656 | 0.0246292 | 0.23249665 | 2.6193382 | 20 | 4 5.6 | 20.2 |
| 372430 2009 <i>SY</i> ₄₂ | 16.6 | X | 167.61821 | 309.58190 | 34.89449 | 9.39020 | 0.1703587 | 0.21750226 | 2.7383789 | 20 | 2 10.8 | 21.2 |
| 372431 2009 <i>SG</i> ₄₂ | 16.6 | X | 155.28339 | 333.35669 | 35.83821 | 6.85069 | 0.0801774 | 0.21771388 | 2.7366041 | 20 | 2 20.9 | 20.7 |
| 372432 2009 <i>SQ</i> ₄₆ | 17.5 | X | 232.37185 | 291.43608 | 0.87274 | 6.43577 | 0.1830470 | 0.22636766 | 2.6664071 | 20 | 2 1.5 | 21.9 |
| 372433 2009 <i>SM</i> ₄₈ | 17.4 | X | 166.96951 | 101.26723 | 226.57950 | 4.10194 | 0.1702639 | 0.21702676 | 2.7423772 | 20 | 1 16.9 | 21.8 |
| 372434 2009 <i>SO</i> ₄₈ | 16.6 | X | 297.01620 | 242.53006 | 304.61092 | 2.72947 | 0.0377320 | 0.20935936 | 2.8089314 | 20 | — | — |
| 372435 2009 <i>SE</i> ₄₉ | 16.8 | X | 204.43340 | 91.88861 | 296.88059 | 10.18765 | 0.2029406 | 0.23828357 | 2.5767561 | 20 | 4 26.5 | 21.3 |
| 372436 2009 <i>SK</i> ₅₃ | 17.1 | X | 226.97794 | 67.46833 | 267.98714 | 2.29779 | 0.1866408 | 0.23752053 | 2.5822718 | 20 | 3 15.1 | 21.3 |
| 372437 2009 <i>SX</i> ₅₄ | 17.6 | X | 133.97688 | 74.18639 | 343.34885 | 6.67740 | 0.0692641 | 0.23279783 | 2.6170786 | 20 | 3 21.2 | 21.4 |
| 372438 2009 <i>SO</i> ₇₀ | 16.4 | X | 166.38086 | 268.68778 | 61.71858 | 6.27219 | 0.0426042 | 0.21419403 | 2.7665029 | 20 | 1 11.5 | 20.4 |
| 372439 2009 <i>SJ</i> ₇₁ | 17.3 | X | 61.38093 | 146.55625 | 339.45188 | 2.05333 | 0.1881660 | 0.22687575 | 2.6624247 | 20 | 4 1.6 | 20.1 |
| 372440 2009 <i>SY</i> ₇₁ | 18.0 | X | 213.66993 | 71.65333 | 346.82824 | 5.47103 | 0.0994913 | 0.25116391 | 2.4878903 | 20 | 6 22.6 | 21.6 |
| 372441 2009 <i>SS</i> ₇₂ | 17.3 | X | 335.43589 | 343.24738 | 219.79780 | 2.72994 | 0.0910621 | 0.23092647 | 2.6311983 | 20 | 2 13.8 | 20.5 |
| 372442 2009 <i>SV</i> ₇₂ | 17.4 | X | 232.70234 | 7.69899 | 300.99676 | 2.06840 | 0.0450414 | 0.23170071 | 2.6253335 | 20 | 2 25.8 | 21.1 |
| 372443 2009 <i>SV</i> ₇₃ | 17.1 | X | 59.43995 | 293.03152 | 142.11044 | 5.13009 | 0.0531178 | 0.21228465 | 2.7830669 | 20 | 1 7.9 | 20.7 |
| 372444 2009 <i>SL</i> ₈₆ | 16.8 | X | 91.98722 | 97.36046 | 335.85891 | 5.89036 | 0.1085540 | 0.22012438 | 2.7165891 | 20 | 2 25.9 | 20.3 |
| 372445 2009 <i>SJ</i> ₉₂ | 17.1 | X | 62.01450 | 144.50980 | 301.62230 | 5.24075 | 0.0386532 | 0.22044538 | 2.7139513 | 20 | 1 23.1 | 20.4 |
| 372446 2009 <i>SS</i> ₉₅ | 16.6 | X | 219.33649 | 275.71840 | 5.73315 | 6.50360 | 0.0928490 | 0.22107940 | 2.7087600 | 20 | 1 10.2 | 20.8 |
| 372447 2009 <i>SC</i> ₉₆ | 16.8 | X | 206.95391 | 341.61108 | 27.04329 | 7.16375 | 0.2977908 | 0.23692437 | 2.5866017 | 20 | 4 6.9 | 21.5 |
| 372448 2009 <i>SV</i> ₉₆ | 17.0 | X | 124.50155 | 190.29218 | 209.24402 | 3.73920 | 0.0814210 | 0.21515937 | 2.7582220 | 20 | 2 19.4 | 21.0 |
| 372449 2009 <i>SP</i> ₁₀₀ | 17.0 | X | 215.12185 | 155.36453 | 182.75609 | 10.71191 | 0.1349422 | 0.23225591 | 2.6211429 | 20 | 3 10.2 | 21.2 |
| 372450 2009 <i>SV</i> ₁₀₄ | 15.0 | X | 290.51906 | 200.59231 | 290.35135 | 26.73323 | 0.1184075 | 0.17861817 | 3.1226187 | 20 | 12 23.9 | 19.1 |
| 372451 2009 <i>SK</i> ₁₁₄ | 17.3 | X | 206.72613 | 46.15697 | 333.34001 | 5.64801 | 0.1160330 | 0.24004842 | 2.5641110 | 20 | 4 21.2 | 21.2 |
| 372452 2009 <i>SK</i> ₁₂₄ | 16.7 | X | 221.77957 | 298.53626 | 347.10003 | 8.60567 | 0.0787200 | 0.22054401 | 2.7131421 | 20 | 1 18.9 | 20.9 |
| 372453 2009 <i>SD</i> ₁₂₅ | 16.9 | X | 210.57160 | 37.26303 | 312.74423 | 3.82606 | 0.1523688 | 0.23403508 | 2.6078468 | 20 | 3 19.3 | 21.2 |
| 372454 2009 <i>SP</i> ₁₂₇ | 17.4 | X | 169.93980 | 92.58751 | 327.52795 | 3.69058 | 0.1093233 | 0.23754199 | 2.5821163 | 20 | 5 6.5 | 21.4 |
| 372455 2009 <i>SF</i> ₁₃₁ | 17.0 | X | 134.62225 | 311.03959 | 54.95701 | 4.79958 | 0.0764965 | 0.21622188 | 2.7491786 | 20 | 1 22.6 | 20.8 |
| 372456 2009 <i>SL</i> ₁₃₄ | 17.1 | X | 189.28313 | 236.74091 | 158.35204 | 5.34628 | 0.1587125 | 0.23616668 | 2.5921311 | 20 | 4 27.7 | 21.3 |
| 372457 2009 <i>SX</i> ₁₃₄ | 17.4 | X | 139.26021 | 24.37243 | 2.27729 | 4.78473 | 0.0848832 | 0.22169168 | 2.7037703 | 20 | 2 22.8 | 21.2 |
| 372458 2009 <i>SR</i> ₁₃₅ | 16.8 | X | 176.27954 | 350.17450 | 12.27041 | 12.17771 | 0.1859662 | 0.22697539 | 2.6616455 | 20 | 3 9.9 | 21.3 |
| 372459 2009 <i>SF</i> ₁₃₆ | 17.9 | X | 168.23199 | 183.44674 | 224.42418 | 2.32144 | 0.1604424 | 0.23283347 | 2.6168115 | 20 | 4 22.4 | 21.9 |
| 372460 2009 <i>SM</i> ₁₃₈ | 17.4 | X | 178.66131 | 341.04954 | 26.65345 | 3.42646 | 0.1204513 | 0.22748701 | 2.6576532 | 20 | 3 13.8 | 21.4 |
| 372461 2009 <i>SV</i> ₁₃₈ | 16.5 | X | 158.38098 | 324.02148 | 40.66216 | 6.82016 | 0.0830079 | 0.21784370 | 2.7355167 | 20 | 2 19.0 | 20.6 |
| 372462 2009 <i>SH</i> ₁₄₁ | 16.9 | X | 244.76687 | 329.81450 | 0.19195 | 7.08342 | 0.1894623 | 0.23979730 | 2.5659008 | 20 | 3 24.9 | 20.9 |
| 372463 2009 <i>SE</i> ₁₄₅ | 17.2 | X | 51.49768 | 309.71181 | 167.52209 | 9.57104 | 0.0428802 | 0.22637480 | 2.6663511 | 20 | 2 15.9 | 20.6 |
| 372464 2009 <i>SE</i> ₁₄₇ | 17.2 | X | 158.19291 | 290.02409 | 86.37917 | 2.92259 | 0.1406312 | 0.22393800 | 2.6856589 | 20 | 3 6.3 | 21.3 |
| 372465 2009 <i>SF</i> ₁₅₄ | 17.5 | X | 172.48867 | 232.94464 | 187.29836 | 10.72194 | 0.2070295 | 0.23760311 | 2.5816734 | 20 | 5 14.7 | 21.9 |
| 372466 2009 <i>SJ</i> ₁₅₆ | 17.5 | X | 216.27473 | 344.85248 | 28.71339 | 4.29114 | 0.1070783 | 0.24003321 | 2.5642192 | 20 | 4 26.2 | 21.3 |
| 372467 2009 <i>SH</i> ₁₅₇ | 16.2 | X | 225.89347 | 320.20499 | 19.73958 | 12.09976 | 0.1341893 | 0.23452456 | 2.6042170 | 20 | 3 25.8 | 20.2 |
| 372468 2009 <i>SX</i> ₁₅₇ | 16.5 | X | 279.95322 | 88.76766 | 201.84321 | 11.28126 | 0.1155336 | 0.23517484 | 2.5994141 | 20 | 3 19.8 | 20.2 |
| 372469 2009 <i>SE</i> ₁₆₀ | 17.8 | X | 117.12520 | 153.62718 | 294.62214 | 2.90009 | 0.0974996 | 0.22912842 | 2.6449456 | 20 | 4 13.4 | 21.5 |
| 372470 2009 <i>SK</i> ₁₇₀ | 16.9 | X | 123.81770 | 59.90754 | 4.84958 | 9.80101 | 0.1364557 | 0.22883414 | 2.6472127 | 20 | 3 28.0 | 20.7 |
| 372471 2009 <i>SL</i> ₁₇₂ | 17.1 | X | 97.74358 | 7.91957 | 76.27985 | 4.88757 | 0.0976 | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|--------------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|--------|----------|
| 372481 2009 <i>SU</i> ₂₀₉ | 17.0 | X | 71.20191 | 245.33382 | 208.88161 | 4.15217 | 0.0795482 | 0.22113421 | 2.7083124 | 20 | 2 18.2 | 20.5 |
| 372482 2009 <i>SX</i> ₂₁₀ | 17.1 | X | 121.57457 | 72.74705 | 15.61433 | 8.01098 | 0.0868170 | 0.23203117 | 2.6228402 | 20 | 4 17.8 | 20.8 |
| 372483 2009 <i>SE</i> ₂₁₁ | 16.3 | X | 240.73959 | 303.27500 | 16.36652 | 11.92842 | 0.0807610 | 0.23377214 | 2.6098020 | 20 | 3 20.1 | 20.1 |
| 372484 2009 <i>SY</i> ₂₁₃ | 17.5 | X | 205.07654 | 297.35265 | 40.16109 | 1.79453 | 0.2181421 | 0.23107754 | 2.6300513 | 20 | 3 1.3 | 22.1 |
| 372485 2009 <i>SL</i> ₂₁₆ | 17.3 | X | 213.31110 | 304.06079 | 10.98280 | 3.11205 | 0.0414559 | 0.22722362 | 2.6597066 | 20 | 2 13.6 | 21.0 |
| 372486 2009 <i>SG</i> ₂₂₂ | 16.8 | X | 144.51792 | 75.73446 | 324.89531 | 4.59995 | 0.1215983 | 0.22933942 | 2.6433230 | 20 | 3 17.3 | 20.8 |
| 372487 2009 <i>SH</i> ₂₂₅ | 16.4 | X | 122.67807 | 60.34456 | 332.56159 | 4.94356 | 0.0240049 | 0.22333899 | 2.6904588 | 20 | 2 1.9 | 19.9 |
| 372488 2009 <i>SC</i> ₂₃₃ | 17.3 | X | 189.10213 | 0.87378 | 25.47369 | 5.97637 | 0.2654038 | 0.23466339 | 2.6031897 | 20 | 4 15.1 | 21.9 |
| 372489 2009 <i>SF</i> ₂₃₃ | 17.2 | X | 204.38051 | 191.25885 | 174.98021 | 14.51470 | 0.2164183 | 0.23422631 | 2.6064272 | 20 | 4 4.6 | 21.6 |
| 372490 2009 <i>SC</i> ₂₃₅ | 16.4 | X | 237.35463 | 14.12638 | 324.06095 | 12.88540 | 0.2712655 | 0.23833093 | 2.5764148 | 20 | 3 18.7 | 21.1 |
| 372491 2009 <i>SR</i> ₂₄₀ | 16.2 | X | 174.54119 | 110.01323 | 324.82603 | 16.27175 | 0.1094283 | 0.24293781 | 2.5437396 | 20 | 5 29.3 | 20.5 |
| 372492 2009 <i>SM</i> ₂₄₁ | 16.2 | X | 196.40637 | 57.53189 | 357.95888 | 28.30873 | 0.1808266 | 0.24125819 | 2.5555321 | 20 | 5 15.3 | 21.0 |
| 372493 2009 <i>SO</i> ₂₄₃ | 16.9 | X | 232.05545 | 69.46358 | 273.23702 | 12.63527 | 0.1956862 | 0.23996739 | 2.5646881 | 20 | 3 22.3 | 21.3 |
| 372494 2009 <i>SO</i> ₂₄₉ | 17.9 | X | 204.59139 | 211.77676 | 154.59402 | 4.15419 | 0.1375276 | 0.23548615 | 2.5971227 | 20 | 4 5.9 | 21.9 |
| 372495 2009 <i>SW</i> ₂₄₉ | 17.2 | X | 266.07978 | 36.41632 | 219.25584 | 4.22834 | 0.1088321 | 0.22290305 | 2.6939656 | 20 | 1 23.1 | 21.1 |
| 372496 2009 <i>SM</i> ₂₅₃ | 17.8 | X | 219.32187 | 283.14135 | 22.47502 | 5.14858 | 0.2293770 | 0.22826904 | 2.6515798 | 20 | 2 5.1 | 22.4 |
| 372497 2009 <i>SM</i> ₂₅₄ | 16.5 | X | 257.07838 | 200.64526 | 112.03963 | 14.18752 | 0.1835677 | 0.24311510 | 2.5425027 | 20 | 3 22.0 | 20.7 |
| 372498 2009 <i>SL</i> ₂₆₁ | 15.7 | X | 199.34572 | 336.10328 | 14.06717 | 13.69839 | 0.2592460 | 0.23004353 | 2.6379265 | 20 | 3 14.4 | 20.4 |
| 372499 2009 <i>SH</i> ₂₆₂ | 16.9 | X | 252.39686 | 268.09325 | 348.33033 | 11.20567 | 0.1574959 | 0.22378841 | 2.6868556 | 20 | 1 9.8 | 21.3 |
| 372500 2009 <i>SH</i> ₂₆₆ | 16.7 | X | 227.07682 | 40.88480 | 250.37758 | 3.72150 | 0.0616585 | 0.22009964 | 2.7167927 | 20 | 1 28.8 | 20.7 |
| 372501 2009 <i>SN</i> ₂₇₂ | 17.8 | X | 180.48888 | 77.04733 | 278.93798 | 1.66220 | 0.1388492 | 0.22586100 | 2.6703933 | 20 | 2 29.3 | 22.1 |
| 372502 2009 <i>SJ</i> ₂₇₅ | 16.8 | X | 101.93830 | 20.84576 | 35.24059 | 4.74200 | 0.1361697 | 0.21952264 | 2.7215512 | 20 | 2 23.4 | 20.4 |
| 372503 2009 <i>SE</i> ₂₇₇ | 16.9 | X | 43.61341 | 74.97929 | 32.35487 | 5.78346 | 0.1266371 | 0.21691657 | 2.7433059 | 20 | 2 1.6 | 20.0 |
| 372504 2009 <i>ST</i> ₂₇₇ | 17.3 | X | 144.06308 | 258.07508 | 162.72891 | 5.83851 | 0.1747302 | 0.23095603 | 2.6309737 | 20 | 4 18.7 | 21.5 |
| 372505 2009 <i>SR</i> ₂₇₈ | 18.0 | X | 180.37462 | 208.35977 | 167.35938 | 6.19236 | 0.1757746 | 0.23188920 | 2.6239106 | 20 | 3 26.3 | 22.2 |
| 372506 2009 <i>SX</i> ₂₈₀ | 17.2 | X | 140.10310 | 292.64293 | 170.43893 | 9.56769 | 0.1684909 | 0.23856011 | 2.5747644 | 20 | 6 6.4 | 21.4 |
| 372507 2009 <i>SO</i> ₂₈₂ | 16.8 | X | 86.78698 | 343.62325 | 71.05730 | 5.11196 | 0.0676769 | 0.21603054 | 2.7508017 | 20 | 1 21.9 | 20.5 |
| 372508 2009 <i>SQ</i> ₂₈₃ | 16.6 | X | 195.02450 | 158.78436 | 158.63898 | 6.83317 | 0.0305916 | 0.22037519 | 2.7145276 | 20 | 1 25.4 | 20.4 |
| 372509 2009 <i>SE</i> ₂₈₃ | 16.8 | X | 73.08317 | 331.62389 | 169.83389 | 10.98847 | 0.0449158 | 0.23431330 | 2.6057821 | 20 | 4 22.2 | 20.2 |
| 372510 2009 <i>SF</i> ₂₈₄ | 17.0 | X | 133.45996 | 320.46596 | 56.26633 | 6.80362 | 0.0740747 | 0.21907583 | 2.7252504 | 20 | 2 3.9 | 20.9 |
| 372511 2009 <i>SU</i> ₂₈₆ | 17.1 | X | 46.24865 | 143.43603 | 329.01777 | 6.46430 | 0.0527062 | 0.21881801 | 2.7273906 | 20 | 2 6.0 | 20.5 |
| 372512 2009 <i>SQ</i> ₂₈₇ | 17.6 | X | 141.35226 | 183.81125 | 258.48313 | 4.44587 | 0.2867320 | 0.23094996 | 2.6310198 | 20 | 5 18.1 | 22.2 |
| 372513 2009 <i>SE</i> ₂₈₈ | 16.8 | X | 150.41242 | 15.64065 | 347.96577 | 5.89334 | 0.0467614 | 0.21954271 | 2.7213853 | 20 | 2 3.3 | 20.6 |
| 372514 2009 <i>SM</i> ₂₈₈ | 17.2 | X | 232.27407 | 27.11292 | 281.52864 | 2.73167 | 0.1941205 | 0.23127735 | 2.6285363 | 20 | 2 16.9 | 21.6 |
| 372515 2009 <i>SA</i> ₂₉₇ | 16.4 | X | 199.17827 | 22.09907 | 345.07445 | 12.24781 | 0.1085013 | 0.23347823 | 2.6119917 | 20 | 3 28.4 | 20.5 |
| 372516 2009 <i>SH</i> ₂₉₇ | 16.0 | X | 196.11703 | 358.17569 | 350.17502 | 16.46291 | 0.1658166 | 0.22944415 | 2.6425186 | 20 | 3 6.9 | 20.3 |
| 372517 2009 <i>SW</i> ₃₁₂ | 17.0 | X | 178.57217 | 57.31780 | 343.30765 | 13.59975 | 0.2925192 | 0.23329891 | 2.6133299 | 20 | 4 19.3 | 22.0 |
| 372518 2009 <i>SB</i> ₃₁₆ | 17.7 | X | 213.79667 | 170.58128 | 192.80915 | 1.46552 | 0.2042793 | 0.23754462 | 2.5820971 | 20 | 4 7.4 | 22.0 |
| 372519 2009 <i>SS</i> ₃₁₉ | 18.7 | X | 184.69633 | 133.00817 | 288.42071 | 2.48750 | 0.3248944 | 0.23775064 | 2.5806053 | 20 | 5 23.7 | 23.5 |
| 372520 2009 <i>SS</i> ₃₂₆ | 16.7 | X | 202.58840 | 323.83391 | 29.47622 | 5.85630 | 0.2543637 | 0.23237959 | 2.6202178 | 20 | 3 18.7 | 21.4 |
| 372521 2009 <i>SS</i> ₃₃₇ | 16.8 | X | 181.65033 | 184.48279 | 219.30419 | 13.48247 | 0.2456831 | 0.23323859 | 2.6137805 | 20 | 4 30.6 | 21.5 |
| 372522 2009 <i>SF</i> ₃₄₂ | 17.0 | X | 117.92562 | 188.67612 | 213.87725 | 5.23043 | 0.0729184 | 0.22009455 | 2.7168346 | 20 | 2 12.8 | 20.7 |
| 372523 2009 <i>SN</i> ₃₄₂ | 16.9 | X | 54.08376 | 340.39521 | 187.55843 | 7.81843 | 0.1346054 | 0.24083833 | 2.5585013 | 20 | 5 12.3 | 19.8 |
| 372524 2009 <i>SN</i> ₃₄₂ | 17.5 | X | 229.28466 | 141.39015 | 169.74233 | 5.64920 | 0.1095375 | 0.23079706 | 2.6321817 | 20 | 2 21.4 | 21.4 |
| 372525 2009 <i>SC</i> ₃₄₄ | 16.7 | X | 148.17766 | 255.23715 | 183.44692 | 16.62014 | 0.2899655 | 0.23091991 | 2.6312481 | 20 | 5 21.5 | 21.6 |
| 372526 2009 <i>SN</i> ₃₄₄ | 17.7 | X | 114.10080 | 271.73800 | 160.84402 | 2.49487 | 0.0740917 | 0.22620400 | 2.6676930 | 20 | 3 19.2 | 21.3 |
| 372527 2009 <i>SQ</i> ₃₅₂ | 15.1 | X | 312.82785 | 211.61621 | 273.95766 | 17.11557 | 0.0571038 | 0.18062555 | 3.0994402 | 20 | — | — |
| 372528 2009 <i>SF</i> ₃₅₇ | 16.5 | X | 298.47815 | 242.65639 | 17.56097 | 8.97186 | 0.1454164 | 0.23100142 | 2.6306291 | 20 | 3 4.8 | 20.0 |
| 372529 2009 <i>ST</i> ₃₅₈ | 16.1 | X | 199.56353 | 39.76846 | 342.22873 | 11.66711 | 0.0828873 | 0.23482339 | 2.6020071 | 20 | 4 15.3 | 20.1 |
| 372530 2009 <i>SY</i> ₃₆₀ | 17.0 | X | 211.13695 | 56.86434 | 218.91295 | 4.09918 | 0.1436201 | 0.21309906 | 2.7759717 | 20 | — | — |
| 372531 2009 <i>SN</i> ₃₆₁ | 16.8 | X | 169.70035 | 359.82236 | 15.69915 | 12.44316 | 0.2379647 | 0.22570151 | 2.6716511 | 20 | 3 21.1 | 21.5 |
| 372532 2009 <i>SO</i> ₃₆₃ | 17.3 | X | 170.64334 | 340.86026 | 19.13571 | 2.71773 | 0.0861314 | 0.22807797 | 2.6530605 | 20 | 2 23.3 | 21.1 |
| 372533 2009 <i>TZ</i> | 16.1 | X | 208.39344 | 36.91144 | 280.84771 | 10.46417 | 0.0588982 | 0.22204761 | 2.7008802 | 20 | 2 7.6 | 20.2 |
| 372534 2009 <i>TS</i> ₁ | 17.4 | X | 192.79562 | 173.30161 | 210.45977 | 4.93434 | 0.2412395 | 0.23610024 | 2.5926174 | 20 | 4 14.5 | 21.9 |
| 372535 2009 <i>TU</i> ₁ | 16.7 | X | 152.20286 | 40.26975 | 25.41393 | 12.86473 | 0.2437098 | 0.23145469 | 2.6271935 | 20 | 5 2.2 | 21.2 |
| 372536 2009 <i>TR</i> ₃ | 17.1 | X | 132.42842 | 192.45922 | 226.22792 | 1.87525 | 0.1715318 | 0.22462542 | 2.6801769 | 20 | 4 2.4 | 21.1 |
| 372537 2009 <i>TN</i> ₆ | 17.8 | X | 214.59354 | 12.96420 | 345.32684 | 2.39994 | 0.2254543 | 0.23724885 | 2.5842427 | 20 | 3 31.6 | 22.3 |
| 372538 2009 <i>TF</i> ₇ | 17.2 | X | 216.73262 | 10.65629 | 333.28179 | 3.20798 | 0.2456410 | 0.23490614 | 2.6013960 | 20 | 3 15.6 | 21.7 |
| 372539 2009 <i>TD</i> ₉ | 16.5 | X | 237.35230 | 322.11461 | 7.74214 | 12.55202 | 0.2776019 | 0.23738959 | 2.5832212 | 20 | 3 15.5 | 21.0 |
| 372540 2009 <i>TN</i> ₉ | 17.1 | X | 186.15231 | 340.70144 | 18.52031 | 6.29345 | 0.1073209 | 0.22884946 | 2.6470946 | 20 | 3 11.0 | 21.2 |
| 372541 2009 <i>TL</i> ₁₅ | 17.6 | X | 302.38593 | 303.92999 | 30.86022 | 2.92170 | 0.2070056 | 0.25594494 | 2.4568107 | 20 | 6 6.9 | 20.3 |
| 372542 2009 <i>TM</i> ₁₅ | 17.6 | X | 104.65614 | 283.71007 | 179.33275 | 9.27754 | 0.0747066 | 0.23103961 | 2.6303392 | 20 | 4 17.1 | 21.1 |
| 372543 2009 <i>TL</i> ₁₈ | 16.8 | X | 239.72167 | 338.31078 | 342.19861 | 8.72884 | 0.1964418 | 0.23732199 | 2.5837118 | 20 | 3 8.2 | 21.0 |
| 372544 2009 <i>TJ</i> ₂₃ | 16.1 | X | 225.09120 | 310.96697 | 41.17969 | 9.40576 | 0.1028890 | 0.23326189 | 2.6136064 | 20 | 4 11.1 | 19.9 |
| 372545 2009 <i>TV</i> ₂₅ | 16.1 | X | 330.63106 | 214.09455 | 323.37721 | 9.25344 | 0.0175114 | 0.21448108 | 2.7640340 | 20 | 1 20.1 | 19.9 |
| 372546 2009 <i>TK</i> ₂₆ | 16.4 | X | 210.47436 | 313.84007 | 35.24702 | 15.53055 | 0.1544418 | 0.23393449 | 2.6085943 | 20 | 3 25.5 | 20.7 |
| 372547 2009 <i>TK</i> ₂₇ | 16.9 | X | 174.32792 | 238.75344 | 137.02012 | 4.91184 | 0.1520801 | 0.22761724 | 2.6566394 | 20 | 3 21.3 | 21.2 |
| 372548 2009 <i>TS</i> ₃₃ | 16.4 | X | 265.93871 | 284.47046 | 1.27759 | 11.00176 | 0.1719719 | 0.23504280 | 2.6003876 | 20 | 2 25.2 | 20.3 |
| 372549 2009 <i>TC</i> ₃₄ | 16.9 | X | 176.98801 | 117.63170 | 295.91798 | 7.69918 | 0.1563709 | 0.23942905 | 2.5685310 | 20 | 5 4.9 | 21.1 |
| 372550 2009 <i>TA</i> ₃₅ | 17.6 | X | 242.47962 | 136.87138 | 188.79316 | 4.43597 | 0.3359878 | 0.23931364 | 2.5693567 | 20 | 3 8.5 | 22.3 |
| 372551 2009 <i>TK</i> ₃₆ | 17.2 | X | 218.92630 | 174.02337 | 198 | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|--------|----------|
| 372561 2009 UM ₁₇ | 17.5 | X | 117.71380 | 232.91872 | 220.70983 | 4.83189 | 0.2753810 | 0.22537660 | 2.6742182 | 20 | 5 12.6 | 21.7 |
| 372562 2009 UN ₂₀ | 16.3 | X | 212.32428 | 8.42204 | 15.74039 | 22.70273 | 0.0361610 | 0.23799887 | 2.5788106 | 20 | 5 2.2 | 20.1 |
| 372563 2009 UC ₃₃ | 17.1 | X | 169.60169 | 321.11100 | 52.85109 | 6.28583 | 0.0498067 | 0.22207061 | 2.7006937 | 20 | 3 11.1 | 21.0 |
| 372564 2009 UH ₃₆ | 16.6 | X | 138.94673 | 287.03454 | 70.22287 | 2.89754 | 0.0856228 | 0.21294988 | 2.7772680 | 20 | 1 17.8 | 20.6 |
| 372565 2009 UL ₃₉ | 16.2 | X | 194.38289 | 249.60031 | 59.00566 | 10.75645 | 0.0980459 | 0.21295043 | 2.7772632 | 20 | 1 19.5 | 20.6 |
| 372566 2009 UU ₃₉ | 16.8 | X | 207.18092 | 117.10148 | 255.24646 | 2.14592 | 0.1354587 | 0.23161364 | 2.6259914 | 20 | 4 14.0 | 20.9 |
| 372567 2009 UF ₄₆ | 16.9 | X | 160.38805 | 135.87793 | 230.63917 | 4.10158 | 0.1313531 | 0.21943158 | 2.7223040 | 20 | 2 21.9 | 21.1 |
| 372568 2009 US ₄₇ | 17.0 | X | 211.17341 | 138.61263 | 234.14312 | 6.27473 | 0.1664028 | 0.23504294 | 2.6003866 | 20 | 4 16.8 | 21.2 |
| 372569 2009 UJ ₄₉ | 16.7 | X | 187.88159 | 262.54253 | 43.18390 | 5.45454 | 0.1041195 | 0.21537548 | 2.7563765 | 20 | 1 8.5 | 21.0 |
| 372570 2009 UF ₅₂ | 16.8 | X | 206.00430 | 277.60236 | 32.45732 | 5.38621 | 0.0244355 | 0.21705378 | 2.7421496 | 20 | 2 1.4 | 20.7 |
| 372571 2009 UH ₅₆ | 16.9 | X | 25.24465 | 91.90300 | 10.31725 | 1.83017 | 0.0455263 | 0.20679210 | 2.8321316 | 20 | — | — |
| 372572 2009 UK ₅₇ | 17.7 | X | 171.58657 | 98.91880 | 296.86975 | 0.86327 | 0.1960753 | 0.22981779 | 2.6396537 | 20 | 4 11.5 | 21.9 |
| 372573 Pietromenga | 15.9 | X | 171.53171 | 149.24718 | 234.35171 | 21.14853 | 0.0456442 | 0.22720784 | 2.6598298 | 20 | 3 14.4 | 20.1 |
| 372574 2009 UR ₇₂ | 16.9 | X | 198.56741 | 183.73730 | 181.38506 | 4.53020 | 0.2207720 | 0.23115457 | 2.6294670 | 20 | 3 28.3 | 21.4 |
| 372575 2009 UJ ₇₇ | 17.3 | X | 101.46946 | 112.36962 | 285.49828 | 2.06686 | 0.1021467 | 0.21343290 | 2.7730762 | 20 | 1 24.3 | 20.8 |
| 372576 2009 UG ₈₂ | 16.6 | X | 192.69485 | 165.68204 | 214.46202 | 8.62287 | 0.1173508 | 0.23007593 | 2.6376789 | 20 | 4 9.9 | 20.8 |
| 372577 2009 UP ₉₁ | 17.1 | X | 190.02231 | 249.38577 | 157.77306 | 5.06628 | 0.2086888 | 0.23615931 | 2.5921851 | 20 | 5 12.8 | 21.5 |
| 372578 Khromov | 16.2 | X | 182.68951 | 304.92280 | 57.71322 | 7.53272 | 0.0497988 | 0.22000028 | 2.7176106 | 20 | 3 12.9 | 20.2 |
| 372579 2009 UB ₉₅ | 17.3 | X | 163.42207 | 272.40414 | 137.66655 | 1.62246 | 0.2066385 | 0.23150765 | 2.6267928 | 20 | 4 23.5 | 21.6 |
| 372580 2009 UJ ₉₆ | 17.9 | X | 126.70054 | 252.39728 | 182.29439 | 3.08368 | 0.1623273 | 0.22571249 | 2.6715645 | 20 | 4 16.7 | 21.9 |
| 372581 2009 UX ₉₈ | 16.9 | X | 63.30765 | 277.81126 | 200.24481 | 5.07028 | 0.1592773 | 0.21724092 | 2.7405746 | 20 | 3 21.2 | 20.2 |
| 372582 2009 UZ ₉₈ | 16.9 | X | 305.93242 | 48.60309 | 173.79468 | 2.82250 | 0.0318311 | 0.21796872 | 2.7344707 | 20 | 2 9.5 | 20.7 |
| 372583 2009 UT ₉₉ | 17.3 | X | 172.00747 | 207.14326 | 174.32629 | 2.18184 | 0.1501336 | 0.22631322 | 2.6668347 | 20 | 3 24.6 | 21.4 |
| 372584 2009 UX ₉₉ | 16.3 | X | 326.45738 | 66.45207 | 82.65256 | 4.03012 | 0.1106201 | 0.20082112 | 2.8879952 | 20 | — | — |
| 372585 2009 UJ ₁₀₁ | 15.7 | X | 10.46056 | 324.93481 | 115.45591 | 17.41699 | 0.1253858 | 0.18155993 | 3.0887971 | 20 | — | — |
| 372586 2009 UE ₁₀₄ | 17.4 | X | 206.08070 | 149.34131 | 187.75993 | 8.20880 | 0.1843322 | 0.22935889 | 2.6431735 | 20 | 2 28.7 | 21.9 |
| 372587 2009 UD ₁₀₉ | 17.1 | X | 157.63954 | 301.61675 | 76.85795 | 3.01662 | 0.1053608 | 0.22111228 | 2.7084915 | 20 | 3 5.9 | 21.1 |
| 372588 2009 UA ₁₁₂ | 17.2 | X | 121.40096 | 4.98518 | 52.61353 | 5.65922 | 0.1152847 | 0.21889952 | 2.7267135 | 20 | 3 17.5 | 21.1 |
| 372589 2009 UJ ₁₂₁ | 16.7 | X | 142.48606 | 3.74927 | 18.55201 | 5.24525 | 0.1246642 | 0.22046008 | 2.7138306 | 20 | 2 26.0 | 20.7 |
| 372590 2009 UV ₁₂₄ | 17.0 | X | 350.37286 | 343.30617 | 179.28281 | 6.97370 | 0.0663883 | 0.21483604 | 2.7609887 | 20 | 1 19.3 | 20.6 |
| 372591 2009 UP ₁₂₆ | 16.7 | X | 260.47804 | 333.08879 | 17.42267 | 12.28191 | 0.3064409 | 0.24515876 | 2.5283534 | 20 | 4 21.4 | 20.7 |
| 372592 2009 UD ₁₃₈ | 16.4 | X | 169.11634 | 132.83492 | 246.97137 | 13.17771 | 0.1039711 | 0.22242964 | 2.6977867 | 20 | 3 11.6 | 20.9 |
| 372593 2009 UH ₁₃₈ | 17.2 | X | 225.75164 | 200.80806 | 134.92265 | 5.28300 | 0.2967925 | 0.23688794 | 2.5868669 | 20 | 3 12.8 | 21.8 |
| 372594 2009 UJ ₁₃₉ | 16.3 | X | 185.74945 | 343.80955 | 21.85105 | 14.02568 | 0.1782113 | 0.22670259 | 2.6637803 | 20 | 3 21.9 | 20.8 |
| 372595 2009 UV ₁₃₉ | 16.4 | X | 174.80736 | 291.79600 | 121.59824 | 12.30302 | 0.1883826 | 0.23219548 | 2.6216027 | 20 | 5 10.7 | 21.0 |
| 372596 2009 UP ₁₄₁ | 16.8 | X | 202.94686 | 326.27508 | 0.91075 | 4.71805 | 0.1205378 | 0.22284212 | 2.6944566 | 20 | 2 17.7 | 21.0 |
| 372597 2009 UJ ₁₄₅ | 16.7 | X | 176.69238 | 281.42562 | 79.14279 | 12.68440 | 0.1339784 | 0.22327161 | 2.6910001 | 20 | 3 9.5 | 21.2 |
| 372598 2009 UB ₁₄₈ | 17.1 | X | 132.17423 | 157.29568 | 223.11384 | 4.09811 | 0.0862065 | 0.21407203 | 2.7675540 | 20 | 2 5.3 | 21.1 |
| 372599 2009 UJ ₁₄₉ | 16.8 | X | 180.28706 | 346.13516 | 341.31657 | 5.87753 | 0.0485010 | 0.21353794 | 2.7721667 | 20 | 1 24.8 | 20.8 |
| 372600 2009 UJ ₁₅₀ | 16.8 | X | 170.82445 | 254.98449 | 46.65863 | 2.59686 | 0.0423046 | 0.20398821 | 2.8580249 | 20 | — | — |
| 372601 2009 VH ₁ | 16.0 | X | 315.11670 | 263.52952 | 33.84365 | 15.29533 | 0.1057912 | 0.23928610 | 2.5695539 | 20 | 5 17.9 | 19.2 |
| 372602 2009 VX ₁ | 17.0 | X | 201.79403 | 51.78821 | 304.22024 | 12.40088 | 0.2893202 | 0.23254778 | 2.6189543 | 20 | 3 13.4 | 22.0 |
| 372603 2009 VD ₃ | 15.8 | X | 197.55632 | 213.16327 | 111.64571 | 14.39215 | 0.1650373 | 0.22050994 | 2.7134215 | 20 | 2 11.1 | 20.3 |
| 372604 2009 VD ₅ | 16.6 | X | 72.63397 | 170.33093 | 265.68395 | 3.66038 | 0.0925556 | 0.21142383 | 2.7906161 | 20 | 1 31.5 | 20.2 |
| 372605 2009 VH ₅ | 16.3 | X | 141.76104 | 356.44161 | 31.52109 | 6.49229 | 0.0358994 | 0.21833192 | 2.7314372 | 20 | 2 23.7 | 20.1 |
| 372606 2009 UV ₇ | 16.5 | X | 104.70716 | 48.62497 | 30.66777 | 5.27880 | 0.026858 | 0.22153656 | 2.7050322 | 20 | 3 7.7 | 20.1 |
| 372607 2009 VJ ₉ | 17.0 | X | 108.64097 | 67.93313 | 317.55233 | 2.61432 | 0.1067537 | 0.21101361 | 2.7942317 | 20 | 1 19.5 | 20.8 |
| 372608 2009 VW ₁₀ | 16.1 | X | 81.31424 | 340.41179 | 69.12812 | 5.07248 | 0.1023925 | 0.20897872 | 2.8123412 | 20 | 1 13.4 | 19.6 |
| 372609 2009 VP ₁₇ | 17.2 | X | 144.72751 | 271.81523 | 164.00772 | 1.73170 | 0.0366021 | 0.23221449 | 2.6214596 | 20 | 4 25.6 | 20.7 |
| 372610 2009 VP ₁₈ | 16.9 | X | 196.67781 | 44.60870 | 266.60618 | 3.62991 | 0.1049164 | 0.21484444 | 2.7609167 | 20 | 1 22.4 | 21.1 |
| 372611 2009 VZ ₁₈ | 16.9 | X | 202.99415 | 81.51246 | 271.48114 | 3.51468 | 0.1508549 | 0.22792699 | 2.6542320 | 20 | 3 16.1 | 21.2 |
| 372612 2009 VB ₁₉ | 17.0 | X | 161.35908 | 335.30184 | 9.51342 | 3.54825 | 0.0997231 | 0.21379975 | 2.7699032 | 20 | 1 28.9 | 21.2 |
| 372613 2009 VZ ₂₃ | 17.5 | X | 109.84580 | 102.75198 | 309.03765 | 3.02102 | 0.2719246 | 0.21399276 | 2.7682374 | 20 | 3 13.5 | 21.6 |
| 372614 2009 VA ₂₉ | 17.4 | X | 194.66755 | 176.05286 | 209.25452 | 3.64611 | 0.1788440 | 0.23577148 | 2.5950269 | 20 | 4 18.4 | 21.7 |
| 372615 2009 VA ₃₄ | 16.8 | X | 128.31092 | 352.09567 | 16.73844 | 4.35868 | 0.1165470 | 0.21177069 | 2.7875681 | 20 | 1 24.7 | 20.8 |
| 372616 2009 VE ₃₇ | 17.2 | X | 172.11802 | 188.49218 | 221.74546 | 5.32623 | 0.1565092 | 0.23066417 | 2.6331926 | 20 | 4 28.9 | 21.5 |
| 372617 2009 VW ₃₇ | 16.9 | X | 167.88320 | 291.87611 | 84.25173 | 2.10178 | 0.1116005 | 0.22472334 | 2.6793982 | 20 | 3 13.3 | 20.9 |
| 372618 2009 VG ₃₈ | 17.0 | X | 209.97913 | 346.49734 | 6.32286 | 3.86503 | 0.1954305 | 0.23186008 | 2.6241303 | 20 | 3 23.0 | 21.2 |
| 372619 2009 VM ₃₉ | 16.0 | X | 237.42056 | 266.84066 | 42.38936 | 15.16548 | 0.1897629 | 0.22721837 | 2.6597476 | 20 | 3 2.4 | 20.6 |
| 372620 2009 VK ₄₀ | 16.4 | X | 84.19285 | 3.56700 | 56.76419 | 6.06813 | 0.0521993 | 0.21155818 | 2.7894345 | 20 | 1 24.9 | 20.1 |
| 372621 2009 VG ₄₁ | 16.6 | X | 182.59640 | 223.15490 | 171.87466 | 3.66731 | 0.1203780 | 0.23159628 | 2.6261226 | 20 | 4 20.3 | 20.7 |
| 372622 2009 VX ₄₂ | 16.3 | X | 183.56332 | 341.52700 | 33.01875 | 12.21361 | 0.0870331 | 0.22614053 | 2.6681922 | 20 | 3 28.9 | 20.3 |
| 372623 2009 VM ₄₈ | 17.5 | X | 82.64938 | 273.05273 | 170.02787 | 3.80103 | 0.0718406 | 0.21393904 | 2.7687008 | 20 | 2 20.9 | 21.2 |
| 372624 2009 VT ₄₉ | 16.3 | X | 8.84359 | 91.91380 | 56.05990 | 5.87402 | 0.1098711 | 0.21110610 | 2.7934155 | 20 | 1 28.6 | 19.6 |
| 372625 2009 VK ₅₀ | 17.3 | X | 140.02576 | 246.39281 | 177.73017 | 3.55830 | 0.2108501 | 0.22494229 | 2.6776593 | 20 | 4 21.1 | 21.5 |
| 372626 IGEM | 18.0 | X | 128.98387 | 219.44342 | 207.25994 | 2.36643 | 0.1979342 | 0.22327742 | 2.6909534 | 20 | 4 12.1 | 22.0 |
| 372627 2009 VB ₅₉ | 16.8 | X | 143.05890 | 192.71295 | 231.53078 | 11.16485 | 0.1711907 | 0.22688860 | 2.6623241 | 20 | 4 18.7 | 21.1 |
| 372628 2009 VX ₅₉ | 16.9 | X | 110.80024 | 274.10062 | 198.37686 | 8.14809 | 0.2594334 | 0.22376727 | 2.6870248 | 20 | 5 29.0 | 21.2 |
| 372629 2009 VC ₆₂ | 17.0 | X | 127.19185 | 359.36162 | 69.56816 | 3.48661 | 0.1184155 | 0.22494151 | 2.6776654 | 20 | 4 6.1 | 20.8 |
| 372630 2009 VU ₆₈ | 17.5 | X | 203.79991 | 10.46286 | 346.63918 | 1.84579 | 0.2243079 | 0.22842032 | 2.6504090 | 20 | 3 22.5 | 21.9 |
| 372631 2009 VJ ₇₁ | 16.8 | X | 103.85948 | 358.31315 | 58.96863 | 4.07248 | 0.1069228 | 0.21164580 | 2.7886646 | 20 | 2 23.9 | 20.6 |
| 372632 2009 UV ₇₂ | 16.1 | X | 181.04511 | 283.22038 | 80.67407 | 12.41567 | 0.0948078 | 0.22461962 | 2.6802230 | 20 | 3 16.5 | 20.4 |
| 372633 2009 VS ₇₉ | 16.7 | X | 93.36195 | 142.63373 | 313.22976 | 9.45235 | 0.2487589 | 0.21781355 | 2.7357692 | 20 | 4 12.8 | 20. |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|--------------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 372641 2009 <i>WD</i> ₁₀ | 17.1 | X | 160.12289 | 296.51603 | 116.87999 | 5.07330 | 0.2821410 | 0.22705514 | 2.6610221 | 20 | 4 29.3 | 21.9 |
| 372642 2009 <i>WM</i> ₁₈ | 17.0 | X | 342.22842 | 24.55288 | 104.58028 | 3.20317 | 0.0177867 | 0.20152198 | 2.8812953 | 20 | — | — |
| 372643 2009 <i>WU</i> ₂₀ | 16.3 | X | 115.28105 | 242.25828 | 155.77114 | 4.78425 | 0.0746306 | 0.21099633 | 2.7943842 | 20 | 2 6.9 | 20.2 |
| 372644 2009 <i>WA</i> ₂₄ | 15.8 | X | 50.87764 | 224.65504 | 241.80442 | 20.92896 | 0.1205867 | 0.21073962 | 2.7966531 | 20 | 2 1.8 | 19.6 |
| 372645 2009 <i>WB</i> ₂₄ | 16.2 | X | 74.05873 | 0.79615 | 75.14539 | 6.29723 | 0.1139264 | 0.20900814 | 2.8120772 | 20 | 2 8.9 | 19.8 |
| 372646 2009 <i>WM</i> ₂₆ | 15.6 | X | 270.67101 | 147.18983 | 25.17282 | 11.10502 | 0.0654104 | 0.19102726 | 2.9858810 | 20 | — | — |
| 372647 2009 <i>WH</i> ₂₇ | 16.4 | X | 16.85826 | 111.59103 | 332.13003 | 1.34249 | 0.0688296 | 0.19692581 | 2.9259549 | 20 | — | — |
| 372648 2009 <i>WU</i> ₂₈ | 16.3 | X | 125.42258 | 179.63383 | 251.04302 | 4.36945 | 0.0406273 | 0.22125799 | 2.7073022 | 20 | 3 24.2 | 20.0 |
| 372649 2009 <i>WZ</i> ₃₀ | 16.5 | X | 296.79988 | 235.53821 | 62.04741 | 2.92160 | 0.1165811 | 0.23314583 | 2.6144737 | 20 | 4 22.8 | 19.7 |
| 372650 2009 <i>WE</i> ₃₂ | 16.6 | X | 123.83838 | 248.31857 | 102.84228 | 3.31286 | 0.0240817 | 0.19973132 | 2.8984909 | 20 | — | — |
| 372651 2009 <i>WV</i> ₃₇ | 16.6 | X | 125.99227 | 119.79126 | 277.00242 | 3.67445 | 0.1176913 | 0.21381106 | 2.7698055 | 20 | 2 22.4 | 20.5 |
| 372652 2009 <i>WF</i> ₃₈ | 16.3 | X | 211.40632 | 251.73311 | 61.06159 | 13.56821 | 0.2308565 | 0.21817533 | 2.7327440 | 20 | 2 11.4 | 21.3 |
| 372653 2009 <i>WB</i> ₄₂ | 16.7 | X | 148.92878 | 282.62201 | 64.97847 | 2.87996 | 0.1129305 | 0.20652047 | 2.8346143 | 20 | 1 21.0 | 21.0 |
| 372654 2009 <i>WQ</i> ₄₅ | 16.4 | X | 65.26962 | 31.59288 | 83.52555 | 5.99394 | 0.1210498 | 0.21501855 | 2.7594261 | 20 | 3 19.5 | 19.8 |
| 372655 2009 <i>WU</i> ₅₁ | 15.4 | X | 14.87577 | 265.30660 | 172.54698 | 25.90391 | 0.2102205 | 0.17821790 | 3.1272925 | 20 | — | — |
| 372656 2009 <i>WE</i> ₅₂ | 16.7 | X | 212.55850 | 0.72540 | 344.51399 | 5.59576 | 0.3212359 | 0.23213598 | 2.6225006 | 20 | 3 12.9 | 21.5 |
| 372657 2009 <i>WS</i> ₅₃ | 15.9 | X | 15.84732 | 57.08937 | 16.14147 | 9.13550 | 0.0942362 | 0.19277160 | 2.9678413 | 20 | — | — |
| 372658 2009 <i>WR</i> ₅₅ | 17.4 | X | 182.85432 | 140.40616 | 231.45624 | 6.00918 | 0.2583290 | 0.22688474 | 2.6623543 | 20 | 3 22.7 | 22.1 |
| 372659 2009 <i>WL</i> ₇₀ | 16.2 | X | 250.55217 | 114.16832 | 75.74967 | 5.82071 | 0.0637585 | 0.19115687 | 2.9845311 | 20 | — | — |
| 372660 2009 <i>WJ</i> ₇₂ | 16.9 | X | 289.60836 | 200.16033 | 131.22017 | 1.89448 | 0.0951837 | 0.24248902 | 2.5468772 | 20 | 6 1.2 | 19.9 |
| 372661 2009 <i>WD</i> ₇₄ | 15.2 | X | 196.87676 | 321.82095 | 141.00571 | 17.26648 | 0.2011804 | 0.17511718 | 3.1641001 | 20 | 11 17.4 | 20.3 |
| 372662 2009 <i>WS</i> ₇₄ | 16.9 | X | 155.72254 | 238.38773 | 247.30953 | 2.98595 | 0.0759225 | 0.21956151 | 2.7212299 | 20 | 3 9.6 | 20.9 |
| 372663 2009 <i>WW</i> ₇₉ | 16.8 | X | 126.05513 | 277.58702 | 101.62191 | 5.22936 | 0.1214248 | 0.20914684 | 2.8108339 | 20 | 2 4.4 | 20.8 |
| 372664 2009 <i>WU</i> ₇₉ | 15.6 | X | 269.00655 | 98.98714 | 88.93513 | 10.74204 | 0.0354101 | 0.19206077 | 2.9751596 | 20 | — | — |
| 372665 2009 <i>WJ</i> ₈₂ | 16.5 | X | 130.52211 | 44.11906 | 342.29921 | 5.53787 | 0.0666438 | 0.21328861 | 2.7743267 | 20 | 2 10.9 | 20.5 |
| 372666 2009 <i>WD</i> ₈₉ | 16.7 | X | 161.49870 | 194.67246 | 214.75917 | 13.71322 | 0.2232208 | 0.22793737 | 2.6541514 | 20 | 4 20.9 | 21.3 |
| 372667 2009 <i>WU</i> ₉₀ | 16.9 | X | 149.08798 | 329.21958 | 46.38277 | 6.26622 | 0.0727837 | 0.21273332 | 2.7791524 | 20 | 2 22.1 | 21.0 |
| 372668 2009 <i>WW</i> ₉₅ | 17.1 | X | 146.46345 | 259.81804 | 219.79916 | 4.81040 | 0.0754942 | 0.23915895 | 2.5704646 | 20 | 6 27.5 | 20.9 |
| 372669 2009 <i>WV</i> ₉₇ | 16.4 | X | 90.77735 | 313.41875 | 116.30453 | 3.68836 | 0.0963428 | 0.21111169 | 2.7933661 | 20 | 2 20.1 | 20.1 |
| 372670 2009 <i>WF</i> ₉₈ | 17.0 | X | 104.70916 | 91.41135 | 358.03843 | 3.67280 | 0.0693033 | 0.22346582 | 2.6894407 | 20 | 3 27.9 | 20.6 |
| 372671 2009 <i>WP</i> ₁₀₉ | 16.5 | X | 304.85729 | 22.82903 | 101.09668 | 4.06339 | 0.1454921 | 0.18715978 | 3.0268742 | 20 | — | — |
| 372672 2009 <i>WX</i> ₁₁₁ | 16.3 | X | 103.98012 | 280.21807 | 91.91546 | 7.49378 | 0.0818579 | 0.20430841 | 2.8550379 | 20 | — | — |
| 372673 2009 <i>WS</i> ₁₁₆ | 17.2 | X | 158.07268 | 96.68590 | 256.90828 | 3.60350 | 0.0784340 | 0.21366512 | 2.7710666 | 20 | 2 1.0 | 21.2 |
| 372674 2009 <i>WY</i> ₁₁₈ | 16.7 | X | 104.67966 | 327.20434 | 57.27099 | 7.37408 | 0.0890462 | 0.20704713 | 2.8298054 | 20 | 1 12.0 | 20.5 |
| 372675 2009 <i>WS</i> ₁₂₂ | 17.1 | X | 301.01827 | 118.75454 | 78.62938 | 3.08059 | 0.0165177 | 0.20658827 | 2.8339941 | 20 | 1 8.0 | 21.0 |
| 372676 2009 <i>WH</i> ₁₂₄ | 16.5 | X | 136.22382 | 228.80552 | 60.58708 | 3.25290 | 0.0290543 | 0.18744497 | 3.0238032 | 20 | — | — |
| 372677 2009 <i>WR</i> ₁₂₇ | 16.7 | X | 200.65080 | 96.61408 | 239.94657 | 3.87355 | 0.0490255 | 0.21584168 | 2.7524061 | 20 | 2 24.3 | 20.7 |
| 372678 2009 <i>WV</i> ₁₃₃ | 17.4 | X | 221.49382 | 34.17525 | 303.08195 | 1.46139 | 0.0844858 | 0.22569861 | 2.6716740 | 20 | 3 18.3 | 21.4 |
| 372679 2009 <i>WW</i> ₁₃₄ | 17.2 | X | 142.35573 | 43.27718 | 347.15746 | 5.34471 | 0.0644760 | 0.21857625 | 2.7294014 | 20 | 2 28.3 | 21.1 |
| 372680 2009 <i>WT</i> ₁₃₉ | 17.2 | X | 204.61586 | 291.25337 | 16.44636 | 2.16837 | 0.0632693 | 0.22021313 | 2.7158591 | 20 | 1 26.3 | 21.1 |
| 372681 2009 <i>WD</i> ₁₄₅ | 17.2 | X | 98.45615 | 30.05564 | 20.54009 | 4.29012 | 0.1006817 | 0.21485408 | 2.7608341 | 20 | 2 6.8 | 20.8 |
| 372682 2009 <i>WK</i> ₁₅₅ | 16.4 | X | 339.59854 | 70.65613 | 203.32449 | 9.03224 | 0.0302240 | 0.23847157 | 2.5754017 | 20 | 6 4.4 | 19.7 |
| 372683 2009 <i>WT</i> ₁₆₁ | 15.0 | X | 219.48037 | 295.80586 | 254.95968 | 25.52993 | 0.1542519 | 0.17821015 | 3.1273832 | 20 | 11 29.3 | 19.7 |
| 372684 2009 <i>WW</i> ₁₆₅ | 17.1 | X | 64.70741 | 136.93945 | 294.50350 | 1.03759 | 0.0495120 | 0.20339936 | 2.8635383 | 20 | 1 12.3 | 20.6 |
| 372685 2009 <i>WT</i> ₁₆₇ | 16.8 | X | 99.46717 | 336.69271 | 75.45059 | 5.45917 | 0.0660257 | 0.21113094 | 2.7931963 | 20 | 2 5.7 | 20.5 |
| 372686 2009 <i>WL</i> ₁₇₁ | 16.9 | X | 207.14163 | 343.01301 | 0.68550 | 3.54376 | 0.1255213 | 0.22557230 | 2.6726712 | 20 | 3 11.4 | 21.2 |
| 372687 2009 <i>WN</i> ₁₇₅ | 16.8 | X | 90.53501 | 95.88058 | 333.32599 | 5.49606 | 0.0470634 | 0.21281119 | 2.7784744 | 20 | 2 11.5 | 20.3 |
| 372688 2009 <i>WU</i> ₁₇₆ | 16.4 | X | 146.41296 | 242.33149 | 342.14340 | 4.63842 | 0.1444799 | 0.17213037 | 3.2005973 | 20 | 10 30.8 | 21.6 |
| 372689 2009 <i>WB</i> ₁₇₇ | 16.9 | X | 137.90470 | 162.74354 | 221.65995 | 5.95680 | 0.0437339 | 0.21728718 | 2.7401856 | 20 | 2 10.4 | 20.9 |
| 372690 2009 <i>WX</i> ₁₈₆ | 17.1 | X | 117.37410 | 38.97784 | 36.29652 | 5.30220 | 0.1387809 | 0.22158856 | 2.7046090 | 20 | 4 5.4 | 20.9 |
| 372691 2009 <i>WT</i> ₁₈₈ | 16.9 | X | 159.36739 | 271.80481 | 33.38535 | 6.46306 | 0.0408116 | 0.20154546 | 2.8810715 | 20 | — | — |
| 372692 2009 <i>WC</i> ₁₉₅ | 16.4 | X | 190.52769 | 331.89726 | 39.32722 | 6.80775 | 0.1829102 | 0.22743554 | 2.6580541 | 20 | 3 31.1 | 20.9 |
| 372693 2009 <i>WL</i> ₁₉₇ | 16.2 | X | 238.47343 | 83.50994 | 123.89789 | 8.43504 | 0.0389433 | 0.19214138 | 2.9743275 | 20 | — | — |
| 372694 2009 <i>WL</i> ₂₀₆ | 17.0 | X | 169.59375 | 359.72223 | 347.72735 | 2.99205 | 0.1017211 | 0.21455047 | 2.7634381 | 20 | 2 9.1 | 21.2 |
| 372695 2009 <i>WR</i> ₂₀₇ | 16.9 | X | 110.95044 | 329.90379 | 41.07092 | 2.42250 | 0.0855082 | 0.20415594 | 2.8564593 | 20 | 1 2.6 | 20.7 |
| 372696 2009 <i>WM</i> ₂₀₉ | 16.7 | X | 126.29281 | 142.39704 | 261.61149 | 3.66560 | 0.0705499 | 0.21327809 | 2.7744179 | 20 | 2 25.5 | 20.6 |
| 372697 2009 <i>WH</i> ₂₁₁ | 16.8 | X | 204.89747 | 134.44798 | 211.03667 | 5.30649 | 0.1757686 | 0.22566985 | 2.6719010 | 20 | 3 8.9 | 21.3 |
| 372698 2009 <i>WZ</i> ₂₂₄ | 15.9 | X | 318.88685 | 246.57447 | 264.20788 | 9.36388 | 0.0652297 | 0.19308970 | 2.9645809 | 20 | — | — |
| 372699 2009 <i>WJ</i> ₂₂₆ | 16.8 | X | 37.38688 | 327.45767 | 180.81763 | 3.19925 | 0.0237680 | 0.22097030 | 2.7096515 | 20 | 3 8.2 | 20.3 |
| 372700 2009 <i>WQ</i> ₂₃₀ | 16.4 | X | 113.20204 | 189.71232 | 252.73641 | 2.78536 | 0.0740784 | 0.21907920 | 2.7252224 | 20 | 3 29.7 | 20.2 |
| 372701 2009 <i>WV</i> ₂₃₀ | 17.6 | X | 170.05997 | 204.41595 | 163.87533 | 2.89127 | 0.1475195 | 0.22240499 | 2.6979860 | 20 | 3 6.9 | 21.8 |
| 372702 2009 <i>WJ</i> ₂₃₇ | 17.0 | X | 121.90115 | 164.66440 | 262.60319 | 4.16994 | 0.0479347 | 0.22062022 | 2.7125172 | 20 | 3 16.3 | 20.8 |
| 372703 2009 <i>WE</i> ₂₄₈ | 16.8 | X | 122.51208 | 16.93077 | 57.56815 | 5.95578 | 0.1449986 | 0.22091079 | 2.7101381 | 20 | 4 11.8 | 20.7 |
| 372704 2009 <i>WL</i> ₂₄₉ | 16.1 | X | 98.82981 | 174.58267 | 263.29590 | 4.15539 | 0.0704732 | 0.21510639 | 2.7586748 | 20 | 3 4.6 | 19.8 |
| 372705 2009 <i>WX</i> ₂₄₉ | 16.6 | X | 275.97774 | 76.21234 | 112.66455 | 3.05556 | 0.0601818 | 0.19471592 | 2.9480515 | 20 | — | — |
| 372706 2009 <i>WT</i> ₂₅₀ | 15.8 | X | 12.61753 | 46.82827 | 47.53659 | 5.11104 | 0.0532488 | 0.19731988 | 2.9220580 | 20 | — | — |
| 372707 2009 <i>WM</i> ₂₅₆ | 16.9 | X | 121.33174 | 250.91282 | 161.38441 | 0.36046 | 0.0657828 | 0.21452006 | 2.7636992 | 20 | 3 1.9 | 20.8 |
| 372708 2009 <i>WY</i> ₂₅₈ | 15.5 | X | 211.78579 | 342.40891 | 245.22912 | 14.90296 | 0.1185282 | 0.18484093 | 3.0521365 | 20 | — | — |
| 372709 2009 <i>WZ</i> ₂₅₉ | 15.9 | X | 74.56448 | 15.46102 | 73.65656 | 7.13116 | 0.0058876 | 0.20944539 | 2.8081621 | 20 | 2 13.4 | 19.8 |
| 372710 2009 <i>WF</i> ₂₆₀ | 15.9 | X | 31.93510 | 119.87014 | 292.90940 | 14.55397 | 0.0783595 | 0.18354314 | 3.0665069 | 20 | — | — |
| 372711 2009 <i>WQ</i> ₂₆₀ | 16.7 | X | 54.15953 | 333.46523 | 76.20986 | 3.12615 | 0.1188571 | 0.19673185 | 2.9278777 | 20 | — | — |
| 372712 2009 <i>XG</i> ₂ | 15.4 | | | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|------------|------------|-----------|----|---------|----------|
| 372721 2009 XD ₂₁ | 16.1 | X | 171.54615 | 258.94016 | 103.55051 | 14.17973 | 0.2646827 | 0.22052061 | 2.7133340 | 20 | 3 11.8 | 21.1 |
| 372722 2009 XN ₂₁ | 15.6 | X | 93.09364 | 220.44673 | 100.94083 | 10.78525 | 0.0685000 | 0.17735406 | 3.1374390 | 20 | 12 29.3 | 20.1 |
| 372723 2009 XY ₂₂ | 16.0 | X | 359.23164 | 342.40744 | 109.97009 | 7.41473 | 0.1038809 | 0.18535532 | 3.0464871 | 20 | — | — |
| 372724 2009 YA ₄ | 16.0 | X | 6.32228 | 330.07949 | 106.83996 | 11.48117 | 0.0917359 | 0.18238029 | 3.0795277 | 20 | — | — |
| 372725 2009 YJ ₄ | 16.1 | X | 44.50149 | 104.35316 | 303.39214 | 10.85630 | 0.0518488 | 0.18454377 | 3.0554121 | 20 | — | — |
| 372726 2009 YL ₄ | 15.4 | X | 87.71264 | 256.88642 | 98.22106 | 9.36702 | 0.0534241 | 0.18182210 | 3.0858272 | 20 | — | — |
| 372727 2009 YH ₆ | 16.6 | X | 143.87239 | 214.70106 | 127.12713 | 6.95164 | 0.1768586 | 0.20865911 | 2.8152123 | 20 | 1 14.3 | 20.8 |
| 372728 2009 YV ₉ | 16.3 | X | 76.25794 | 135.92107 | 258.40207 | 8.55559 | 0.0870452 | 0.19292067 | 2.9663124 | 20 | — | — |
| 372729 2009 YQ ₁₁ | 16.2 | X | 92.10031 | 128.73218 | 322.92601 | 4.10221 | 0.1639465 | 0.21093836 | 2.7948961 | 20 | 3 28.3 | 20.0 |
| 372730 2009 YM ₁₇ | 15.8 | X | 12.31916 | 281.77647 | 101.31285 | 11.35806 | 0.0334673 | 0.17228932 | 3.1986286 | 20 | 12 3.6 | 20.3 |
| 372731 2009 YX ₁₉ | 16.2 | X | 337.11552 | 329.56709 | 118.83486 | 5.11736 | 0.1542436 | 0.17787102 | 3.1313570 | 20 | — | — |
| 372732 2009 YD ₂₀ | 16.1 | X | 95.66911 | 309.59418 | 92.65362 | 5.44550 | 0.1634176 | 0.20095768 | 2.8866867 | 20 | 2 3.6 | 19.9 |
| 372733 2009 YP ₂₀ | 16.1 | X | 271.17233 | 100.80183 | 95.71624 | 10.35595 | 0.1661287 | 0.18427835 | 3.0583453 | 20 | — | — |
| 372734 2009 YE ₂₁ | 15.2 | X | 313.64522 | 164.38904 | 304.84691 | 15.42331 | 0.0726071 | 0.17668182 | 3.1453921 | 20 | — | — |
| 372735 2010 AG ₁₇ | 16.1 | X | 339.67149 | 125.94554 | 324.23877 | 8.27648 | 0.1163724 | 0.18087896 | 3.0965446 | 20 | — | — |
| 372736 2010 AD ₂₃ | 16.2 | X | 47.56294 | 261.12350 | 136.45284 | 10.45661 | 0.2040426 | 0.18595736 | 3.0399082 | 20 | — | — |
| 372737 2010 AR ₂₅ | 15.0 | X | 319.46594 | 327.02034 | 123.78427 | 25.70291 | 0.2090355 | 0.17303615 | 3.1894183 | 20 | 12 16.9 | 18.8 |
| 372738 2010 AT ₄₇ | 15.6 | X | 327.23981 | 323.26870 | 142.18301 | 12.31459 | 0.1461966 | 0.17784246 | 3.1316923 | 20 | — | — |
| 372739 2010 AV ₄₈ | 15.9 | X | 81.48866 | 274.01356 | 145.15576 | 12.47444 | 0.1883120 | 0.19954568 | 2.9002882 | 20 | 2 7.9 | 19.6 |
| 372740 2010 AH ₄₉ | 15.7 | X | 66.03286 | 131.25523 | 321.53586 | 10.84480 | 0.0924748 | 0.19047141 | 2.9916872 | 20 | — | — |
| 372741 2010 AP ₄₉ | 15.7 | X | 70.61498 | 62.93938 | 286.42000 | 14.81453 | 0.0651283 | 0.17292748 | 3.1907544 | 20 | — | — |
| 372742 2010 AF ₅₅ | 16.0 | X | 28.55096 | 70.85060 | 344.98073 | 8.70297 | 0.0956418 | 0.17833743 | 3.1258949 | 20 | — | — |
| 372743 2010 AG ₆₀ | 15.7 | X | 288.46355 | 141.50308 | 116.53552 | 9.54734 | 0.0798934 | 0.17026080 | 3.2239844 | 20 | 11 5.9 | 20.2 |
| 372744 2010 AQ ₆₁ | 15.6 | X | 359.18232 | 124.81517 | 320.80523 | 10.73486 | 0.0831002 | 0.17937253 | 3.1138577 | 20 | — | — |
| 372745 2010 AH ₆₄ | 15.5 | X | 48.32268 | 66.20910 | 314.03305 | 8.82057 | 0.0767799 | 0.17972466 | 3.1097891 | 20 | — | — |
| 372746 2010 AJ ₆₇ | 15.9 | X | 293.82624 | 244.74766 | 235.41813 | 5.13464 | 0.0735158 | 0.17850795 | 3.1239039 | 20 | 12 16.8 | 20.1 |
| 372747 2010 AT ₆₇ | 17.5 | X | 171.78849 | 244.66449 | 142.70043 | 1.49434 | 0.2127554 | 0.22284150 | 2.6944616 | 20 | 4 3.4 | 21.9 |
| 372748 2010 AV ₆₉ | 16.3 | X | 13.86278 | 302.61866 | 133.95369 | 9.91377 | 0.1600706 | 0.18634530 | 3.0356877 | 20 | — | — |
| 372749 2010 AG ₈₀ | 16.0 | X | 323.89417 | 307.70269 | 160.86465 | 11.27292 | 0.0917989 | 0.17877840 | 3.1207527 | 20 | — | — |
| 372750 2010 BT | 16.1 | X | 281.60181 | 173.41658 | 312.38814 | 6.37337 | 0.19713636 | 0.17086151 | 3.2164235 | 20 | 12 2.1 | 20.4 |
| 372751 2010 BZ ₂ | 16.2 | X | 66.97162 | 132.45736 | 353.67506 | 16.52807 | 0.1905171 | 0.21268350 | 2.7795864 | 20 | 4 7.5 | 19.7 |
| 372752 2010 BV ₁₄ | 16.9 | X | 235.47291 | 175.57775 | 170.68912 | 14.30207 | 0.2560683 | 0.24042378 | 2.5614414 | 20 | 4 3.6 | 21.3 |
| 372753 2010 CY ₁ | 15.8 | X | 17.22931 | 132.75473 | 316.39178 | 7.9258 | 0.0426798 | 0.18483023 | 3.0522543 | 20 | — | — |
| 372754 2010 CJ ₂ | 15.8 | X | 31.96613 | 67.86702 | 333.86739 | 8.37705 | 0.0816974 | 0.17390907 | 3.1787367 | 20 | — | — |
| 372755 2010 CC ₁₃ | 17.2 | X | 113.54235 | 119.05208 | 307.97163 | 5.63456 | 0.2543317 | 0.21889100 | 2.7267842 | 20 | 3 31.8 | 21.5 |
| 372756 2010 CR ₁₅ | 16.3 | X | 166.13600 | 252.13414 | 188.95093 | 11.40104 | 0.1787524 | 0.23459202 | 2.6037177 | 20 | 6 2.9 | 20.7 |
| 372757 2010 CT ₂₁ | 16.5 | X | 277.14190 | 154.29391 | 350.85115 | 0.37922 | 0.1428710 | 0.17284919 | 3.1917178 | 20 | 12 14.4 | 20.6 |
| 372758 2010 CD ₂₇ | 15.4 | X | 107.07175 | 196.83408 | 140.15632 | 11.33891 | 0.0817807 | 0.17820196 | 3.1274790 | 20 | — | — |
| 372759 2010 CH ₂₈ | 16.4 | X | 271.08231 | 115.92753 | 276.36392 | 8.76965 | 0.2770499 | 0.24373226 | 2.5382089 | 20 | 7 1.1 | 19.6 |
| 372760 2010 CJ ₂₉ | 15.2 | X | 194.30911 | 143.52289 | 350.19767 | 4.66240 | 0.1546684 | 0.14226661 | 3.6341322 | 20 | 8 27.5 | 21.0 |
| 372761 2010 CV ₆₉ | 15.8 | X | 2.36498 | 267.14048 | 126.36815 | 10.10475 | 0.1046544 | 0.17160730 | 3.2070978 | 20 | 12 9.8 | 20.0 |
| 372762 2010 CQ ₇₀ | 16.5 | X | 107.28045 | 45.70317 | 309.43794 | 6.75145 | 0.0462331 | 0.18600480 | 3.0393913 | 20 | — | — |
| 372763 2010 CP ₉₂ | 16.0 | X | 133.60955 | 300.64680 | 65.54646 | 1.65477 | 0.0954736 | 0.18611436 | 3.0381984 | 20 | 1 27.6 | 20.4 |
| 372764 2010 CM ₁₀₇ | 15.7 | X | 201.01358 | 103.07530 | 148.27694 | 11.97557 | 0.0094168 | 0.17890284 | 3.1193054 | 20 | — | — |
| 372765 2010 CV ₁₂₀ | 16.1 | X | 286.23282 | 166.16466 | 349.46656 | 9.36348 | 0.0404547 | 0.17413393 | 3.1759997 | 20 | — | — |
| 372766 2010 CD ₁₃₈ | 16.8 | X | 332.20625 | 324.82298 | 135.00165 | 1.78701 | 0.1690898 | 0.17617419 | 3.1514314 | 20 | — | — |
| 372767 2010 CB ₁₄₁ | 15.7 | X | 321.23319 | 125.18940 | 358.73527 | 13.90732 | 0.1549702 | 0.17569857 | 3.1571161 | 20 | — | — |
| 372768 2010 CR ₁₄₂ | 15.7 | X | 279.46501 | 58.59805 | 84.61602 | 6.90095 | 0.1284929 | 0.17077936 | 3.2174548 | 20 | 12 16.7 | 19.9 |
| 372769 2010 CY ₁₅₉ | 15.8 | X | 4.02826 | 90.97190 | 342.67248 | 16.56780 | 0.1604502 | 0.17059462 | 3.2197773 | 20 | — | — |
| 372770 2010 CF ₁₆₀ | 15.5 | X | 36.63426 | 301.21752 | 105.20730 | 17.95899 | 0.1398076 | 0.18094883 | 3.0957475 | 20 | — | — |
| 372771 2010 CM ₁₆₀ | 15.9 | X | 11.76486 | 92.87549 | 354.73446 | 26.14027 | 0.2057402 | 0.18461897 | 3.0545824 | 20 | — | — |
| 372772 2010 CY ₁₆₉ | 15.9 | X | 22.76456 | 74.74501 | 323.26286 | 17.56143 | 0.1402129 | 0.17157590 | 3.2074891 | 20 | — | — |
| 372773 2010 DG ₆ | 16.4 | X | 9.68254 | 285.87021 | 176.14181 | 5.39818 | 0.1172498 | 0.18086801 | 3.0966697 | 20 | — | — |
| 372774 2010 DO ₂₀ | 16.1 | X | 162.73403 | 233.32019 | 223.76797 | 30.67501 | 0.2929321 | 0.23221780 | 2.6214347 | 20 | 6 16.8 | 21.3 |
| 372775 2010 DR ₃₅ | 16.4 | X | 4.59181 | 92.74405 | 348.67625 | 4.56570 | 0.1327143 | 0.17924460 | 3.1153391 | 20 | — | — |
| 372776 2010 DH ₄₃ | 16.6 | X | 13.58090 | 96.53005 | 345.20637 | 9.28180 | 0.2216866 | 0.17884835 | 3.1199390 | 20 | — | — |
| 372777 2010 DN ₄₄ | 15.9 | X | 337.66731 | 306.38194 | 172.11745 | 17.49591 | 0.1764742 | 0.17619931 | 3.1511319 | 20 | — | — |
| 372778 2010 DS ₆₀ | 16.8 | X | 149.82032 | 240.67349 | 169.56893 | 5.52365 | 0.0736644 | 0.22213086 | 2.7002053 | 20 | 4 2.9 | 20.6 |
| 372779 2010 EX ₁₄₀ | 16.6 | X | 39.76487 | 94.37455 | 359.17405 | 10.96262 | 0.1890290 | 0.18898409 | 3.0073633 | 20 | 1 18.4 | 20.0 |
| 372780 2010 FP ₆ | 15.8 | X | 52.06750 | 242.88691 | 169.97219 | 17.33191 | 0.1493426 | 0.18247060 | 3.0785116 | 20 | — | — |
| 372781 2010 FC ₃₄ | 15.3 | X | 137.23943 | 198.13276 | 92.60286 | 18.20503 | 0.0936548 | 0.18153363 | 3.0890954 | 20 | — | — |
| 372782 2010 FQ ₄₃ | 16.2 | X | 100.74442 | 339.87154 | 91.09906 | 5.53541 | 0.1857510 | 0.21104127 | 2.7939874 | 20 | 3 20.6 | 20.2 |
| 372783 2010 GC ₄₁ | 15.8 | X | 344.78252 | 341.61889 | 72.17481 | 10.00551 | 0.0755031 | 0.17162561 | 3.2068697 | 20 | 12 5.7 | 20.0 |
| 372784 2010 GS ₁₇₃ | 15.7 | X | 314.14204 | 281.69054 | 204.06036 | 10.41237 | 0.1000134 | 0.17307183 | 3.1889800 | 20 | — | — |
| 372785 2010 JL ₃₄ | 17.5 | X | 327.24512 | 356.32409 | 221.49038 | 20.75069 | 0.0492722 | 0.37791343 | 1.8947031 | 20 | 1 27.6 | 20.0 |
| 372786 2010 NA ₁₁₄ | 18.1 | X | 307.21964 | 9.94178 | 42.38230 | 3.47497 | 0.1397706 | 0.29792018 | 2.2202545 | 20 | 11 8.1 | 19.5 |
| 372787 2010 OK ₆₁ | 17.0 | X | 77.13546 | 244.88927 | 303.66850 | 6.71925 | 0.1415751 | 0.27091324 | 2.3654616 | 20 | 7 17.1 | 20.0 |
| 372788 2010 OR ₁₂₅ | 17.8 | X | 215.90285 | 105.40099 | 342.15627 | 4.94195 | 0.2008414 | 0.27558532 | 2.3386505 | 20 | 7 27.6 | 21.4 |
| 372789 2010 PK ₂₆ | 17.6 | X | 85.84262 | 241.34091 | 158.48482 | 8.33088 | 0.1963046 | 0.34293628 | 2.0214380 | 20 | — | — |
| 372790 2010 PQ ₂₆ | 17.6 | X | 343.46764 | 116.89144 | 270.58078 | 4.12281 | 0.1297305 | 0.29943893 | 2.2127408 | 20 | 12 12.6 | 19.5 |
| 372791 2010 RT ₅₁ | 18.6 | X | 79.75588 | 252.79487 | 30.29832 | 2.77537 | 0.1097428 | 0.30696445 | 2.1764264 | 20 | 11 28.3 | 21.3 |
| 372792 2010 RR ₆₀ | 17.7 | X | 283.05792 | 79.88157 | 357.97834 | 5.75037 | 0.1314955 | 0.29829794 | 2.2183797 | 20 | 10 28.4 | 19.5 |
| 372793 2010 RA ₆₂ | 17.9 | X | 283.83265 | 67.59768 | 16.01474 | 6.87093 | 0.1117640 | 0.29999799 | 2.2099909 | 20 | 11 10.9 | 19.9 |
| 372794 2010 RG ₁₀₇ | 18.5 | X | 35.43669 | 296.91919 | 20.85610 | 1.72251 | 0.1728919 | 0.30422357 | 2.1894791 | 20 | 11 30.1 | 21.0 |
| 372795 2010 RS ₁₀₇ | 18.0 | X | 315.40895 | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 372801 2010 SY ₈ | 18.0 | X | 358.44183 | 2.70200 | 4.98428 | 5.01825 | 0.1882647 | 0.30332002 | 2.1938251 | 20 | 12 20.1 | 20.1 |
| 372802 2010 SA ₁₉ | 16.9 | X | 126.82432 | 145.34748 | 36.87351 | 7.59869 | 0.0421089 | 0.28537833 | 2.2848378 | 20 | 9 3.6 | 19.9 |
| 372803 2010 ST ₂₈ | 18.0 | X | 334.87865 | 35.80422 | 7.42206 | 1.10631 | 0.2216402 | 0.30387896 | 2.1911341 | 20 | — | — |
| 372804 2010 SH ₄₁ | 17.1 | X | 220.95988 | 296.47737 | 33.66183 | 5.08912 | 0.0612709 | 0.25776148 | 2.4452543 | 20 | 3 9.8 | 20.5 |
| 372805 2010 TE ₇ | 18.3 | X | 58.82782 | 124.42767 | 221.17459 | 4.10039 | 0.1957853 | 0.31589851 | 2.1351956 | 20 | — | — |
| 372806 2010 TB ₃₈ | 18.4 | X | 7.95541 | 137.71149 | 241.37747 | 4.22211 | 0.1645469 | 0.30799169 | 2.1715844 | 20 | — | — |
| 372807 2010 TP ₄₀ | 18.3 | X | 110.08527 | 247.70364 | 354.35883 | 6.37261 | 0.1017325 | 0.30189557 | 2.2007205 | 20 | 11 4.1 | 21.4 |
| 372808 2010 TP ₄₃ | 18.5 | X | 63.25642 | 3.35160 | 309.07300 | 0.75780 | 0.1141492 | 0.30940452 | 2.1649687 | 20 | 12 19.9 | 21.2 |
| 372809 2010 TW ₅₆ | 17.8 | X | 127.96287 | 219.31120 | 338.12366 | 5.83621 | 0.1077780 | 0.29160398 | 2.2522007 | 20 | 9 24.5 | 21.0 |
| 372810 2010 TO ₆₄ | 18.5 | X | 25.76496 | 353.04845 | 348.78266 | 6.33418 | 0.0152702 | 0.30415965 | 2.1897859 | 20 | 11 23.9 | 21.1 |
| 372811 2010 TS ₈₅ | 18.3 | X | 236.98878 | 65.76189 | 31.76489 | 6.20260 | 0.1315845 | 0.29205117 | 2.2499010 | 20 | 9 15.7 | 21.1 |
| 372812 2010 TA ₁₁₃ | 17.6 | X | 90.82383 | 193.55935 | 10.48056 | 6.09685 | 0.0834856 | 0.28219227 | 2.3020035 | 20 | 8 20.9 | 20.5 |
| 372813 2010 TX ₁₁₆ | 17.5 | X | 17.14146 | 27.92750 | 354.60303 | 3.91680 | 0.1772295 | 0.31007981 | 2.1618243 | 20 | — | — |
| 372814 2010 TW ₁₂₄ | 18.0 | X | 212.91278 | 346.80632 | 150.07235 | 6.13944 | 0.0136852 | 0.29868448 | 2.2164653 | 20 | 10 28.2 | 20.6 |
| 372815 2010 TL ₁₃₈ | 17.7 | X | 158.59131 | 258.96042 | 264.76496 | 3.95851 | 0.0590800 | 0.28640397 | 2.2793798 | 20 | 9 12.1 | 20.8 |
| 372816 2010 TG ₁₅₁ | 15.7 | X | 111.08655 | 181.81293 | 222.39828 | 25.98204 | 0.0868535 | 0.23658095 | 2.5891042 | 20 | 1 29.9 | 19.9 |
| 372817 2010 TP ₁₆₁ | 18.8 | X | 130.31647 | 292.30834 | 308.68266 | 4.41849 | 0.0398513 | 0.30691362 | 2.1766668 | 20 | 11 27.8 | 21.4 |
| 372818 2010 US ₁₃ | 17.8 | X | 7.98754 | 329.90608 | 33.65258 | 8.65679 | 0.1136771 | 0.30257888 | 2.1974060 | 20 | 12 15.4 | 20.3 |
| 372819 2010 UF ₁₆ | 18.2 | X | 283.83329 | 238.13417 | 174.22938 | 4.47176 | 0.1105230 | 0.28993691 | 2.2608255 | 20 | 9 23.1 | 20.3 |
| 372820 2010 UT ₁₆ | 17.8 | X | 265.29631 | 9.60564 | 48.71448 | 4.60367 | 0.1058371 | 0.28203324 | 2.3028687 | 20 | 9 2.7 | 20.4 |
| 372821 2010 UE ₂₅ | 17.9 | X | 296.07733 | 22.02257 | 63.20388 | 4.74645 | 0.155935 | 0.29588391 | 2.2304294 | 20 | 12 5.9 | 19.6 |
| 372822 2010 UF ₂₆ | 17.8 | X | 351.05078 | 347.31883 | 31.64753 | 4.86902 | 0.1784629 | 0.30046714 | 2.2076898 | 20 | 12 21.5 | 19.8 |
| 372823 2010 UZ ₃₂ | 18.0 | X | 201.33479 | 96.17068 | 355.98739 | 6.15302 | 0.0978039 | 0.27597371 | 2.3364558 | 20 | 7 27.4 | 21.3 |
| 372824 2010 UB ₃₅ | 17.3 | X | 116.69916 | 326.61439 | 262.85100 | 6.73472 | 0.0754676 | 0.29428556 | 2.2384982 | 20 | 10 23.1 | 20.4 |
| 372825 2010 UQ ₄₁ | 17.2 | X | 17.18564 | 5.48860 | 282.86657 | 2.60370 | 0.1880826 | 0.28807826 | 2.2705395 | 20 | 9 17.5 | 19.3 |
| 372826 2010 UU ₄₅ | 17.7 | X | 7.80194 | 350.22300 | 345.85038 | 5.15972 | 0.1523556 | 0.29682492 | 2.2257129 | 20 | 11 8.6 | 19.9 |
| 372827 2010 UH ₅₄ | 17.7 | X | 175.07760 | 249.86900 | 249.57708 | 5.42031 | 0.0364658 | 0.28204501 | 2.2028047 | 20 | 8 29.7 | 20.7 |
| 372828 2010 UJ ₅₇ | 17.8 | X | 310.38251 | 183.97301 | 258.58207 | 4.40002 | 0.0971037 | 0.30131115 | 2.2035653 | 20 | — | — |
| 372829 2010 UQ ₅₇ | 17.4 | X | 263.89007 | 359.86854 | 29.81480 | 5.13273 | 0.1063877 | 0.27491252 | 2.3424646 | 20 | 7 17.9 | 20.3 |
| 372830 2010 UL ₆₀ | 18.4 | X | 335.22343 | 304.64349 | 51.91163 | 3.42184 | 0.2292903 | 0.28953244 | 2.2629306 | 20 | 10 14.3 | 19.4 |
| 372831 2010 UR ₆₄ | 17.4 | X | 55.74671 | 20.17372 | 245.82055 | 6.00263 | 0.0982298 | 0.28678859 | 2.2773414 | 20 | 9 28.3 | 20.2 |
| 372832 2010 UJ ₇₀ | 17.7 | X | 302.94848 | 351.09593 | 48.49480 | 5.61079 | 0.1875165 | 0.29083008 | 2.2561943 | 20 | 10 4.6 | 19.2 |
| 372833 2010 UE ₇₃ | 17.5 | X | 267.49674 | 341.90745 | 77.18297 | 5.87065 | 0.1560247 | 0.28471582 | 2.2883809 | 20 | 8 30.7 | 20.0 |
| 372834 2010 UU ₇₆ | 17.1 | X | 161.75372 | 161.00942 | 287.00622 | 5.54735 | 0.1040431 | 0.25830608 | 2.4418161 | 20 | 6 4.2 | 20.7 |
| 372835 2010 UA ₈₀ | 17.8 | X | 209.25722 | 109.51612 | 359.93073 | 6.59514 | 0.0784735 | 0.28095899 | 2.3087350 | 20 | 9 1.3 | 20.7 |
| 372836 2010 VT ₁₄ | 17.7 | X | 314.45562 | 321.25407 | 68.50559 | 3.16649 | 0.1607876 | 0.29156982 | 2.2523766 | 20 | 10 16.8 | 19.3 |
| 372837 2010 VQ ₂₂ | 16.8 | X | 27.44769 | 25.80895 | 239.10307 | 9.90665 | 0.1450553 | 0.27634966 | 2.3343363 | 20 | 8 17.3 | 19.5 |
| 372838 2010 VG ₃₂ | 17.9 | X | 18.85164 | 269.11349 | 117.89011 | 5.08358 | 0.1247129 | 0.31031860 | 2.1607151 | 20 | — | — |
| 372839 2010 VH ₄₇ | 17.7 | X | 151.50861 | 203.81190 | 251.18255 | 6.02818 | 0.0723767 | 0.25822315 | 2.4423389 | 20 | 5 31.6 | 20.8 |
| 372840 2010 VA ₆₁ | 17.5 | X | 1.24734 | 231.50612 | 163.17377 | 6.01461 | 0.1907976 | 0.30537807 | 2.1839574 | 20 | — | — |
| 372841 2010 VZ ₆₁ | 17.7 | X | 237.44499 | 106.38244 | 5.70591 | 7.05323 | 0.0498503 | 0.28977167 | 2.2616849 | 20 | 10 16.0 | 20.4 |
| 372842 2010 VE ₈₆ | 17.8 | X | 195.01654 | 197.94037 | 242.23605 | 2.22630 | 0.1686776 | 0.26520788 | 2.3992662 | 20 | 6 27.9 | 21.6 |
| 372843 2010 VM ₉₁ | 17.8 | X | 349.63124 | 134.46355 | 326.71257 | 4.36136 | 0.1391146 | 0.29771393 | 2.2212799 | 20 | 12 14.9 | 19.9 |
| 372844 2010 VZ ₉₁ | 17.3 | X | 11.81504 | 267.53102 | 243.40727 | 0.99550 | 0.1543342 | 0.26328672 | 2.4109234 | 20 | 5 26.5 | 19.3 |
| 372845 2010 VK ₉₂ | 18.2 | X | 91.19283 | 264.53549 | 24.83374 | 3.45132 | 0.1899340 | 0.31121167 | 2.1565729 | 20 | 12 24.0 | 21.6 |
| 372846 2010 VN ₉₉ | 18.2 | X | 351.21869 | 294.21833 | 94.94592 | 0.84032 | 0.1812265 | 0.30203094 | 2.2000629 | 20 | — | — |
| 372847 2010 VK ₁₀₁ | 17.9 | X | 205.22148 | 274.68564 | 184.69286 | 0.67695 | 0.1394990 | 0.27472943 | 2.3435052 | 20 | 8 5.2 | 21.3 |
| 372848 2010 VR ₁₁₂ | 18.1 | X | 322.93548 | 328.45956 | 84.11820 | 3.79469 | 0.1433878 | 0.29872079 | 2.1262857 | 20 | 12 13.2 | 19.8 |
| 372849 2010 VN ₁₂₈ | 17.5 | X | 4.74354 | 53.86536 | 250.97130 | 4.57224 | 0.1646431 | 0.28721204 | 2.2751025 | 20 | 9 13.5 | 19.5 |
| 372850 2010 VA ₁₃₀ | 18.2 | X | 8.67933 | 332.59172 | 11.76054 | 6.33341 | 0.1992904 | 0.30004494 | 2.2097604 | 20 | 12 2.1 | 20.5 |
| 372851 2010 VV ₁₃₅ | 16.8 | X | 79.93806 | 10.77416 | 229.81891 | 6.03188 | 0.0887641 | 0.28396656 | 2.2924045 | 20 | 9 23.3 | 19.8 |
| 372852 2010 VN ₁₄₈ | 17.2 | X | 21.06278 | 179.31968 | 86.61382 | 7.63250 | 0.1247412 | 0.27473071 | 2.3434980 | 20 | 8 11.8 | 19.6 |
| 372853 2010 VK ₁₅₀ | 17.2 | X | 28.11139 | 203.57651 | 92.32531 | 5.53734 | 0.1241280 | 0.28715931 | 2.2753810 | 20 | 10 11.6 | 19.7 |
| 372854 2010 VZ ₁₅₉ | 17.8 | X | 265.49601 | 267.20322 | 137.18983 | 4.61847 | 0.1065041 | 0.27757779 | 2.3274458 | 20 | 8 9.9 | 20.2 |
| 372855 2010 VX ₁₆₀ | 17.2 | X | 77.98173 | 24.97239 | 250.07847 | 6.60996 | 0.0947289 | 0.29475803 | 2.2361055 | 20 | 11 11.3 | 20.1 |
| 372856 2010 VK ₁₆₂ | 17.8 | X | 278.00898 | 93.40668 | 11.71091 | 4.02504 | 0.1078523 | 0.29769316 | 2.2213832 | 20 | 12 4.1 | 19.9 |
| 372857 2010 VZ ₁₆₃ | 18.0 | X | 34.51631 | 75.86753 | 270.74169 | 3.79520 | 0.1669163 | 0.30361990 | 2.1923803 | 20 | — | — |
| 372858 2010 VB ₁₇₁ | 17.7 | X | 59.68903 | 297.94384 | 57.31688 | 4.78683 | 0.2270080 | 0.31459884 | 2.1410722 | 20 | — | — |
| 372859 2010 VG ₁₇₃ | 17.7 | X | 344.67134 | 89.16907 | 240.89141 | 1.78917 | 0.2245858 | 0.28520059 | 2.2857870 | 20 | 9 17.6 | 19.0 |
| 372860 2010 VJ ₁₇₃ | 18.1 | X | 316.44692 | 320.90116 | 66.02858 | 5.76080 | 0.1491609 | 0.28914128 | 2.2649710 | 20 | 10 17.4 | 19.9 |
| 372861 2010 VE ₁₈₂ | 16.8 | X | 55.69082 | 151.20498 | 66.91624 | 7.70191 | 0.0476962 | 0.26635645 | 2.3923639 | 20 | 7 13.3 | 19.7 |
| 372862 2010 VX ₁₉₆ | 17.5 | X | 213.41926 | 102.17326 | 355.27240 | 6.20370 | 0.1823960 | 0.27499782 | 2.3418802 | 20 | 8 9.7 | 20.9 |
| 372863 2010 VB ₁₉₇ | 18.4 | X | 323.45325 | 60.72305 | 339.09691 | 6.54971 | 0.1289723 | 0.29481533 | 2.2358157 | 20 | 11 18.7 | 20.3 |
| 372864 2010 VR ₂₁₃ | 17.3 | X | 82.43649 | 18.51121 | 235.78016 | 7.53683 | 0.1062975 | 0.29042255 | 2.2583045 | 20 | 10 19.2 | 20.3 |
| 372865 2010 VG ₂₁₆ | 18.3 | X | 276.98220 | 171.52462 | 273.27353 | 2.19856 | 0.1369100 | 0.29506885 | 2.2345349 | 20 | 10 27.0 | 20.4 |
| 372866 2010 VP ₂₁₆ | 17.6 | X | 103.22916 | 236.10882 | 338.10161 | 5.19400 | 0.1021706 | 0.28353662 | 2.2947213 | 20 | 9 18.3 | 20.6 |
| 372867 2010 VO ₂₁₇ | 16.9 | X | 103.49730 | 172.79924 | 22.59653 | 9.36288 | 0.0297258 | 0.27830030 | 2.3234158 | 20 | 8 20.3 | 19.9 |
| 372868 2010 VA ₂₁₈ | 18.0 | X | 233.85726 | 162.40095 | 330.43905 | 5.67165 | 0.0935039 | 0.29722209 | 2.2237297 | 20 | 11 2.6 | 20.7 |
| 372869 2010 WG ₂₂ | 18.1 | X | 209.93595 | 5.24975 | 67.33214 | 3.32437 | 0.1438798 | 0.26872869 | 2.3782638 | 20 | 7 4.7 | 21.6 |
| 372870 2010 WZ ₂₇ | 16.6 | X | 330.69397 | 158.71204 | 40.02844 | 5.59114 | 0.1557940 | 0.23233350 | 2.6205643 | 20 | 1 25.5 | 19.8 |
| 372871 2010 WJ ₂₈ | 17.6 | X | 233.37210 | 174.57095 | 269.62199 | 4.58969 | 0.1057764 | 0.27836740 | 2.3230424 | 20 | 8 20.2 | 20.6 |
| 372872 2010 WA ₄₀ | 17.5 | X | 350.93568 | 179.89745 | 202.89664 | 5.39559 | 0.1528064 | 0.29880889 | 2.2158501 | 20 | 12 22.1 | 19.6 |
| 372873 2010 WZ ₄₃ | 17.3 | X | 47.08299 | 267.14358 | 21.27915 | 6.06669 | 0.1858031 | 0.28996009 | 2.2607050 | 20 | 11 2.8 | 20.2 |
| 372874 201 | | | | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|-------------|-----------|----|---------|----------|
| 372881 2010 XF ₆₈ | 16.5 | X | 68.83618 | 128.38427 | 8.58264 | 5.38110 | 0.0498440 | 0.24403786 | 2.5360895 | 20 | 4 6.7 | 19.6 |
| 372882 2010 XT ₈₃ | 16.2 | X | 339.98492 | 46.28947 | 257.89236 | 22.96313 | 0.1268266 | 0.27315862 | 2.3524809 | 20 | 7 10.8 | 18.7 |
| 372883 2010 XZ ₈₃ | 17.8 | X | 250.02443 | 307.37150 | 124.16173 | 6.58961 | 0.1010341 | 0.27852162 | 2.3221848 | 20 | 8 29.6 | 20.5 |
| 372884 2010 XD ₈₄ | 18.0 | X | 277.46131 | 196.96175 | 200.67061 | 4.93874 | 0.1446015 | 0.27894002 | 2.3198621 | 20 | 8 10.3 | 20.5 |
| 372885 2010 XZ ₈₄ | 18.1 | X | 14.53106 | 222.18224 | 186.83461 | 2.69402 | 0.1705314 | 0.31066558 | 2.1591060 | 20 | — | — |
| 372886 2010 XL ₈₅ | 18.4 | X | 325.70195 | 217.18963 | 186.30531 | 3.32020 | 0.1668963 | 0.29521388 | 2.2338030 | 20 | 12 5.9 | 20.1 |
| 372887 2010 YM | 18.2 | X | 235.21730 | 107.31866 | 317.52839 | 4.48740 | 0.0929421 | 0.26942206 | 2.3741817 | 20 | 7 29.7 | 21.4 |
| 372888 2010 YC ₃ | 16.7 | X | 199.02956 | 117.27314 | 343.90471 | 6.36353 | 0.0865393 | 0.26428605 | 2.4048420 | 20 | 8 5.9 | 20.1 |
| 372889 2011 AK ₉ | 16.1 | X | 261.81691 | 339.58537 | 287.18630 | 9.37164 | 0.1501845 | 0.22415630 | 2.6839150 | 20 | 1 27.9 | 20.3 |
| 372890 2011 AD ₁₃ | 15.2 | X | 204.37378 | 229.39421 | 322.99131 | 15.82894 | 0.1768421 | 0.17991854 | 3.1075546 | 20 | 11 9.0 | 20.5 |
| 372891 2011 AS ₁₅ | 17.0 | X | 127.04605 | 162.93080 | 343.99619 | 4.84313 | 0.1215073 | 0.25552917 | 2.4594749 | 20 | 7 17.4 | 20.6 |
| 372892 2011 AO ₂₁ | 17.1 | X | 121.57773 | 313.77042 | 89.24154 | 4.61398 | 0.0212141 | 0.22372317 | 2.6873779 | 20 | 2 13.7 | 20.7 |
| 372893 2011 AP ₂₃ | 16.4 | X | 15.88496 | 174.43080 | 334.18704 | 15.02480 | 0.1437069 | 0.22349874 | 2.6891766 | 20 | 2 7.6 | 19.2 |
| 372894 2011 AE ₂₆ | 17.8 | X | 277.08165 | 67.89515 | 352.50102 | 4.27017 | 0.1257749 | 0.27825681 | 2.3236579 | 20 | 9 18.3 | 19.9 |
| 372895 2011 AE ₂₆ | 16.9 | X | 128.87046 | 30.23371 | 58.57290 | 5.78603 | 0.0656779 | 0.24079319 | 2.5588211 | 20 | 4 26.5 | 20.4 |
| 372896 2011 AL ₃₁ | 16.5 | X | 143.64152 | 293.18997 | 82.06932 | 7.08036 | 0.0363025 | 0.22405512 | 2.6847229 | 20 | 2 8.6 | 20.3 |
| 372897 2011 AJ ₃₂ | 17.2 | X | 14.61058 | 179.24795 | 14.79246 | 3.31735 | 0.0832474 | 0.23485261 | 2.6017913 | 20 | 4 5.5 | 20.1 |
| 372898 2011 AW ₃₃ | 16.6 | X | 321.64208 | 135.54332 | 84.95930 | 6.69231 | 0.1723804 | 0.22373525 | 2.6872812 | 20 | 2 9.1 | 20.0 |
| 372899 2011 AD ₃₄ | 16.8 | X | 179.45870 | 52.78045 | 21.23764 | 7.10836 | 0.0253175 | 0.25159437 | 2.4850517 | 20 | 6 3.9 | 20.2 |
| 372900 2011 AK ₃₈ | 17.0 | X | 357.72321 | 235.31379 | 284.04171 | 4.27866 | 0.1035889 | 0.22058170 | 2.7128330 | 20 | 1 22.1 | 20.0 |
| 372901 2011 AC ₄₃ | 16.0 | X | 161.07709 | 129.90064 | 113.51954 | 7.53842 | 0.1685218 | 0.18159118 | 3.0884427 | 20 | 12 7.5 | 21.1 |
| 372902 2011 AR ₄₆ | 17.3 | X | 72.20973 | 198.24209 | 280.03739 | 3.62394 | 0.0918656 | 0.22831299 | 2.6512395 | 20 | 3 22.9 | 20.5 |
| 372903 2011 AB ₅₃ | 16.0 | X | 212.07543 | 236.91793 | 332.33180 | 13.63853 | 0.1888632 | 0.18318989 | 3.0704478 | 20 | 12 9.8 | 21.0 |
| 372904 2011 AF ₅₈ | 16.8 | X | 7.59880 | 9.31846 | 124.72941 | 8.88490 | 0.0447559 | 0.21704002 | 2.7422655 | 20 | 1 9.5 | 20.4 |
| 372905 2011 AF ₆₁ | 16.7 | X | 339.76252 | 45.95340 | 107.21577 | 8.18624 | 0.0214072 | 0.21393900 | 2.7687011 | 20 | — | — |
| 372906 2011 AM ₆₅ | 16.8 | X | 97.87639 | 332.21420 | 106.99776 | 5.34905 | 0.0199178 | 0.22571398 | 2.6715527 | 20 | 2 29.7 | 20.4 |
| 372907 2011 AT ₆₅ | 17.2 | X | 248.02800 | 74.15901 | 323.18664 | 5.01636 | 0.0827028 | 0.25941684 | 2.4348410 | 20 | 7 8.9 | 20.5 |
| 372908 2011 AZ ₆₇ | 17.7 | X | 35.11150 | 332.02594 | 209.01753 | 1.38945 | 0.0476304 | 0.23825525 | 2.5769603 | 20 | 4 18.3 | 20.8 |
| 372909 2011 AY ₆₈ | 16.2 | X | 350.79976 | 15.86766 | 139.80719 | 10.34807 | 0.1252332 | 0.21247129 | 2.7814369 | 20 | 1 5.9 | 19.6 |
| 372910 2011 AB ₇₀ | 17.0 | X | 186.23097 | 26.56886 | 1.57592 | 5.84825 | 0.1231892 | 0.24342674 | 2.5403323 | 20 | 4 12.5 | 20.8 |
| 372911 2011 AJ ₇₅ | 16.6 | X | 189.73865 | 74.39027 | 358.43401 | 6.16162 | 0.1216929 | 0.25322093 | 2.4743985 | 20 | 6 13.8 | 20.4 |
| 372912 2011 AN ₇₆ | 16.9 | X | 237.54364 | 25.15621 | 355.02386 | 7.62317 | 0.1095596 | 0.25717017 | 2.4490012 | 20 | 5 26.5 | 20.5 |
| 372913 2011 AN ₇₇ | 17.2 | X | 150.51014 | 34.56944 | 100.21632 | 2.11647 | 0.1366400 | 0.25732049 | 2.4480473 | 20 | 7 26.2 | 20.9 |
| 372914 2011 BD | 17.1 | X | 19.21696 | 13.42579 | 114.47335 | 5.80340 | 0.0431304 | 0.21936063 | 2.7228910 | 20 | 1 17.7 | 20.5 |
| 372915 2011 BW ₄ | 16.3 | X | 313.34044 | 25.40414 | 125.22829 | 15.36822 | 0.0996329 | 0.20438438 | 2.8543305 | 20 | — | — |
| 372916 2011 BA ₅ | 18.1 | X | 256.96874 | 175.60167 | 210.38263 | 2.20898 | 0.1312901 | 0.26256158 | 2.4153603 | 20 | 6 26.8 | 21.3 |
| 372917 2011 BV ₅ | 17.3 | X | 152.49451 | 211.66649 | 298.84195 | 0.17703 | 0.1475043 | 0.26196394 | 2.4190325 | 20 | 8 18.2 | 21.1 |
| 372918 2011 BW ₅ | 18.0 | X | 143.18341 | 171.15070 | 288.24291 | 0.74040 | 0.1389354 | 0.24801725 | 2.5088890 | 20 | 6 1.5 | 21.6 |
| 372919 2011 BW ₈ | 17.8 | X | 282.87710 | 292.55819 | 74.67360 | 2.83834 | 0.2088431 | 0.26726011 | 2.3869681 | 20 | 6 23.8 | 20.5 |
| 372920 2011 BO ₉ | 17.5 | X | 272.41085 | 268.03286 | 98.04242 | 2.41743 | 0.1993244 | 0.26322475 | 2.4113018 | 20 | 6 8.9 | 20.7 |
| 372921 2011 BT ₉ | 17.0 | X | 343.19308 | 180.22370 | 313.83949 | 3.38897 | 0.0165839 | 0.20930848 | 2.8093865 | 20 | — | — |
| 372922 2011 BM ₁₇ | 16.7 | X | 126.15782 | 254.51084 | 122.02037 | 6.96579 | 0.0578960 | 0.21735386 | 2.7396252 | 20 | 1 21.7 | 20.6 |
| 372923 2011 BV ₁₉ | 16.5 | X | 85.59341 | 321.73323 | 155.37111 | 11.18720 | 0.1463182 | 0.22913696 | 2.6448799 | 20 | 4 23.8 | 20.1 |
| 372924 2011 BC ₂₁ | 16.7 | X | 265.13846 | 109.70733 | 128.37309 | 9.25896 | 0.0757844 | 0.21536281 | 2.7564846 | 20 | 1 6.2 | 20.7 |
| 372925 2011 BW ₂₁ | 17.2 | X | 85.64207 | 300.18831 | 169.10829 | 3.18531 | 0.0173786 | 0.23261661 | 2.6184377 | 20 | 3 20.9 | 20.7 |
| 372926 2011 BR ₂₂ | 16.8 | X | 143.26192 | 216.89478 | 133.54399 | 5.26249 | 0.0802695 | 0.21283754 | 2.7782451 | 20 | 1 12.9 | 20.7 |
| 372927 2011 BO ₂₅ | 16.4 | X | 22.23946 | 172.81024 | 336.47109 | 7.41819 | 0.1624741 | 0.22198832 | 2.7013611 | 20 | 2 18.5 | 19.1 |
| 372928 2011 BW ₂₇ | 16.1 | X | 226.23317 | 218.25300 | 331.46378 | 4.83546 | 0.1334709 | 0.18025251 | 3.0994440 | 20 | 12 7.3 | 20.6 |
| 372929 2011 BG ₂₈ | 15.3 | X | 198.67393 | 225.26742 | 342.60493 | 21.54436 | 0.1303560 | 0.17569147 | 3.1572012 | 20 | 11 24.7 | 20.7 |
| 372930 2011 BZ ₂₈ | 17.3 | X | 23.19687 | 124.01471 | 55.77729 | 3.55604 | 0.0740955 | 0.23208125 | 2.6224629 | 20 | 4 1.3 | 20.2 |
| 372931 2011 BE ₃₂ | 17.7 | X | 88.40054 | 162.42276 | 308.72355 | 0.73233 | 0.0418162 | 0.23142242 | 2.6274377 | 20 | 3 30.1 | 21.2 |
| 372932 2011 BL ₃₅ | 17.7 | X | 128.72105 | 323.42272 | 135.83050 | 5.37024 | 0.0779353 | 0.24034594 | 2.5619945 | 20 | 5 12.5 | 21.3 |
| 372933 2011 BC ₃₈ | 16.0 | X | 60.91396 | 300.26475 | 157.78633 | 25.37690 | 0.2105904 | 0.21741978 | 2.7390714 | 20 | 2 27.2 | 18.9 |
| 372934 2011 BS ₄₆ | 16.6 | X | 132.17138 | 165.45508 | 194.82039 | 3.34494 | 0.1097209 | 0.221194331 | 2.7860543 | 20 | 1 15.7 | 20.6 |
| 372935 2011 BT ₄₇ | 16.2 | X | 156.57419 | 73.47085 | 150.49658 | 19.60954 | 0.1394838 | 0.17231544 | 3.1983053 | 20 | 11 14.9 | 21.7 |
| 372936 2011 BN ₅₁ | 16.2 | X | 189.37307 | 212.06807 | 98.55356 | 5.24672 | 0.0884068 | 0.21357273 | 2.7718657 | 20 | 1 15.0 | 20.3 |
| 372937 2011 BO ₅₃ | 17.6 | X | 244.73033 | 307.21504 | 124.94195 | 3.51399 | 0.1205579 | 0.26843612 | 2.3799916 | 20 | 8 17.6 | 20.7 |
| 372938 2011 BC ₅₄ | 16.7 | X | 203.63683 | 104.56963 | 97.79190 | 2.39720 | 0.1017645 | 0.18215908 | 3.0820203 | 20 | 12 2.9 | 21.3 |
| 372939 2011 BF ₆₁ | 16.3 | X | 253.65467 | 230.31810 | 92.53073 | 16.05854 | 0.0942262 | 0.24222630 | 2.5487184 | 20 | 4 12.4 | 20.3 |
| 372940 2011 BX ₆₆ | 16.3 | X | 192.42424 | 273.99882 | 317.46416 | 9.19382 | 0.0216679 | 0.18631953 | 3.0359676 | 20 | — | — |
| 372941 2011 BQ ₇₀ | 17.2 | X | 78.07700 | 287.51213 | 179.96341 | 8.62019 | 0.1711711 | 0.22707185 | 2.6608916 | 20 | 4 1.2 | 20.3 |
| 372942 2011 BN ₇₁ | 16.7 | X | 156.55312 | 169.63690 | 201.93591 | 2.43990 | 0.1114123 | 0.22144332 | 2.7057915 | 20 | 2 23.5 | 20.7 |
| 372943 2011 BQ ₇₁ | 16.9 | X | 203.21587 | 37.49383 | 183.22573 | 3.07055 | 0.0573526 | 0.18553879 | 3.0444785 | 20 | 12 29.0 | 21.3 |
| 372944 2011 BF ₇₃ | 16.8 | X | 271.83828 | 305.46602 | 197.97395 | 7.24231 | 0.1083418 | 0.18416762 | 3.0595710 | 20 | 12 12.8 | 20.9 |
| 372945 2011 BN ₇₃ | 17.6 | X | 268.76285 | 257.49679 | 160.16710 | 5.70120 | 0.2227818 | 0.27164867 | 2.3611903 | 20 | 8 12.9 | 20.3 |
| 372946 2011 BO ₇₃ | 17.2 | X | 209.64511 | 78.41469 | 309.54374 | 4.26073 | 0.1018491 | 0.24075337 | 2.5591032 | 20 | 5 6.6 | 21.1 |
| 372947 2011 BL ₇₄ | 16.7 | X | 291.87093 | 101.01375 | 213.30528 | 5.14264 | 0.1329902 | 0.23736870 | 2.5833728 | 20 | 5 5.6 | 19.9 |
| 372948 2011 BE ₇₆ | 17.2 | X | 168.78665 | 186.38850 | 181.61724 | 3.14162 | 0.1059027 | 0.22264384 | 2.6960561 | 20 | 3 2.5 | 21.1 |
| 372949 2011 BR ₇₆ | 17.3 | X | 169.75236 | 243.52615 | 148.87462 | 6.60260 | 0.0341439 | 0.22966518 | 2.6408229 | 20 | 4 1.1 | 21.0 |
| 372950 2011 BO ₇₈ | 17.2 | X | 132.94295 | 302.66436 | 153.35584 | 4.34786 | 0.1423050 | 0.24332546 | 2.5410372 | 20 | 5 18.9 | 21.0 |
| 372951 2011 BY ₇₈ | 16.8 | X | 22.64437 | 282.32300 | 219.33549 | 4.12428 | 0.1049632 | 0.22035214 | 2.7147168 | 20 | 2 6.9 | 20.0 |
| 372952 2011 BL ₈₅ | 16.7 | X | 23.36166 | 78.05144 | 66.53499 | 5.64776 | 0.1010715 | 0.22146210 | 2.7056385 | 20 | 2 16.2 | 19.8 |
| 372953 2011 BJ ₈₆ | 17.4 | X | 13.17213 | 60.89257 | 122.80799 | 5.02379 | 0.0586285 | 0.23008768 | 2.6375891 | 20 | 3 22.8 | 20.5 |
| 372954 2011 BJ | | | | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 372961 2011 BH ₁₀₄ | 16.4 | X | 162.54119 | 292.90313 | 310.36840 | 4.31267 | 0.1123146 | 0.18110173 | 3.0940049 | 20 | 12 8.8 | 21.2 |
| 372962 2011 BL ₁₀₅ | 16.7 | X | 192.61212 | 161.63072 | 150.26816 | 6.09192 | 0.0792690 | 0.21435942 | 2.7650798 | 20 | 1 18.6 | 20.9 |
| 372963 2011 BY ₁₁₁ | 18.0 | X | 135.61553 | 249.29144 | 167.74920 | 0.63214 | 0.1139117 | 0.22777868 | 2.6553840 | 20 | 3 29.3 | 21.9 |
| 372964 2011 BT ₁₁₂ | 17.0 | X | 182.42293 | 97.26793 | 281.72181 | 6.35584 | 0.1703250 | 0.23056758 | 2.6339279 | 20 | 3 27.8 | 21.4 |
| 372965 2011 BS ₁₁₆ | 16.9 | X | 41.11482 | 81.35427 | 78.00873 | 5.12624 | 0.1617789 | 0.23021305 | 2.6366314 | 20 | 4 11.8 | 19.6 |
| 372966 2011 BK ₁₁₉ | 16.9 | X | 112.60133 | 106.45803 | 27.41665 | 3.41908 | 0.0626385 | 0.24349368 | 2.5398667 | 20 | 6 3.8 | 20.3 |
| 372967 2011 BV ₁₂₄ | 17.3 | X | 148.30913 | 275.72546 | 182.53743 | 3.82395 | 0.1134162 | 0.24474334 | 2.5312136 | 20 | 6 4.4 | 21.0 |
| 372968 2011 BP ₁₅₂ | 17.1 | X | 65.49242 | 149.29754 | 331.13001 | 5.40064 | 0.0850068 | 0.22345040 | 2.6895645 | 20 | 3 16.1 | 20.4 |
| 372969 2011 CX | 15.9 | X | 218.65237 | 172.69710 | 4.48092 | 10.13203 | 0.0797555 | 0.17806342 | 3.1291010 | 20 | 11 17.8 | 20.6 |
| 372970 2011 CD ₂ | 16.6 | X | 111.36020 | 248.63750 | 143.89285 | 6.77610 | 0.0174999 | 0.21244984 | 2.7816241 | 20 | 1 17.9 | 20.4 |
| 372971 2011 CW ₁₀ | 17.6 | X | 199.05590 | 228.38307 | 150.74052 | 5.46690 | 0.2024526 | 0.24237504 | 2.5476756 | 20 | 4 16.1 | 21.9 |
| 372972 2011 CT ₁₄ | 16.4 | X | 303.82772 | 46.40922 | 113.43440 | 5.36802 | 0.1349045 | 0.19830553 | 2.9123674 | 20 | — | — |
| 372973 2011 CV ₂₇ | 17.7 | X | 219.59037 | 54.72374 | 26.51362 | 2.32923 | 0.1522591 | 0.26339200 | 2.4102809 | 20 | 7 26.4 | 21.2 |
| 372974 2011 CE ₃₂ | 17.1 | X | 34.70858 | 206.92841 | 265.16482 | 2.25291 | 0.0543003 | 0.21362260 | 2.7714343 | 20 | 1 19.8 | 20.7 |
| 372975 2011 CT ₃₃ | 16.0 | X | 221.12070 | 167.76270 | 131.88765 | 15.34258 | 0.0283882 | 0.22079042 | 2.7111230 | 20 | 2 3.8 | 19.7 |
| 372976 2011 CF ₃₄ | 17.3 | X | 193.24663 | 287.53268 | 146.13550 | 3.39948 | 0.1584462 | 0.25580312 | 2.4577186 | 20 | 6 18.0 | 21.2 |
| 372977 2011 CT ₃₄ | 16.8 | X | 54.29356 | 144.81442 | 320.67334 | 4.34822 | 0.1243981 | 0.21825007 | 2.7321201 | 20 | 2 14.3 | 19.8 |
| 372978 2011 CZ ₃₄ | 16.7 | X | 87.35213 | 119.85470 | 312.30096 | 7.83320 | 0.1036336 | 0.21920976 | 2.7241402 | 20 | 2 16.5 | 20.2 |
| 372979 2011 CB ₄₉ | 16.3 | X | 259.95208 | 303.17335 | 299.60595 | 9.57678 | 0.0997892 | 0.21126372 | 2.7920258 | 20 | 1 5.5 | 20.4 |
| 372980 2011 CY ₄₉ | 16.1 | X | 263.22443 | 251.81763 | 284.77999 | 7.80764 | 0.0690428 | 0.19102299 | 2.9859254 | 20 | — | — |
| 372981 2011 CY ₅₃ | 17.1 | X | 94.27381 | 64.50223 | 317.88643 | 5.58486 | 0.0690110 | 0.20636652 | 2.8360239 | 20 | — | — |
| 372982 2011 CB ₅₄ | 17.3 | X | 88.23075 | 173.48881 | 241.51147 | 0.48078 | 0.0372348 | 0.21338441 | 2.7734963 | 20 | 1 19.6 | 21.0 |
| 372983 2011 CP ₅₉ | 16.8 | X | 164.88090 | 42.85035 | 173.12171 | 1.09436 | 0.0923836 | 0.17320438 | 3.1873528 | 20 | 11 9.3 | 21.6 |
| 372984 2011 CS ₆₇ | 16.5 | X | 193.64727 | 352.18385 | 345.07227 | 6.71264 | 0.0974022 | 0.21977933 | 2.7194317 | 20 | 2 20.5 | 20.7 |
| 372985 2011 CT ₆₈ | 16.7 | X | 295.15177 | 80.48408 | 146.50647 | 6.46166 | 0.0543600 | 0.21521949 | 2.7577083 | 20 | 1 29.9 | 20.6 |
| 372986 2011 CS ₇₀ | 17.0 | X | 146.37577 | 128.07392 | 247.53387 | 3.05531 | 0.1284643 | 0.21888791 | 2.7268099 | 20 | 2 19.1 | 21.2 |
| 372987 2011 CF ₇₁ | 16.7 | X | 8.53497 | 22.30345 | 320.27686 | 5.78315 | 0.0964177 | 0.21490593 | 2.7603900 | 20 | 2 1.5 | 19.7 |
| 372988 2011 CK ₇₁ | 17.0 | X | 180.40728 | 298.93485 | 194.61690 | 1.48956 | 0.1596810 | 0.26281496 | 2.4138077 | 20 | 8 22.6 | 20.7 |
| 372989 2011 CE ₇₃ | 16.3 | X | 135.74555 | 126.28314 | 334.21145 | 21.66141 | 0.0697310 | 0.23935789 | 2.5690401 | 20 | 5 10.8 | 20.5 |
| 372990 2011 CJ ₇₄ | 17.0 | X | 63.08448 | 221.31657 | 291.51647 | 5.67921 | 0.1904771 | 0.23189485 | 2.6238680 | 20 | 5 11.5 | 20.1 |
| 372991 2011 CN ₇₅ | 16.5 | X | 87.68748 | 179.06868 | 296.72941 | 12.44960 | 0.1207914 | 0.23117137 | 2.6293396 | 20 | 4 10.0 | 20.3 |
| 372992 2011 CQ ₇₆ | 17.0 | X | 186.94229 | 348.37698 | 332.10106 | 4.08847 | 0.0241033 | 0.21338993 | 2.7734484 | 20 | 1 22.1 | 20.8 |
| 372993 2011 CP ₈₀ | 17.0 | X | 292.39902 | 198.18257 | 216.49164 | 3.60391 | 0.1206787 | 0.27428538 | 2.3460339 | 20 | 10 6.4 | 19.4 |
| 372994 2011 CD ₈₆ | 15.8 | X | 256.59510 | 206.94726 | 324.15750 | 7.67364 | 0.0460520 | 0.18653571 | 3.0336215 | 20 | — | — |
| 372995 2011 CQ ₈₆ | 17.2 | X | 116.86136 | 184.30473 | 271.48291 | 3.90577 | 0.1065170 | 0.23445072 | 2.6047637 | 20 | 4 23.9 | 20.8 |
| 372996 2011 CD ₈₇ | 16.7 | X | 25.02915 | 279.59868 | 240.88092 | 3.03586 | 0.0226605 | 0.22273614 | 2.6953113 | 20 | 3 5.8 | 20.2 |
| 372997 2011 CC ₈₈ | 16.7 | X | 224.00711 | 309.28328 | 330.43648 | 4.36284 | 0.0110058 | 0.20945769 | 2.8080522 | 20 | 1 16.5 | 20.6 |
| 372998 2011 CW ₈₉ | 16.9 | X | 170.97111 | 153.52048 | 173.13215 | 6.69715 | 0.0414572 | 0.20926705 | 2.8097573 | 20 | 1 11.4 | 21.1 |
| 372999 2011 CR ₉₀ | 16.5 | X | 125.75250 | 139.79391 | 163.37552 | 11.52465 | 0.0475321 | 0.18780265 | 3.0199626 | 20 | — | — |
| 373000 2011 CF ₉₂ | 16.9 | X | 153.02634 | 346.94511 | 326.33042 | 9.48789 | 0.0550079 | 0.20030259 | 2.8929771 | 20 | — | — |
| 373001 2011 CW ₉₆ | 16.5 | X | 95.60565 | 38.73874 | 264.79121 | 2.78925 | 0.1181792 | 0.17724800 | 3.1386905 | 20 | 12 15.4 | 21.4 |
| 373002 2011 CD ₉₇ | 16.9 | X | 143.55511 | 172.56590 | 229.02879 | 5.34674 | 0.0354968 | 0.22428363 | 2.6828990 | 20 | 3 8.2 | 20.7 |
| 373003 2011 CF ₁₀₆ | 17.0 | X | 95.40984 | 89.04243 | 324.99333 | 4.48599 | 0.0540606 | 0.21323848 | 2.7747615 | 20 | 1 30.6 | 20.7 |
| 373004 2011 CT ₁₀₇ | 17.4 | X | 87.07583 | 243.85302 | 166.42553 | 4.89671 | 0.0308430 | 0.20810269 | 2.8202282 | 20 | 1 11.8 | 21.3 |
| 373005 2011 DA | 15.9 | X | 218.28019 | 38.72005 | 146.84821 | 17.74921 | 0.1538547 | 0.17964781 | 3.1106759 | 20 | 11 26.4 | 21.0 |
| 373006 2011 DG ₂ | 16.1 | X | 208.86772 | 212.29665 | 336.51824 | 8.43499 | 0.0417224 | 0.17557856 | 3.1585557 | 20 | 11 25.4 | 20.9 |
| 373007 2011 DL ₂ | 15.9 | X | 264.58717 | 191.00659 | 333.92388 | 6.69867 | 0.1384620 | 0.18533040 | 3.0467602 | 20 | 12 25.7 | 20.0 |
| 373008 2011 DT ₃ | 15.3 | X | 166.00238 | 152.13128 | 314.56705 | 11.58186 | 0.0942973 | 0.19095721 | 2.9866111 | 20 | — | — |
| 373009 2011 DV ₅ | 16.6 | X | 238.70286 | 358.26443 | 156.11384 | 0.91064 | 0.1327282 | 0.17521697 | 3.1628986 | 20 | 11 9.1 | 21.0 |
| 373010 2011 DP ₈ | 15.8 | X | 241.97228 | 20.75145 | 152.99565 | 13.61647 | 0.1117004 | 0.17642409 | 3.1484547 | 20 | 12 10.5 | 20.5 |
| 373011 2011 DU ₈ | 16.0 | X | 63.89110 | 321.05196 | 159.20280 | 13.62219 | 0.1319276 | 0.21812143 | 2.7331942 | 20 | 3 24.2 | 19.3 |
| 373012 2011 DF ₉ | 17.9 | X | 90.95319 | 290.19981 | 147.96151 | 5.70072 | 0.1399371 | 0.22112176 | 2.7084141 | 20 | 3 7.4 | 21.3 |
| 373013 2011 DW ₉ | 16.0 | X | 330.08172 | 322.83378 | 168.05334 | 10.43744 | 0.0499729 | 0.19211007 | 2.9746507 | 20 | — | — |
| 373014 2011 DU ₁₀ | 16.1 | X | 221.92503 | 23.17863 | 138.20748 | 16.18104 | 0.1888194 | 0.17315272 | 3.1879867 | 20 | 10 29.6 | 21.3 |
| 373015 2011 DC ₁₃ | 16.1 | X | 251.02401 | 190.06992 | 315.69063 | 8.71673 | 0.2140013 | 0.17920387 | 3.1158112 | 20 | 10 29.6 | 20.7 |
| 373016 2011 DO ₁₄ | 17.6 | X | 237.44686 | 221.80608 | 179.44101 | 1.97874 | 0.1689049 | 0.25712935 | 2.4492603 | 20 | 6 19.4 | 21.3 |
| 373017 2011 DR ₂₀ | 16.2 | X | 191.56305 | 58.45421 | 144.36460 | 13.59668 | 0.0945298 | 0.17680926 | 3.1438806 | 20 | 11 23.9 | 21.2 |
| 373018 2011 DE ₃₀ | 16.6 | X | 166.23936 | 354.34258 | 351.62510 | 1.62214 | 0.1049661 | 0.21265019 | 2.7798767 | 20 | 2 4.1 | 20.7 |
| 373019 2011 DK ₃₅ | 17.1 | X | 142.63276 | 278.31791 | 163.97149 | 7.17452 | 0.1563281 | 0.23689276 | 2.5868318 | 20 | 5 13.2 | 21.2 |
| 373020 2011 DA ₃₆ | 16.5 | X | 105.76769 | 253.59193 | 164.46700 | 6.32840 | 0.0083068 | 0.21414330 | 2.7669398 | 20 | 2 9.8 | 20.4 |
| 373021 2011 DO ₃₇ | 17.3 | X | 76.76213 | 160.50968 | 275.68189 | 1.46103 | 0.0316940 | 0.21151100 | 2.7898493 | 20 | 1 30.7 | 21.1 |
| 373022 2011 DO ₃₉ | 16.7 | X | 267.14089 | 292.12970 | 313.50974 | 4.04417 | 0.0620285 | 0.20838942 | 2.8176407 | 20 | 1 20.6 | 20.8 |
| 373023 2011 DF ₄₀ | 16.3 | X | 264.71736 | 138.36270 | 349.87649 | 6.88623 | 0.0969754 | 0.17460665 | 3.1702647 | 20 | 11 11.3 | 20.7 |
| 373024 2011 DA ₄₁ | 16.0 | X | 83.08836 | 153.17092 | 163.45320 | 8.98430 | 0.0156241 | 0.17401022 | 3.1775047 | 20 | 12 7.4 | 20.6 |
| 373025 2011 DG ₄₁ | 16.4 | X | 11.84596 | 12.56255 | 355.46376 | 7.53353 | 0.0183869 | 0.16891922 | 3.2410321 | 20 | 11 8.8 | 21.0 |
| 373026 2011 DD ₄₅ | 16.7 | X | 301.90487 | 24.68431 | 152.18155 | 6.64032 | 0.0129149 | 0.19988759 | 2.8969800 | 20 | — | — |
| 373027 2011 DM ₅₀ | 15.4 | X | 282.79944 | 255.55730 | 276.39501 | 9.36306 | 0.0602761 | 0.19177301 | 2.9781351 | 20 | — | — |
| 373028 2011 EF ₂ | 16.4 | X | 196.43584 | 102.66131 | 145.76910 | 10.00942 | 0.0841486 | 0.19208283 | 2.9749318 | 20 | — | — |
| 373029 2011 EZ ₇ | 16.6 | X | 274.84322 | 318.26173 | 168.11159 | 9.59498 | 0.0407058 | 0.17542142 | 3.1604406 | 20 | 12 3.3 | 21.1 |
| 373030 2011 EM ₈ | 17.5 | X | 145.63417 | 20.59037 | 48.24604 | 2.51296 | 0.1456798 | 0.23803373 | 2.5785589 | 20 | 4 26.4 | 21.4 |
| 373031 2011 EF ₁₂ | 16.7 | X | 100.71975 | 317.10461 | 120.95514 | 14.67982 | 0.1554036 | 0.22727283 | 2.6593227 | 20 | 3 27.0 | 20.6 |
| 373032 2011 EM ₂₃ | 16.7 | X | 90.93651 | 326.64549 | 146.59253 | 15.76093 | 0.2409164 | 0.22893530 | 2.6464328 | 20 | 5 11.2 | 20.8 |
| 373033 2011 EO ₂₅ | 15.5 | X | 229.85956 | 42.36659 | 146.67929 | 9.88494 | 0.0508631 | 0.17434314 | 3.1734584 | 20 | 12 20.8 | 20.1 |
| 373034 2011 EH ₂₆ | 1 | | | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 373041 2011 EB ₅₃ | 15.7 | X | 10.52682 | 235.58512 | 168.27056 | 17.43470 | 0.0183239 | 0.17231857 | 3.1982666 | 20 | 12 23.5 | 20.5 |
| 373042 2011 ES ₅₄ | 15.5 | X | 235.30027 | 84.75685 | 134.46054 | 12.44855 | 0.0566108 | 0.19008022 | 2.9957905 | 20 | — | — |
| 373043 2011 EL ₅₅ | 16.6 | X | 130.95846 | 313.70842 | 131.14383 | 12.76626 | 0.1739995 | 0.23298345 | 2.6156884 | 20 | 5 9.1 | 20.9 |
| 373044 2011 EM ₅₉ | 16.0 | X | 111.95743 | 245.95444 | 92.38572 | 9.03293 | 0.1451879 | 0.18949690 | 3.0019352 | 20 | — | — |
| 373045 2011 EM ₆₀ | 15.8 | X | 200.03305 | 105.29321 | 121.13227 | 11.18756 | 0.0389005 | 0.18174726 | 3.0866743 | 20 | — | — |
| 373046 2011 EV ₆₂ | 15.9 | X | 141.21736 | 157.03141 | 111.23156 | 10.50080 | 0.0566073 | 0.17573109 | 3.1567267 | 20 | 12 17.4 | 20.6 |
| 373047 2011 EU ₆₅ | 15.4 | X | 286.26874 | 60.70839 | 117.31856 | 13.11838 | 0.0743754 | 0.19708430 | 2.9243860 | 20 | — | — |
| 373048 2011 EF ₆₆ | 16.9 | X | 188.52383 | 165.03157 | 175.25535 | 7.84808 | 0.0560861 | 0.21189089 | 2.7865138 | 20 | 2 16.5 | 21.0 |
| 373049 2011 EZ ₆₆ | 16.7 | X | 182.42233 | 97.96730 | 274.59518 | 1.42122 | 0.0772749 | 0.22130192 | 2.7069440 | 20 | 3 20.9 | 20.8 |
| 373050 2011 EB ₇₂ | 16.2 | X | 127.60589 | 272.14688 | 132.91892 | 4.86041 | 0.1021381 | 0.20876642 | 2.8142475 | 20 | 3 6.8 | 20.2 |
| 373051 2011 EK ₇₄ | 15.7 | X | 249.08759 | 257.53112 | 251.62199 | 4.50908 | 0.1366668 | 0.17117233 | 3.2125286 | 20 | 11 12.8 | 20.3 |
| 373052 2011 EG ₈₁ | 15.9 | X | 337.63432 | 116.01937 | 352.13975 | 12.39215 | 0.0617594 | 0.19152609 | 2.9806942 | 20 | — | — |
| 373053 2011 EA ₈₂ | 16.5 | X | 95.11782 | 72.68187 | 356.24789 | 6.22415 | 0.0599736 | 0.21458545 | 2.7631377 | 20 | 2 19.7 | 20.2 |
| 373054 2011 EA ₈₄ | 16.6 | X | 264.00962 | 333.87877 | 197.43350 | 5.17152 | 0.0856864 | 0.18514310 | 3.0488147 | 20 | — | — |
| 373055 2011 EQ ₈₅ | 15.6 | X | 83.87090 | 306.24044 | 104.39389 | 10.13592 | 0.1001401 | 0.20426165 | 2.8554737 | 20 | 1 18.7 | 19.3 |
| 373056 2011 FE | 16.6 | X | 283.85491 | 349.16517 | 178.53424 | 6.12509 | 0.1250121 | 0.18900216 | 3.0071716 | 20 | — | — |
| 373057 2011 FA ₇ | 16.0 | X | 232.87842 | 357.44448 | 169.48774 | 3.71315 | 0.1412599 | 0.17314694 | 3.1880577 | 20 | 11 16.7 | 20.8 |
| 373058 2011 FK ₁₀ | 16.2 | X | 305.80328 | 4.27046 | 167.13884 | 10.00267 | 0.0389352 | 0.19640619 | 2.9311133 | 20 | — | — |
| 373059 2011 FY ₁₀ | 16.7 | X | 98.90430 | 335.00745 | 144.61160 | 4.93066 | 0.1390144 | 0.22847413 | 2.6499928 | 20 | 5 11.4 | 20.4 |
| 373060 2011 FT ₁₅ | 16.6 | X | 147.27554 | 89.78447 | 5.47354 | 15.12749 | 0.0996299 | 0.24544467 | 2.5263895 | 20 | 5 24.2 | 20.6 |
| 373061 2011 FV ₂₇ | 15.8 | X | 247.42652 | 199.05416 | 345.66997 | 11.07715 | 0.1940579 | 0.18194499 | 3.0844376 | 20 | 12 18.0 | 20.3 |
| 373062 2011 FM ₃₄ | 17.1 | X | 69.04988 | 311.69978 | 170.10926 | 14.02705 | 0.1789236 | 0.22127304 | 2.7071795 | 20 | 4 10.8 | 20.4 |
| 373063 2011 FC ₃₇ | 16.8 | X | 35.13947 | 286.04861 | 171.58307 | 9.66179 | 0.0941471 | 0.20258372 | 2.8712193 | 20 | 1 4.6 | 20.4 |
| 373064 2011 FJ ₃₇ | 16.1 | X | 219.54428 | 37.74014 | 168.65653 | 9.90167 | 0.1021575 | 0.17711139 | 3.1403042 | 20 | 12 18.9 | 20.8 |
| 373065 2011 FC ₄₁ | 16.2 | X | 286.92476 | 16.94993 | 104.69824 | 6.29898 | 0.0991786 | 0.17838933 | 3.1252886 | 20 | 12 7.0 | 20.1 |
| 373066 2011 FT ₄₃ | 15.9 | X | 153.21786 | 308.15178 | 4.24995 | 9.64180 | 0.0877556 | 0.18833704 | 3.0142474 | 20 | — | — |
| 373067 2011 FD ₅₁ | 16.1 | X | 239.85399 | 22.63413 | 163.81424 | 11.76557 | 0.0447400 | 0.17588604 | 3.1548725 | 20 | 12 29.9 | 20.7 |
| 373068 2011 FV ₅₅ | 17.1 | X | 86.73079 | 84.06511 | 355.09953 | 5.76944 | 0.0911254 | 0.21195516 | 2.7859505 | 20 | 2 26.0 | 20.7 |
| 373069 2011 FD ₆₃ | 15.6 | X | 217.80579 | 198.61416 | 10.99196 | 10.26183 | 0.0213195 | 0.17761252 | 3.1343945 | 20 | — | — |
| 373070 2011 FV ₆₅ | 16.5 | X | 209.62748 | 307.39040 | 261.63897 | 3.99830 | 0.1186435 | 0.17562896 | 3.1579504 | 20 | 12 13.6 | 21.3 |
| 373071 2011 FU ₆₆ | 15.2 | X | 227.83018 | 29.82549 | 144.24371 | 18.63959 | 0.0850427 | 0.17050675 | 3.2208834 | 20 | 11 29.4 | 20.2 |
| 373072 2011 FJ ₆₉ | 15.6 | X | 354.85761 | 309.48598 | 113.55626 | 12.41710 | 0.0356571 | 0.17735000 | 3.1374869 | 20 | 12 29.6 | 19.8 |
| 373073 2011 FE ₇₂ | 16.0 | X | 268.65412 | 325.15553 | 151.19744 | 12.57653 | 0.0517258 | 0.17056249 | 3.2201816 | 20 | 11 13.2 | 20.7 |
| 373074 2011 FM ₇₄ | 17.2 | X | 108.38132 | 72.52971 | 357.95179 | 4.96358 | 0.1077920 | 0.21908972 | 2.7251351 | 20 | 3 14.7 | 20.8 |
| 373075 2011 FU ₈₁ | 16.5 | X | 74.77406 | 356.18876 | 82.80238 | 3.24163 | 0.0307940 | 0.20699267 | 2.8303017 | 20 | 2 2.3 | 20.2 |
| 373076 2011 FE ₈₂ | 15.8 | X | 34.85089 | 293.97715 | 13.26684 | 10.33170 | 0.0578318 | 0.15312160 | 3.4602841 | 20 | 9 29.9 | 20.4 |
| 373077 2011 FH ₈₈ | 16.5 | X | 35.69157 | 243.72255 | 196.44172 | 1.50808 | 0.0991098 | 0.19691038 | 2.9261078 | 20 | — | — |
| 373078 2011 FE ₉₀ | 16.3 | X | 269.28114 | 45.86186 | 135.10687 | 9.07334 | 0.0800630 | 0.18689510 | 3.0297312 | 20 | — | — |
| 373079 2011 FB ₉₁ | 16.4 | X | 98.37338 | 225.64222 | 164.44234 | 2.50879 | 0.0692111 | 0.19975297 | 2.8982814 | 20 | 1 8.3 | 20.3 |
| 373080 2011 FJ ₉₅ | 16.4 | X | 157.63039 | 54.55636 | 241.56440 | 1.93763 | 0.0979185 | 0.18380167 | 3.0636307 | 20 | — | — |
| 373081 2011 FL ₉₅ | 16.5 | X | 160.65517 | 169.86141 | 201.18553 | 5.69585 | 0.0790530 | 0.21081316 | 2.7960026 | 20 | 2 24.8 | 20.7 |
| 373082 2011 FA ₉₇ | 15.7 | X | 109.68525 | 345.28851 | 358.86621 | 10.49798 | 0.0539811 | 0.18699347 | 3.0286686 | 20 | — | — |
| 373083 2011 FZ ₉₇ | 15.6 | X | 160.87298 | 265.82591 | 356.14257 | 9.72013 | 0.0694837 | 0.17615139 | 3.1517034 | 20 | 12 30.5 | 20.5 |
| 373084 2011 FL ₁₀₂ | 16.3 | X | 216.37970 | 250.80483 | 295.72852 | 9.34265 | 0.0503222 | 0.17823219 | 3.1271254 | 20 | 12 2.0 | 20.9 |
| 373085 2011 FD ₁₂₀ | 15.6 | X | 174.02638 | 242.74735 | 357.44812 | 15.73877 | 0.0537236 | 0.17303994 | 3.1893718 | 20 | 12 17.3 | 20.6 |
| 373086 2011 FR ₁₂₆ | 15.6 | X | 81.65327 | 289.74190 | 100.63391 | 13.04561 | 0.0673714 | 0.19677401 | 2.9274595 | 20 | — | — |
| 373087 2011 FM ₁₃₀ | 15.8 | X | 256.38720 | 9.98582 | 123.41449 | 12.88229 | 0.0503885 | 0.17330731 | 3.1860906 | 20 | 11 19.6 | 20.4 |
| 373088 2011 FO ₁₃₂ | 16.5 | X | 206.03315 | 268.61010 | 346.10328 | 9.98627 | 0.1093463 | 0.18926581 | 3.0043782 | 20 | — | — |
| 373089 2011 FV ₁₃₂ | 16.7 | X | 297.85112 | 170.53503 | 325.05680 | 0.69909 | 0.0745266 | 0.18694584 | 3.0291830 | 20 | — | — |
| 373090 2011 FD ₁₃₄ | 17.2 | X | 85.95419 | 267.16984 | 180.06010 | 3.53131 | 0.1295041 | 0.21898807 | 2.7259784 | 20 | 3 9.8 | 20.7 |
| 373091 2011 FV ₁₃₄ | 16.4 | X | 163.55184 | 20.51203 | 347.70019 | 2.98208 | 0.1085919 | 0.21301910 | 2.7766663 | 20 | 2 28.2 | 20.7 |
| 373092 2011 FR ₁₄₁ | 15.2 | X | 156.00079 | 242.16366 | 7.06322 | 18.33451 | 0.0724458 | 0.16963059 | 3.2319646 | 20 | 12 4.7 | 20.5 |
| 373093 2011 FO ₁₄₆ | 16.2 | X | 47.09741 | 259.20118 | 188.97767 | 8.57091 | 0.0665865 | 0.20202481 | 2.8765124 | 20 | 1 9.1 | 20.0 |
| 373094 2011 FR ₁₄₇ | 15.0 | X | 161.61498 | 321.19562 | 305.10182 | 11.83077 | 0.0464788 | 0.17437560 | 3.1730645 | 20 | — | — |
| 373095 2011 FB ₁₄₈ | 15.4 | X | 248.47621 | 65.24165 | 107.73403 | 13.57812 | 0.0761889 | 0.17790512 | 3.1309569 | 20 | 12 21.4 | 19.8 |
| 373096 2011 FU ₁₄₈ | 15.9 | X | 262.78265 | 22.20579 | 134.88868 | 1.95894 | 0.1242222 | 0.17774980 | 3.1327805 | 20 | 12 12.3 | 20.1 |
| 373097 2011 FR ₁₅₀ | 15.3 | X | 162.14689 | 275.87745 | 327.89175 | 15.64270 | 0.0858698 | 0.17262193 | 3.1945185 | 20 | 12 7.4 | 20.5 |
| 373098 2011 FN ₁₅₆ | 16.4 | X | 296.02963 | 158.70307 | 9.51417 | 10.32824 | 0.0425388 | 0.19076672 | 2.9885989 | 20 | — | — |
| 373099 2011 GX ₉ | 16.1 | X | 97.12519 | 240.37744 | 199.91012 | 15.22668 | 0.1844265 | 0.21297317 | 2.7770655 | 20 | 3 23.0 | 19.9 |
| 373100 2011 GS ₁₇ | 16.9 | X | 0.31511 | 134.79885 | 314.73225 | 3.01644 | 0.1157650 | 0.18745456 | 3.0237001 | 20 | — | — |
| 373101 2011 GW ₂₁ | 16.3 | X | 6.01014 | 111.38814 | 295.90952 | 6.77798 | 0.0297960 | 0.17279121 | 3.1924318 | 20 | 12 23.1 | 20.7 |
| 373102 2011 GK ₃₆ | 15.9 | X | 323.07989 | 140.15849 | 333.10553 | 0.65676 | 0.0709660 | 0.18267353 | 3.0762311 | 20 | — | — |
| 373103 2011 GT ₃₆ | 15.7 | X | 220.56711 | 220.67927 | 2.65484 | 22.58357 | 0.1216192 | 0.17791112 | 3.1308865 | 20 | — | — |
| 373104 2011 GZ ₃₆ | 15.6 | X | 293.82236 | 283.16261 | 225.63395 | 16.15980 | 0.0916838 | 0.18254262 | 3.0777017 | 20 | — | — |
| 373105 2011 GX ₃₈ | 16.7 | X | 130.37995 | 11.11855 | 114.28574 | 6.37553 | 0.1524256 | 0.24103748 | 2.5570918 | 20 | 6 23.4 | 20.5 |
| 373106 2011 GH ₄₂ | 16.5 | X | 259.12222 | 209.40960 | 321.96303 | 6.88257 | 0.1299203 | 0.17868437 | 3.1218474 | 20 | 12 25.5 | 20.8 |
| 373107 2011 GV ₄₄ | 16.2 | X | 8.55818 | 12.94371 | 61.83124 | 3.33528 | 0.0695991 | 0.18599125 | 3.0395389 | 20 | — | — |
| 373108 2011 GE ₄₅ | 16.2 | X | 97.17675 | 222.12148 | 186.91678 | 11.45461 | 0.1019476 | 0.20486008 | 2.8499101 | 20 | 1 31.7 | 20.3 |
| 373109 2011 GK ₅₄ | 17.2 | X | 18.25862 | 196.79885 | 268.53469 | 0.74743 | 0.0718194 | 0.19767569 | 2.9185505 | 20 | — | — |
| 373110 2011 GB ₅₆ | 15.8 | X | 290.02753 | 347.81028 | 151.39246 | 9.75202 | 0.0427178 | 0.18004605 | 3.1060873 | 20 | — | — |
| 373111 2011 GS ₅₉ | 15.7 | X | 261.91131 | 28.79143 | 135.76681 | 12.28281 | 0.0379636 | 0.17967714 | 3.1103373 | 20 | — | — |
| 373112 2011 GR ₆₂ | 15.3 | X | 258.87611 | 66.92295 | 88.70641 | 16.98639 | 0.0338607 | 0.17281953 | 3.1920781 | 20 | 12 17.5 | 19.6 |
| 373113 2011 GG ₇₅ | 16.0 | X | 108.12978 | 348.60893 | 75.41423 | 6.66916 | 0.1761498 | 0.21192527 | 2.7862124 | 20 | 3 19.8 | 20.0 |
| 373114 2011 GA ₇₆ | 15.6 | X | 339.20217 | 22.59612 | 68.91820 | 11.74732 | 0.0993347 | 0.178223 | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> | | |
|--------|----------|-------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----------|---------|------|
| 373121 | 2011 | HJ ₃₇ | 15.4 | X | 335.23547 | 267.38176 | 184.20427 | 12.75054 | 0.0285401 | 0.17153097 | 3.2080492 | 20 | — | — |
| 373122 | 2011 | HW ₄₃ | 16.0 | X | 15.16240 | 269.46543 | 161.65639 | 8.70438 | 0.0641979 | 0.17873732 | 3.1212308 | 20 | — | — |
| 373123 | 2011 | HC ₆₅ | 15.6 | X | 287.90020 | 348.07091 | 156.01812 | 10.36161 | 0.0620367 | 0.17748160 | 3.1359358 | 20 | — | — |
| 373124 | 2011 | HE ₆₅ | 15.9 | X | 43.54151 | 216.80549 | 180.24504 | 14.25629 | 0.0680005 | 0.17792058 | 3.1307755 | 20 | — | — |
| 373125 | 2011 | HO ₆₈ | 15.9 | X | 9.78131 | 255.23003 | 185.03235 | 11.52574 | 0.0510482 | 0.18048667 | 3.1010300 | 20 | — | — |
| 373126 | 2011 | HU ₇₀ | 16.2 | X | 353.98016 | 323.89258 | 199.84967 | 13.72741 | 0.1699013 | 0.20394278 | 2.8584493 | 20 | 1 15.6 | 19.8 |
| 373127 | 2011 | HA ₇₃ | 16.3 | X | 193.11705 | 30.67535 | 193.57967 | 10.98359 | 0.0649575 | 0.17303197 | 3.1894697 | 20 | 12 18.7 | 21.2 |
| 373128 | 2011 | HE ₇₅ | 15.3 | X | 128.02685 | 88.49717 | 199.39939 | 19.14441 | 0.1108503 | 0.16955472 | 3.2329287 | 20 | 12 24.7 | 20.7 |
| 373129 | 2011 | HK ₇₈ | 15.4 | X | 234.56863 | 132.45061 | 79.94357 | 10.62165 | 0.0515421 | 0.18095279 | 3.0957023 | 20 | — | — |
| 373130 | 2011 | HL ₈₆ | 17.4 | X | 149.23517 | 151.48320 | 312.19817 | 2.39482 | 0.1698969 | 0.23759944 | 2.5817000 | 20 | 6 14.7 | 21.5 |
| 373131 | 2011 | HM ₈₇ | 16.2 | X | 357.90759 | 296.94489 | 146.21327 | 11.13577 | 0.0842324 | 0.17887448 | 3.1196350 | 20 | — | — |
| 373132 | 2011 | HX ₉₈ | 16.2 | X | 339.23575 | 270.32406 | 205.40324 | 11.18303 | 0.0685990 | 0.17810830 | 3.1285753 | 20 | — | — |
| 373133 | 2011 | HP ₁₀₂ | 15.4 | X | 165.42839 | 208.90156 | 101.93742 | 12.81360 | 0.0257027 | 0.18766414 | 3.0214484 | 20 | — | — |
| 373134 | 2011 | KV ₁₈ | 16.0 | X | 308.95423 | 341.57788 | 162.78333 | 18.49220 | 0.1740205 | 0.17803100 | 3.1294808 | 20 | — | — |
| 373135 | 2011 | SD ₁₇₃ | 19.5 | X | 100.53638 | 59.45604 | 203.14905 | 4.38872 | 0.0475751 | 0.46397135 | 1.6525018 | 20 | 12 20.0 | 22.6 |
| 373136 | 2011 | YF ₆ | 16.0 | X | 19.63579 | 285.08621 | 254.81805 | 39.36107 | 0.1864246 | 0.26354303 | 2.4093600 | 20 | 2 23.8 | 19.5 |
| 373137 | 2011 | YA ₁₁ | 17.7 | X | 2.43784 | 237.08806 | 279.77110 | 17.55635 | 0.0733349 | 0.36742708 | 1.9305836 | 20 | — | — |
| 373138 | 2011 | YF ₂₄ | 18.1 | X | 208.58554 | 333.19615 | 291.34436 | 16.01138 | 0.0630869 | 0.35179311 | 1.9873659 | 20 | — | — |
| 373139 | 2011 | YA ₅₆ | 17.4 | X | 52.95482 | 54.43535 | 88.46628 | 4.62973 | 0.1159443 | 0.26099405 | 2.4250218 | 20 | 3 31.7 | 20.0 |
| 373140 | 2012 | AH ₁₇ | 17.3 | X | 274.84794 | 298.83984 | 332.09495 | 19.17948 | 0.0475749 | 0.37142462 | 1.9167064 | 20 | 2 12.6 | 19.1 |
| 373141 | 2012 | BN | 16.5 | X | 299.70601 | 23.61208 | 107.10295 | 10.05322 | 0.0375038 | 0.22178828 | 2.7029851 | 20 | — | — |
| 373142 | 2012 | BU ₉ | 17.6 | X | 83.36359 | 271.74943 | 296.01635 | 4.50930 | 0.1825440 | 0.27891686 | 2.3199905 | 20 | 8 25.5 | 20.9 |
| 373143 | 2012 | BC ₁₅ | 17.5 | X | 38.48076 | 271.49566 | 294.50186 | 3.67310 | 0.1732939 | 0.26559341 | 2.3969438 | 20 | 6 15.1 | 19.7 |
| 373144 | 2012 | BG ₁₅ | 17.6 | X | 65.95352 | 344.55753 | 249.52013 | 2.68529 | 0.1264091 | 0.28351474 | 2.2948393 | 20 | 9 2.1 | 20.4 |
| 373145 | 2012 | BO ₂₄ | 17.7 | X | 211.32747 | 52.45183 | 321.42729 | 18.33740 | 0.1011888 | 0.38477412 | 1.8721134 | 20 | 4 2.5 | 20.4 |
| 373146 | 2012 | BJ ₂₆ | 17.6 | X | 142.55324 | 232.20876 | 147.29990 | 23.33444 | 0.0948834 | 0.36483781 | 1.9397071 | 20 | 1 27.5 | 19.8 |
| 373147 | 2012 | BX ₂₇ | 18.0 | X | 171.81951 | 198.63249 | 343.29647 | 5.32613 | 0.0965794 | 0.30438859 | 2.1886877 | 20 | 10 23.8 | 21.0 |
| 373148 | 2012 | BU ₄₇ | 17.5 | X | 68.81029 | 266.53407 | 298.29374 | 4.08133 | 0.1709353 | 0.27416172 | 2.3467393 | 20 | 8 2.3 | 20.3 |
| 373149 | 2012 | BJ ₅₃ | 18.1 | X | 180.33809 | 108.66671 | 62.08931 | 1.00380 | 0.1092942 | 0.30314539 | 2.1946675 | 20 | 10 19.7 | 20.8 |
| 373150 | 2012 | BG ₅₅ | 17.0 | X | 27.32568 | 109.94855 | 133.46593 | 10.65818 | 0.1042424 | 0.27161159 | 2.3614052 | 20 | 7 12.5 | 19.4 |
| 373151 | 2012 | BF ₁₂₂ | 18.0 | X | 37.15661 | 135.11052 | 117.53205 | 3.23630 | 0.1672410 | 0.27593926 | 2.3366503 | 20 | 8 25.8 | 20.4 |
| 373152 | 2012 | BM ₁₂₂ | 17.9 | X | 80.12732 | 261.78979 | 354.09800 | 3.30274 | 0.1192391 | 0.29271345 | 2.2465061 | 20 | 10 21.0 | 20.8 |
| 373153 | 2012 | BM ₁₃₂ | 15.8 | X | 317.96498 | 242.90335 | 333.26536 | 29.29136 | 0.3107789 | 0.23276830 | 2.6172999 | 20 | 1 15.3 | 19.9 |
| 373154 | 2012 | BY ₁₄₈ | 17.3 | X | 323.31112 | 66.64697 | 146.36378 | 25.60023 | 0.1843595 | 0.24197788 | 2.5504625 | 20 | 1 25.2 | 20.6 |
| 373155 | 2012 | CJ ₇ | 18.2 | X | 110.56410 | 35.77884 | 157.26824 | 2.22356 | 0.1103084 | 0.28836200 | 2.2690498 | 20 | 8 31.2 | 21.1 |
| 373156 | 2012 | CL ₁₈ | 17.3 | X | 38.84419 | 116.92628 | 112.04339 | 3.21081 | 0.1573691 | 0.27492986 | 2.3423661 | 20 | 7 20.3 | 19.3 |
| 373157 | 2012 | CR ₁₉ | 17.3 | X | 64.31446 | 247.47431 | 350.71553 | 6.27083 | 0.2099447 | 0.28405718 | 2.2919169 | 20 | 9 19.2 | 20.2 |
| 373158 | 2012 | CY ₂₉ | 18.0 | X | 133.40540 | 95.95103 | 121.74927 | 4.51772 | 0.0918126 | 0.30663274 | 2.1779958 | 20 | 11 1.8 | 20.9 |
| 373159 | 2012 | CT ₄₇ | 18.4 | X | 168.58226 | 80.86314 | 92.97896 | 3.04455 | 0.0656297 | 0.29879018 | 2.2159426 | 20 | 10 14.0 | 21.2 |
| 373160 | 2012 | CO ₅₁ | 17.8 | X | 63.73942 | 12.79974 | 178.53653 | 2.13074 | 0.1390386 | 0.26850317 | 2.3795953 | 20 | 6 30.6 | 20.4 |
| 373161 | 2012 | CE ₅₃ | 17.6 | X | 83.43025 | 251.08966 | 313.33351 | 2.54658 | 0.1891851 | 0.27901746 | 2.3194328 | 20 | 8 22.9 | 20.7 |
| 373162 | 2012 | CH ₅₇ | 17.5 | X | 114.05243 | 315.47867 | 275.78420 | 6.19245 | 0.1576928 | 0.29946260 | 2.2126242 | 20 | 10 26.9 | 21.0 |
| 373163 | 2012 | DK | 17.3 | X | 27.80833 | 95.12567 | 146.79117 | 7.59445 | 0.0899980 | 0.27289850 | 2.3539756 | 20 | 7 9.1 | 19.9 |
| 373164 | 2012 | DS ₁ | 17.6 | X | 355.61073 | 164.17173 | 92.99907 | 3.11635 | 0.1782861 | 0.26292473 | 2.4131358 | 20 | 6 2.1 | 19.2 |
| 373165 | 2012 | DO ₄ | 17.1 | X | 89.71251 | 105.22002 | 133.09941 | 22.30368 | 0.1815180 | 0.28884681 | 2.2665101 | 20 | 10 23.4 | 21.0 |
| 373166 | 2012 | DX ₆ | 16.5 | X | 240.76741 | 273.42152 | 340.57884 | 11.78508 | 0.2351723 | 0.22295834 | 2.6935202 | 20 | — | — |
| 373167 | 2012 | DS ₁₃ | 17.0 | X | 107.21480 | 193.90354 | 357.33930 | 10.04511 | 0.0520409 | 0.27747001 | 2.3280485 | 20 | 8 20.7 | 20.0 |
| 373168 | 2012 | DH ₁₅ | 16.3 | X | 230.24072 | 270.37231 | 11.67872 | 29.14606 | 0.3442559 | 0.21595500 | 2.7514431 | 20 | 1 23.7 | 22.0 |
| 373169 | 2012 | DU ₁₉ | 17.4 | X | 115.33284 | 244.38010 | 333.24029 | 8.05018 | 0.0691046 | 0.29125599 | 2.2539943 | 20 | 10 3.6 | 20.5 |
| 373170 | 2012 | DW ₁₉ | 15.9 | X | 275.03015 | 268.58444 | 298.78655 | 11.89694 | 0.1431581 | 0.22110687 | 2.7085356 | 20 | — | — |
| 373171 | 2012 | DW ₂₅ | 17.8 | X | 140.55146 | 142.55902 | 35.48775 | 6.12426 | 0.0935256 | 0.28553679 | 2.2839925 | 20 | 9 15.4 | 21.0 |
| 373172 | 2012 | DO ₂₇ | 17.9 | X | 69.72166 | 41.83091 | 179.47256 | 5.12579 | 0.1639132 | 0.27376844 | 2.3489862 | 20 | 8 25.0 | 20.9 |
| 373173 | 2012 | DB ₃₀ | 17.5 | X | 121.82328 | 182.42648 | 18.48301 | 2.76040 | 0.0943757 | 0.28699999 | 2.2762230 | 20 | 9 23.2 | 20.6 |
| 373174 | 2012 | DT ₃₁ | 17.8 | X | 109.03649 | 67.80339 | 148.51764 | 6.28798 | 0.1118117 | 0.28797919 | 2.2710602 | 20 | 10 2.3 | 20.9 |
| 373175 | 2012 | DC ₃₂ | 17.6 | X | 88.85275 | 75.66665 | 114.01184 | 5.50101 | 0.1697618 | 0.27624301 | 2.3349371 | 20 | 8 7.4 | 20.8 |
| 373176 | 2012 | DX ₃₃ | 17.7 | X | 79.73377 | 288.39657 | 338.02308 | 5.06568 | 0.0859027 | 0.29998757 | 2.2100421 | 20 | 10 31.3 | 20.6 |
| 373177 | 2012 | DT ₃₅ | 17.6 | X | 80.09342 | 207.37796 | 22.63027 | 3.63381 | 0.1199491 | 0.28298580 | 2.2976981 | 20 | 9 16.4 | 20.6 |
| 373178 | 2012 | DO ₃₈ | 17.3 | X | 280.24410 | 32.19592 | 181.88752 | 1.69008 | 0.2243250 | 0.22020108 | 2.7159582 | 20 | — | — |
| 373179 | 2012 | DQ ₄₃ | 17.4 | X | 18.18966 | 152.27911 | 139.55149 | 6.74131 | 0.0622710 | 0.28627028 | 2.2800894 | 20 | 9 7.4 | 19.9 |
| 373180 | 2012 | DN ₄₆ | 17.8 | X | 8.26150 | 201.49266 | 57.29588 | 2.26888 | 0.1592978 | 0.26243914 | 2.4161115 | 20 | 7 4.9 | 19.8 |
| 373181 | 2012 | DO ₄₆ | 17.8 | X | 88.24281 | 236.30274 | 43.51148 | 2.42345 | 0.0209414 | 0.30129733 | 2.2036326 | 20 | 11 25.1 | 20.5 |
| 373182 | 2012 | DB ₄₇ | 16.6 | X | 273.44775 | 71.93603 | 181.43003 | 14.45915 | 0.2254490 | 0.22633942 | 2.6666289 | 20 | 1 15.3 | 21.1 |
| 373183 | 2012 | DT ₄₇ | 17.8 | X | 108.24378 | 74.39238 | 150.89866 | 4.67320 | 0.1088717 | 0.28884103 | 2.2665404 | 20 | 10 13.1 | 20.9 |
| 373184 | 2012 | DL ₅₃ | 16.7 | X | 261.79245 | 129.86054 | 137.39684 | 4.77719 | 0.0760690 | 0.23251674 | 2.6191874 | 20 | 2 4.9 | 20.3 |
| 373185 | 2012 | DM ₅₃ | 16.7 | X | 290.06361 | 95.64703 | 162.14286 | 14.44085 | 0.1849473 | 0.23512599 | 2.5997742 | 20 | 2 10.1 | 20.6 |
| 373186 | 2012 | DX ₅₈ | 17.2 | X | 13.65140 | 234.52907 | 24.46602 | 4.78907 | 0.1823242 | 0.26578530 | 2.3957900 | 20 | 7 22.1 | 19.2 |
| 373187 | 2012 | DG ₅₉ | 17.9 | X | 123.42025 | 146.46441 | 26.33355 | 2.88263 | 0.1610959 | 0.28080660 | 2.3095703 | 20 | 8 22.0 | 21.3 |
| 373188 | 2012 | DR ₅₉ | 17.5 | X | 76.02215 | 65.66402 | 106.66874 | 3.79640 | 0.1128873 | 0.26427381 | 2.4049163 | 20 | 6 16.8 | 20.4 |
| 373189 | 2012 | DD ₆₅ | 17.9 | X | 183.14402 | 5.85155 | 150.27030 | 5.94047 | 0.0887724 | 0.29840416 | 2.2178532 | 20 | 10 5.8 | 20.8 |
| 373190 | 2012 | DH ₆₇ | 17.4 | X | 344.71315 | 119.09707 | 124.77377 | 6.91798 | 0.0769390 | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 373201 2012 <i>DF</i> ₈₃ | 17.3 | X | 73.26351 | 100.60310 | 154.60073 | 5.00101 | 0.0981416 | 0.28963754 | 2.2623831 | 20 | 10 11.5 | 20.1 |
| 373202 2012 <i>DJ</i> ₈₆ | 16.4 | X | 51.88752 | 180.89780 | 55.02183 | 10.49633 | 0.1820765 | 0.27775174 | 2.3264739 | 20 | 9 1.3 | 19.4 |
| 373203 2012 <i>DS</i> ₈₆ | 17.9 | X | 129.90421 | 230.67171 | 353.20139 | 3.24922 | 0.0918664 | 0.29851013 | 2.2173283 | 20 | 11 2.1 | 20.9 |
| 373204 2012 <i>DO</i> ₈₈ | 17.5 | X | 59.04637 | 249.98525 | 347.46068 | 6.41965 | 0.0808203 | 0.27436367 | 2.3455875 | 20 | 8 22.5 | 20.2 |
| 373205 2012 <i>DV</i> ₉₀ | 17.7 | X | 25.30183 | 117.25482 | 147.42639 | 4.05685 | 0.1678066 | 0.27641948 | 2.3339432 | 20 | 8 22.5 | 19.8 |
| 373206 2012 <i>DB</i> ₉₁ | 17.7 | X | 84.55318 | 156.86177 | 127.86587 | 0.87481 | 0.1586820 | 0.30366668 | 2.1921552 | 20 | 12 9.0 | 20.7 |
| 373207 2012 <i>DM</i> ₉₄ | 18.0 | X | 23.40716 | 240.37794 | 7.21490 | 2.35393 | 0.1318971 | 0.27406445 | 2.3472945 | 20 | 7 16.9 | 20.2 |
| 373208 2012 <i>EJ</i> ₂ | 18.3 | X | 195.93101 | 174.37543 | 337.57088 | 4.01962 | 0.0780480 | 0.29923711 | 2.2137356 | 20 | 10 13.3 | 21.1 |
| 373209 2012 <i>EK</i> ₄ | 17.2 | X | 311.35611 | 122.49384 | 103.34188 | 2.24750 | 0.0697714 | 0.23480746 | 2.6021248 | 20 | 2 14.3 | 20.4 |
| 373210 2012 <i>EH</i> ₈ | 17.7 | X | 155.39011 | 266.47528 | 242.47677 | 1.87081 | 0.1277098 | 0.28160082 | 2.3052256 | 20 | 8 19.6 | 21.0 |
| 373211 2012 <i>FE</i> ₂ | 17.8 | X | 46.59973 | 68.69870 | 186.67070 | 6.14980 | 0.1399008 | 0.28093580 | 2.3088621 | 20 | 9 7.6 | 20.5 |
| 373212 2012 <i>FF</i> ₇ | 17.5 | X | 13.05865 | 42.42112 | 165.74422 | 5.97421 | 0.1183880 | 0.25601333 | 2.4563731 | 20 | 4 24.2 | 19.9 |
| 373213 2012 <i>FO</i> ₂₅ | 16.5 | X | 227.05392 | 169.77712 | 100.27659 | 4.99989 | 0.2026531 | 0.21819668 | 2.7325657 | 20 | — | — |
| 373214 2012 <i>FD</i> ₃₀ | 17.1 | X | 21.56448 | 166.22576 | 78.62631 | 5.20246 | 0.1299570 | 0.26318830 | 2.4115244 | 20 | 7 7.3 | 19.4 |
| 373215 2012 <i>FE</i> ₃₁ | 17.4 | X | 29.16652 | 117.80232 | 132.82806 | 6.83045 | 0.0769494 | 0.26965402 | 2.3728199 | 20 | 7 23.0 | 19.9 |
| 373216 2012 <i>FX</i> ₃₃ | 17.3 | X | 304.23378 | 175.66299 | 124.65080 | 4.51308 | 0.1195764 | 0.25532746 | 2.4607701 | 20 | 5 7.4 | 20.2 |
| 373217 2012 <i>FJ</i> ₃₆ | 17.8 | X | 8.33718 | 50.31830 | 183.85842 | 6.07541 | 0.1317025 | 0.25828661 | 2.4419389 | 20 | 5 24.9 | 20.1 |
| 373218 2012 <i>FK</i> ₄₀ | 18.0 | X | 88.76518 | 3.77649 | 190.53477 | 4.68423 | 0.1315961 | 0.27335969 | 2.3513272 | 20 | 8 6.3 | 21.2 |
| 373219 2012 <i>FL</i> ₄₀ | 17.8 | X | 16.08236 | 34.95002 | 188.78403 | 6.13116 | 0.0711109 | 0.25821508 | 2.4423898 | 20 | 5 21.1 | 20.5 |
| 373220 2012 <i>FY</i> ₄₀ | 17.9 | X | 44.63085 | 268.58342 | 327.70156 | 0.70291 | 0.1421974 | 0.27020779 | 2.3695769 | 20 | 8 7.4 | 20.5 |
| 373221 2012 <i>FT</i> ₅₄ | 17.0 | X | 337.53825 | 176.65040 | 51.50808 | 5.22836 | 0.0464023 | 0.24105720 | 2.5569524 | 20 | 3 29.4 | 20.2 |
| 373222 2012 <i>FV</i> ₅₄ | 17.7 | X | 175.71246 | 292.48918 | 215.77152 | 7.73055 | 0.1332634 | 0.28514956 | 2.2860597 | 20 | 9 7.1 | 21.3 |
| 373223 2012 <i>FG</i> ₅₆ | 18.0 | X | 61.03363 | 99.14899 | 138.32440 | 8.45264 | 0.0822373 | 0.27615868 | 2.3354124 | 20 | 8 25.5 | 20.8 |
| 373224 2012 <i>FG</i> ₅₇ | 17.6 | X | 88.17702 | 190.09663 | 355.00476 | 10.20252 | 0.1601528 | 0.26949976 | 2.3737253 | 20 | 8 1.3 | 20.9 |
| 373225 2012 <i>FM</i> ₆₀ | 17.1 | X | 306.11727 | 101.27998 | 142.46331 | 9.78375 | 0.0891850 | 0.23503386 | 2.6004535 | 20 | 2 28.2 | 20.5 |
| 373226 2012 <i>FG</i> ₆₁ | 17.2 | X | 325.10896 | 149.40474 | 62.93130 | 3.90028 | 0.0625157 | 0.23598183 | 2.5934846 | 20 | 2 17.5 | 20.5 |
| 373227 2012 <i>FS</i> ₆₁ | 17.9 | X | 144.79217 | 28.03414 | 110.18026 | 3.25536 | 0.1354156 | 0.27119824 | 2.3638040 | 20 | 7 25.6 | 21.4 |
| 373228 2012 <i>FW</i> ₆₁ | 16.9 | X | 274.60004 | 68.62114 | 153.99831 | 5.59637 | 0.1047065 | 0.22218429 | 2.6997724 | 20 | — | — |
| 373229 2012 <i>FG</i> ₆₅ | 16.7 | X | 211.14189 | 126.56604 | 139.67274 | 4.96952 | 0.1930930 | 0.21156302 | 2.7893920 | 20 | — | — |
| 373230 2012 <i>FV</i> ₆₈ | 17.1 | X | 56.66761 | 60.53211 | 225.29094 | 7.04076 | 0.0763542 | 0.26036086 | 2.4289519 | 20 | 6 2.1 | 20.0 |
| 373231 2012 <i>FV</i> ₆₉ | 17.6 | X | 143.21472 | 168.56567 | 341.13233 | 1.91784 | 0.1572471 | 0.27837626 | 2.3229931 | 20 | 8 9.8 | 20.9 |
| 373232 2012 <i>FV</i> ₇₂ | 16.9 | X | 84.47972 | 242.12846 | 355.38245 | 22.82730 | 0.1329197 | 0.28094164 | 2.3088301 | 20 | 9 27.9 | 20.3 |
| 373233 2012 <i>FL</i> ₇₃ | 17.1 | X | 9.95959 | 249.80072 | 11.52123 | 1.81119 | 0.2109689 | 0.26108119 | 2.4244822 | 20 | 7 19.2 | 18.9 |
| 373234 2012 <i>FE</i> ₇₄ | 16.2 | X | 228.72061 | 129.47162 | 128.57295 | 7.30142 | 0.1293976 | 0.20914450 | 2.8108549 | 20 | — | — |
| 373235 2012 <i>FN</i> ₇₄ | 16.3 | X | 331.63513 | 240.62977 | 338.41768 | 12.48111 | 0.0735225 | 0.23975442 | 2.5662067 | 20 | 3 2.3 | 19.2 |
| 373236 2012 <i>FA</i> ₇₅ | 16.2 | X | 177.65273 | 59.45110 | 226.51947 | 7.22920 | 0.1433305 | 0.20619917 | 2.8375582 | 20 | — | — |
| 373237 2012 <i>FC</i> ₇₆ | 17.1 | X | 13.77451 | 171.47909 | 56.85125 | 6.03334 | 0.1353553 | 0.25855411 | 2.4402543 | 20 | 5 25.5 | 19.2 |
| 373238 2012 <i>FA</i> ₇₇ | 17.7 | X | 150.87618 | 16.66804 | 200.91186 | 2.68662 | 0.0309889 | 0.30234023 | 2.1985622 | 20 | 11 22.6 | 20.3 |
| 373239 2012 <i>FR</i> ₇₇ | 17.1 | X | 303.17760 | 262.62896 | 346.17564 | 6.86300 | 0.1743503 | 0.23722318 | 2.5844292 | 20 | 2 17.9 | 20.6 |
| 373240 2012 <i>FK</i> ₈₀ | 17.3 | X | 61.11409 | 158.00749 | 111.55765 | 5.16307 | 0.1171847 | 0.28344732 | 2.2952032 | 20 | 10 18.5 | 20.2 |
| 373241 2012 <i>GC</i> ₅ | 17.4 | X | 79.69298 | 263.06846 | 32.86475 | 3.69637 | 0.1727545 | 0.29550092 | 2.2323562 | 20 | 12 17.6 | 20.6 |
| 373242 2012 <i>GC</i> ₇ | 17.9 | X | 92.47134 | 267.86893 | 191.42290 | 22.13490 | 0.0887084 | 0.37219799 | 1.9140504 | 20 | 3 8.6 | 19.7 |
| 373243 2012 <i>GU</i> ₈ | 16.9 | X | 276.41200 | 222.42647 | 357.77417 | 7.14819 | 0.1029519 | 0.22059868 | 2.7126938 | 20 | — | — |
| 373244 2012 <i>GK</i> ₉ | 16.9 | X | 8.46168 | 29.44956 | 219.01854 | 5.38838 | 0.1016381 | 0.25932940 | 2.4353883 | 20 | 6 14.4 | 19.3 |
| 373245 2012 <i>GR</i> ₉ | 16.8 | X | 293.38770 | 327.70811 | 359.77334 | 6.55173 | 0.1303829 | 0.25947218 | 2.4344948 | 20 | 5 24.2 | 19.8 |
| 373246 2012 <i>GS</i> ₉ | 17.7 | X | 47.08459 | 40.84761 | 206.77833 | 6.01877 | 0.1087401 | 0.27200924 | 2.3591032 | 20 | 8 20.0 | 20.4 |
| 373247 2012 <i>GC</i> ₁₀ | 17.4 | X | 231.04403 | 40.37129 | 236.34851 | 0.89025 | 0.1799911 | 0.21885476 | 2.7270853 | 20 | 1 12.2 | 21.7 |
| 373248 2012 <i>GQ</i> ₁₈ | 17.6 | X | 91.74759 | 71.66429 | 106.93713 | 3.84899 | 0.1197622 | 0.26561356 | 2.3968226 | 20 | 7 18.5 | 20.8 |
| 373249 2012 <i>GW</i> ₁₉ | 17.0 | X | 281.60371 | 108.14215 | 118.46413 | 3.11159 | 0.0255165 | 0.22270627 | 2.6955522 | 20 | 1 16.2 | 20.6 |
| 373250 2012 <i>GG</i> ₂₁ | 16.6 | X | 165.89890 | 131.18300 | 139.77005 | 10.06193 | 0.1162539 | 0.19213874 | 2.9743547 | 20 | — | — |
| 373251 2012 <i>GR</i> ₂₁ | 16.7 | X | 193.53883 | 117.79005 | 159.26127 | 5.05680 | 0.0769704 | 0.20848701 | 2.8167613 | 20 | — | — |
| 373252 2012 <i>GW</i> ₂₂ | 15.8 | X | 95.08824 | 153.06872 | 148.97591 | 11.48958 | 0.0788332 | 0.17776165 | 3.1326413 | 20 | 12 11.3 | 20.6 |
| 373253 2012 <i>GA</i> ₃₁ | 17.3 | X | 22.90742 | 223.05604 | 1.49236 | 2.29370 | 0.1424300 | 0.25547124 | 2.4598467 | 20 | 6 8.1 | 19.7 |
| 373254 2012 <i>GB</i> ₃₁ | 17.3 | X | 103.05082 | 226.39403 | 32.52052 | 7.09207 | 0.1526328 | 0.29098940 | 2.2553707 | 20 | 11 20.3 | 20.6 |
| 373255 2012 <i>GB</i> ₃₂ | 17.0 | X | 4.51676 | 48.79592 | 201.75450 | 8.39478 | 0.1880594 | 0.25661482 | 2.4525332 | 20 | 6 13.3 | 19.0 |
| 373256 2012 <i>GC</i> ₃₃ | 16.1 | X | 203.46793 | 246.66710 | 41.93853 | 4.63319 | 0.1783529 | 0.21103295 | 2.7940609 | 20 | 1 4.7 | 20.7 |
| 373257 2012 <i>GW</i> ₃₃ | 16.7 | X | 142.98177 | 337.15000 | 241.91043 | 7.36642 | 0.0829847 | 0.29539931 | 2.2328681 | 20 | 11 10.5 | 19.7 |
| 373258 2012 <i>GN</i> ₃₈ | 16.6 | X | 158.40660 | 76.83919 | 170.49124 | 10.75300 | 0.1060868 | 0.18268975 | 3.0760490 | 20 | 12 11.4 | 21.6 |
| 373259 2012 <i>GE</i> ₃₉ | 17.0 | X | 286.24519 | 155.28854 | 98.67646 | 5.31368 | 0.1786723 | 0.22946229 | 2.6423794 | 20 | 2 5.1 | 20.8 |
| 373260 2012 <i>HF</i> ₃ | 16.5 | X | 272.14692 | 72.22095 | 139.63362 | 12.23376 | 0.1005310 | 0.21146868 | 2.7902215 | 20 | — | — |
| 373261 2012 <i>HQ</i> ₃ | 16.5 | X | 137.16876 | 178.51775 | 120.91250 | 3.89158 | 0.1554980 | 0.18863854 | 3.0110347 | 20 | — | — |
| 373262 2012 <i>HW</i> ₅ | 16.0 | X | 130.65137 | 99.75758 | 141.18053 | 13.05145 | 0.1349192 | 0.17203604 | 3.2017673 | 20 | 11 10.4 | 21.3 |
| 373263 2012 <i>HH</i> ₆ | 16.9 | X | 284.86088 | 73.84958 | 130.08691 | 10.22223 | 0.0656024 | 0.21436885 | 2.7649987 | 20 | — | — |
| 373264 2012 <i>HX</i> ₆ | 17.3 | X | 98.41034 | 95.01656 | 75.37634 | 3.28423 | 0.1537381 | 0.26746979 | 2.3857205 | 20 | 7 20.3 | 20.5 |
| 373265 2012 <i>HD</i> ₇ | 18.1 | X | 288.91340 | 298.44060 | 145.06984 | 4.23321 | 0.0653128 | 0.30110092 | 2.2045908 | 20 | 11 27.2 | 20.2 |
| 373266 2012 <i>HB</i> ₁₁ | 16.5 | X | 249.68259 | 238.68909 | 46.78516 | 11.98103 | 0.1745298 | 0.22692632 | 2.6620291 | 20 | 2 12.1 | 21.0 |
| 373267 2012 <i>HW</i> ₁₁ | 16.1 | X | 106.86267 | 208.78651 | 104.04657 | 10.26309 | 0.0686890 | 0.18397340 | 3.0617239 | 20 | — | — |
| 373268 2012 <i>HZ</i> ₁₂ | 15.3 | X | 100.09544 | 220.49598 | 103.34201 | 12.01380 | 0.0333878 | 0.18582568 | 3.0413441 | 20 | — | — |
| 373269 2012 <i>HM</i> ₁₈ | 15.3 | X | 182.21999 | 153.57983 | 106.04617 | 10.41459 | 0.2231294 | 0.19084323 | 2.9878001 | 20 | — | — |
| 373270 2012 <i>HB</i> ₁₉ | 15.7 | X | 134.34515 | 193.88841 | 112.94968 | 11.13753 | 0.0898693 | 0.19277657 | 2.9677903 | 20 | — | — |
| 373271 2012 <i>HN</i> ₂₃ | 18.1 | X | 235.43826 | 338.86317 | 170.84061 | 2.87607 | 0.1139713 | 0.30487729 | 2.1863482 | 20 | 11 30.9 | 20.3 |
| 373272 2012 <i>HO</i> ₂₃ | 17.3 | X | 161.38469 | 77.73985 | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 373281 2012 HQ ₄₁ | 16.5 | X | 172.96797 | 235.84505 | 96.59544 | 4.78186 | 0.0106230 | 0.22014576 | 2.7164132 | 20 | 1 17.8 | 20.2 |
| 373282 2012 HO ₄₃ | 16.6 | X | 244.60854 | 113.82455 | 196.16734 | 5.62297 | 0.1639089 | 0.22988710 | 2.6391231 | 20 | 3 1.9 | 20.9 |
| 373283 2012 HD ₄₈ | 15.6 | X | 91.42269 | 216.58503 | 103.24611 | 10.12828 | 0.1213536 | 0.17799345 | 3.1299209 | 20 | 12 30.6 | 20.3 |
| 373284 2012 HO ₄₈ | 16.5 | X | 130.45489 | 124.78415 | 130.86275 | 10.15336 | 0.0598270 | 0.17500771 | 3.1654194 | 20 | 11 23.5 | 21.4 |
| 373285 2012 HP ₄₈ | 16.2 | X | 228.38715 | 141.65941 | 129.10835 | 9.23436 | 0.0454400 | 0.21323851 | 2.7747613 | 20 | 1 7.9 | 20.3 |
| 373286 2012 HC ₄₉ | 16.2 | X | 125.03149 | 201.55598 | 107.52857 | 12.05757 | 0.0831794 | 0.18943121 | 3.0026291 | 20 | — | — |
| 373287 2012 HP ₅₀ | 16.9 | X | 283.81992 | 56.58883 | 163.41309 | 5.18999 | 0.0817370 | 0.21728322 | 2.7402189 | 20 | 1 3.9 | 20.8 |
| 373288 2012 HN ₅₁ | 16.4 | X | 185.04135 | 169.14429 | 148.51110 | 9.93185 | 0.1509745 | 0.21214606 | 2.7842789 | 20 | 1 20.8 | 21.0 |
| 373289 2012 HV ₅₂ | 15.8 | X | 102.29986 | 101.97636 | 218.55110 | 21.07445 | 0.1576217 | 0.18419836 | 3.0592306 | 20 | — | — |
| 373290 2012 HF ₅₃ | 16.7 | X | 158.68634 | 97.30613 | 174.78171 | 9.66371 | 0.2055628 | 0.18886362 | 3.0086420 | 20 | — | — |
| 373291 2012 HO ₅₄ | 15.6 | X | 155.35402 | 244.26088 | 17.23176 | 5.95812 | 0.1029126 | 0.18628498 | 3.0363430 | 20 | 12 24.7 | 20.4 |
| 373292 2012 HJ ₅₆ | 17.9 | X | 107.28117 | 328.88623 | 207.98986 | 5.23281 | 0.2300128 | 0.27222233 | 2.3578720 | 20 | 8 12.9 | 21.7 |
| 373293 2012 HZ ₅₆ | 17.0 | X | 332.54779 | 138.87950 | 73.38840 | 4.77471 | 0.1476193 | 0.23331772 | 2.6131895 | 20 | 2 16.8 | 20.1 |
| 373294 2012 HR ₅₈ | 17.5 | X | 21.75888 | 8.49459 | 144.19940 | 4.48409 | 0.0842257 | 0.23275003 | 2.6174369 | 20 | 2 20.6 | 20.8 |
| 373295 2012 HA ₆₀ | 16.5 | X | 174.44725 | 256.06728 | 55.22780 | 1.92754 | 0.1856637 | 0.20571952 | 2.8419671 | 20 | 1 7.6 | 21.2 |
| 373296 2012 HY ₆₀ | 17.4 | X | 289.93987 | 57.84873 | 199.82414 | 4.34252 | 0.0763620 | 0.23193954 | 2.6235309 | 20 | 2 25.0 | 20.9 |
| 373297 2012 HX ₆₇ | 16.5 | X | 270.00019 | 88.17299 | 194.34854 | 5.53889 | 0.1503965 | 0.22533638 | 2.6745364 | 20 | 2 24.1 | 20.5 |
| 373298 2012 HZ ₆₈ | 16.0 | X | 150.88566 | 166.98437 | 112.72005 | 11.76169 | 0.0151787 | 0.19041222 | 2.9923072 | 20 | — | — |
| 373299 2012 HJ ₇₁ | 17.0 | X | 221.80188 | 240.15695 | 40.69480 | 4.72714 | 0.0648242 | 0.21455747 | 2.7633779 | 20 | 1 13.1 | 21.1 |
| 373300 2012 HJ ₇₂ | 16.2 | X | 183.60686 | 109.34987 | 199.63183 | 6.81342 | 0.2241428 | 0.21073743 | 2.7966724 | 20 | 1 12.0 | 21.0 |
| 373301 2012 HA ₇₅ | 16.8 | X | 335.33752 | 0.16250 | 211.33377 | 4.56416 | 0.1799540 | 0.23339422 | 2.6126184 | 20 | 2 11.2 | 19.7 |
| 373302 2012 HL ₇₇ | 17.1 | X | 288.07567 | 65.51217 | 159.27719 | 1.95887 | 0.1054684 | 0.21813540 | 2.7330775 | 20 | 1 11.7 | 21.1 |
| 373303 2012 HM ₈₀ | 15.6 | X | 109.77774 | 225.92905 | 86.06159 | 11.60635 | 0.0709679 | 0.18150839 | 3.0893818 | 20 | — | — |
| 373304 2012 HR ₈₀ | 16.9 | X | 346.93401 | 45.57116 | 244.76863 | 2.43845 | 0.1105218 | 0.25788135 | 2.4444966 | 20 | 7 7.9 | 19.3 |
| 373305 2012 HH ₈₂ | 16.1 | X | 284.70430 | 51.07502 | 163.86613 | 34.13701 | 0.2071134 | 0.21728376 | 2.7402143 | 20 | — | — |
| 373306 2012 JT | 16.0 | X | 316.10648 | 203.14047 | 22.90416 | 14.54513 | 0.2049159 | 0.22992179 | 2.6388577 | 20 | 2 7.2 | 19.7 |
| 373307 2012 JX ₁ | 17.5 | X | 333.90982 | 73.86232 | 146.45730 | 4.70790 | 0.1751118 | 0.23567634 | 2.5957253 | 20 | 2 23.5 | 20.2 |
| 373308 2012 JZ ₁ | 16.0 | X | 106.48868 | 209.09228 | 96.56771 | 6.74650 | 0.1535948 | 0.17813101 | 3.1283093 | 20 | 12 30.5 | 21.0 |
| 373309 2012 JG ₂ | 16.2 | X | 266.14621 | 50.77139 | 213.51807 | 12.61283 | 0.1127535 | 0.21955466 | 2.7212865 | 20 | 1 30.9 | 20.6 |
| 373310 2012 JB ₃ | 17.2 | X | 249.41709 | 89.87413 | 230.99887 | 2.65209 | 0.0875041 | 0.23512545 | 2.5997782 | 20 | 3 27.2 | 20.9 |
| 373311 2012 JW ₆ | 17.2 | X | 39.86833 | 314.69110 | 224.11491 | 1.87467 | 0.1062147 | 0.24410455 | 2.5356276 | 20 | 4 27.8 | 20.0 |
| 373312 2012 JK ₇ | 17.5 | X | 166.73746 | 234.45454 | 247.73025 | 4.66125 | 0.0556855 | 0.26668757 | 2.3903832 | 20 | 7 25.3 | 20.8 |
| 373313 2012 JP ₇ | 16.9 | X | 109.29898 | 142.72426 | 237.02957 | 3.96413 | 0.0821063 | 0.20892862 | 2.8127907 | 20 | 1 9.2 | 20.8 |
| 373314 2012 JC ₈ | 16.5 | X | 150.12096 | 23.73057 | 49.00622 | 8.35108 | 0.0787741 | 0.24292681 | 2.5438163 | 20 | 5 1.4 | 19.9 |
| 373315 2012 JE ₈ | 17.2 | X | 338.11772 | 287.67539 | 257.02625 | 1.35800 | 0.0640337 | 0.22298104 | 2.6933374 | 20 | 1 30.3 | 20.7 |
| 373316 2012 JP ₈ | 16.2 | X | 215.48851 | 217.99188 | 54.78526 | 14.32311 | 0.0719322 | 0.20833413 | 2.8181391 | 20 | — | — |
| 373317 2012 JP ₉ | 15.7 | X | 205.78211 | 315.69248 | 229.79722 | 9.22422 | 0.0519948 | 0.17764313 | 3.1340345 | 20 | 11 19.5 | 20.1 |
| 373318 2012 JR ₉ | 16.2 | X | 315.88211 | 118.79650 | 51.56649 | 4.68218 | 0.0408444 | 0.20980418 | 2.8049597 | 20 | — | — |
| 373319 2012 JD ₁₃ | 15.9 | X | 108.23145 | 248.11016 | 62.55959 | 10.70686 | 0.1394053 | 0.17929439 | 3.1147623 | 20 | — | — |
| 373320 2012 JK ₁₅ | 17.2 | X | 347.59670 | 125.12064 | 48.85988 | 5.39557 | 0.0394986 | 0.22215897 | 2.6999776 | 20 | 2 3.9 | 20.7 |
| 373321 2012 JL ₁₅ | 16.8 | X | 321.63403 | 77.73623 | 55.74372 | 2.76117 | 0.0222901 | 0.19906420 | 2.9049630 | 20 | — | — |
| 373322 2012 JQ ₁₆ | 17.1 | X | 92.57374 | 2.48114 | 126.72404 | 5.01377 | 0.0996255 | 0.24660167 | 2.5184812 | 20 | 5 9.9 | 20.4 |
| 373323 2012 JD ₁₉ | 16.7 | X | 294.10651 | 345.69203 | 199.42329 | 4.60799 | 0.0947370 | 0.21034671 | 2.8001346 | 20 | — | — |
| 373324 2012 JW ₁₉ | 15.5 | X | 93.65024 | 222.56901 | 85.94130 | 5.97724 | 0.2225467 | 0.17341858 | 3.1847276 | 20 | 12 26.4 | 20.8 |
| 373325 2012 JG ₂₀ | 16.7 | X | 232.84373 | 175.42164 | 147.37076 | 6.33621 | 0.1330429 | 0.22789909 | 2.6544486 | 20 | 3 10.9 | 20.9 |
| 373326 2012 JX ₂₀ | 16.9 | X | 276.47911 | 232.39014 | 45.29608 | 2.87662 | 0.0915891 | 0.22898083 | 2.6460820 | 20 | 3 6.1 | 20.5 |
| 373327 2012 JR ₂₁ | 16.9 | X | 317.93108 | 234.70642 | 0.78220 | 3.34061 | 0.1502959 | 0.23123552 | 2.6288533 | 20 | 2 24.5 | 20.0 |
| 373328 2012 JY ₂₁ | 16.2 | X | 16.39992 | 194.31696 | 349.43651 | 7.38990 | 0.1675628 | 0.23917290 | 2.5703646 | 20 | 3 23.2 | 18.4 |
| 373329 2012 JW ₂₃ | 16.5 | X | 283.11503 | 172.84946 | 95.21583 | 13.40856 | 0.1554463 | 0.22624203 | 2.6673941 | 20 | 2 26.1 | 20.5 |
| 373330 2012 JZ ₂₄ | 16.1 | X | 326.94719 | 185.65318 | 70.56009 | 14.49691 | 0.1221667 | 0.23859466 | 2.5745158 | 20 | 4 16.8 | 19.3 |
| 373331 2012 JG ₂₅ | 16.2 | X | 251.23418 | 99.06265 | 215.05219 | 14.13926 | 0.1172112 | 0.23040835 | 2.6351413 | 20 | 3 15.3 | 20.3 |
| 373332 2012 JJ ₂₆ | 16.4 | X | 154.02252 | 25.24955 | 198.81894 | 5.15034 | 0.1955818 | 0.17444520 | 3.1722204 | 20 | 11 8.4 | 21.7 |
| 373333 2012 JE ₃₀ | 16.3 | X | 159.81235 | 260.16201 | 49.37157 | 10.21072 | 0.0701267 | 0.19926016 | 2.9030581 | 20 | — | — |
| 373334 2012 JZ ₃₁ | 16.6 | X | 106.54997 | 270.96811 | 114.41134 | 5.43275 | 0.0862183 | 0.21093261 | 2.7949469 | 20 | 1 13.5 | 20.2 |
| 373335 2012 JE ₃₂ | 17.0 | X | 220.43837 | 249.52890 | 31.29185 | 4.39606 | 0.0674764 | 0.21184503 | 2.7869159 | 20 | 1 11.9 | 21.3 |
| 373336 2012 JC ₃₄ | 16.4 | X | 277.36728 | 21.95000 | 236.39395 | 14.00770 | 0.1471889 | 0.22361312 | 2.6882595 | 20 | 1 30.2 | 20.7 |
| 373337 2012 JL ₃₄ | 17.0 | X | 276.71483 | 299.07238 | 10.15059 | 0.71715 | 0.1542200 | 0.23689115 | 2.5868435 | 20 | 4 5.4 | 20.5 |
| 373338 2012 JW ₃₇ | 16.8 | X | 176.95094 | 200.31855 | 133.30815 | 3.62464 | 0.1882374 | 0.21170258 | 2.7881659 | 20 | 2 3.7 | 21.3 |
| 373339 2012 JQ ₃₈ | 16.5 | X | 206.02087 | 151.11219 | 119.85406 | 16.13110 | 0.1175663 | 0.20230576 | 2.8738486 | 20 | — | — |
| 373340 2012 JF ₄₀ | 16.9 | X | 282.58417 | 49.14457 | 157.23947 | 9.13389 | 0.1384613 | 0.21077376 | 2.7963510 | 20 | — | — |
| 373341 2012 JN ₄₁ | 17.5 | X | 176.48506 | 63.51168 | 206.20028 | 1.78263 | 0.1390569 | 0.19163084 | 2.9796079 | 20 | — | — |
| 373342 2012 JG ₄₃ | 17.3 | X | 7.94061 | 316.44845 | 236.59787 | 2.09023 | 0.0682296 | 0.23478702 | 2.6022758 | 20 | 3 23.4 | 20.2 |
| 373343 2012 JY ₄₈ | 17.4 | X | 257.32478 | 188.45634 | 86.97089 | 6.57849 | 0.0513913 | 0.22460337 | 2.6803522 | 20 | 2 15.9 | 21.2 |
| 373344 2012 JC ₅₁ | 16.0 | X | 122.23459 | 247.51129 | 87.59808 | 9.46069 | 0.1630261 | 0.19774471 | 2.9178713 | 20 | — | — |
| 373345 2012 JH ₅₂ | 17.1 | X | 232.85098 | 35.44167 | 257.18715 | 1.11166 | 0.0503270 | 0.22252292 | 2.6970328 | 20 | 2 6.9 | 21.0 |
| 373346 2012 JN ₆₄ | 16.6 | X | 160.74392 | 241.12409 | 114.86858 | 6.21526 | 0.0556682 | 0.21600692 | 2.7510022 | 20 | 2 6.4 | 20.5 |
| 373347 2012 JH ₆₅ | 17.2 | X | 49.01909 | 73.63912 | 94.41357 | 2.02550 | 0.1753941 | 0.24353759 | 2.5395614 | 20 | 5 8.8 | 19.8 |
| 373348 2012 KP ₁ | 17.6 | X | 260.03555 | 329.62060 | 148.57434 | 5.61253 | 0.0901339 | 0.30214635 | 2.1995026 | 20 | 11 28.1 | 19.8 |
| 373349 2012 KQ ₁ | 16.7 | X | 138.88461 | 64.39617 | 190.01693 | 11.34126 | 0.1306718 | 0.17885809 | 3.1198256 | 20 | 12 1.1 | 21.8 |
| 373350 2012 KU ₃ | 16.9 | X | 317.76333 | 21.83475 | 189.79067 | 10.62449 | 0.0645483 | 0.22585152 | 2.6704679 | 20 | 2 3.3 | 20.5 |
| 373351 2012 KL ₅ | 16.8 | X | 65.26590 | 3.99700 | 151.37812 | 4.10992 | 0.1154985 | 0.24319488 | 2.5419467 | 20 | 5 9.1 | 19.8 |
| 373352 2012 KO ₆ | 16.0 | X | 162.63308 | 203.98238 | 91.27874 | 11.39545 | 0.0891173 | 0.20054297 | 2.8906650 | 20 | — | — |
| 373353 2012 KJ ₇ | 16.0 | X | 153.75510 | 84.66559 | 142.99102 | 17.30410 | 0.2157242 | 0.17484243 | 3.1674139 | 20 | 11 16.5 | 21.7 |
| 373354 2012 KD ₁₅ | 16.9 | X | 281.47878 | 141.10569 | 112.22990 | 3.694 | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|------------|------------|-----------|----|---------|----------|
| 373361 2012 KM ₄₃ | 16.7 | X | 223.20195 | 178.45680 | 113.70214 | 4.58973 | 0.0779659 | 0.21289332 | 2.7777599 | 20 | 1 27.5 | 20.8 |
| 373362 2012 KQ ₄₄ | 16.3 | X | 198.97780 | 67.26371 | 158.95045 | 15.40779 | 0.1168205 | 0.18589654 | 3.0405712 | 20 | 12 25.5 | 21.2 |
| 373363 2012 KW ₄₆ | 16.3 | X | 340.03853 | 134.03019 | 67.62012 | 12.63077 | 0.1004433 | 0.22740920 | 2.6582595 | 20 | 2 26.1 | 19.8 |
| 373364 2012 KZ ₄₇ | 17.2 | X | 13.85411 | 63.24123 | 153.19003 | 1.88064 | 0.0848779 | 0.24296718 | 2.5435345 | 20 | 5 6.8 | 19.9 |
| 373365 2012 KD ₄₈ | 17.2 | X | 312.02698 | 110.36658 | 119.78189 | 4.99610 | 0.0866472 | 0.22489042 | 2.6780709 | 20 | 2 20.1 | 20.7 |
| 373366 2012 KD ₄₉ | 16.5 | X | 147.60918 | 115.30195 | 156.73959 | 1.31861 | 0.1737795 | 0.17917849 | 3.1161053 | 20 | 12 27.4 | 21.5 |
| 373367 2012 LC ₆ | 16.3 | X | 80.91987 | 163.45787 | 162.93448 | 7.67289 | 0.1502453 | 0.17162080 | 3.2069297 | 20 | 12 29.0 | 21.3 |
| 373368 2012 LN ₆ | 15.6 | X | 135.82900 | 163.85887 | 103.47394 | 10.20709 | 0.0516240 | 0.17574900 | 3.1565122 | 20 | 12 10.8 | 20.3 |
| 373369 2012 LP ₆ | 15.6 | X | 138.14013 | 209.32565 | 109.80081 | 12.77533 | 0.0315706 | 0.19213514 | 2.9743918 | 20 | — | — |
| 373370 2012 LP ₈ | 15.7 | X | 124.10029 | 147.68769 | 124.79481 | 10.16871 | 0.0635324 | 0.17426838 | 3.1743659 | 20 | 12 5.5 | 20.6 |
| 373371 2012 LO ₁₅ | 16.5 | X | 348.46883 | 46.66270 | 207.81944 | 4.10891 | 0.1923705 | 0.24303097 | 2.5430895 | 20 | 5 10.9 | 18.7 |
| 373372 2012 LK ₁₇ | 16.7 | X | 198.29502 | 128.59374 | 172.97085 | 6.44715 | 0.0400741 | 0.20634405 | 2.8362298 | 20 | 1 12.1 | 20.8 |
| 373373 2012 LB ₁₈ | 17.1 | X | 79.68797 | 92.70858 | 119.40624 | 7.25957 | 0.0655626 | 0.26276474 | 2.4141152 | 20 | 8 11.2 | 20.0 |
| 373374 2012 LD ₁₉ | 16.9 | X | 274.03278 | 116.84431 | 150.28969 | 5.46517 | 0.0745334 | 0.22181803 | 2.7027435 | 20 | 2 20.5 | 20.8 |
| 373375 2012 LR ₁₉ | 16.6 | X | 141.46625 | 187.63224 | 144.41524 | 2.55164 | 0.0753346 | 0.19726028 | 2.9226465 | 20 | — | — |
| 373376 2012 LG ₂₃ | 15.7 | X | 118.55081 | 181.08081 | 108.69111 | 10.13293 | 0.0769424 | 0.17620593 | 3.1510529 | 20 | 12 19.6 | 20.5 |
| 373377 2012 LR ₂₆ | 15.9 | X | 183.55054 | 176.76439 | 151.68035 | 21.75846 | 0.1568649 | 0.21259648 | 3.2063448 | 20 | 2 1.1 | 20.5 |
| 373378 2012 MB ₃ | 15.7 | X | 139.96357 | 46.42526 | 168.41373 | 17.99368 | 0.2326552 | 0.16465120 | 3.2968014 | 20 | 10 20.1 | 21.5 |
| 373379 2012 MJ ₅ | 15.3 | X | 73.06750 | 195.41996 | 130.98849 | 18.17341 | 0.1240476 | 0.16955245 | 3.2329576 | 20 | 12 20.1 | 20.3 |
| 373380 2012 MC ₉ | 16.8 | X | 346.34649 | 32.40344 | 218.26660 | 7.25934 | 0.0957783 | 0.24342070 | 2.5403743 | 20 | 5 8.0 | 19.6 |
| 373381 2012 RT ₄ | 12.9 | X | 259.00081 | 53.21626 | 279.82530 | 16.64079 | 0.0814350 | 0.08491330 | 5.1264755 | 20 | 4 26.3 | 20.0 |
| 373382 2012 TK ₃₀ | 15.8 | X | 59.28692 | 89.56636 | 17.38175 | 11.35390 | 0.0595320 | 0.18021371 | 3.1041605 | 20 | 2 27.3 | 20.0 |
| 373383 2012 TO ₃₀₇ | 15.7 | X | 197.09979 | 18.75755 | 313.92628 | 9.01332 | 0.0230705 | 0.18224370 | 3.0810663 | 20 | 2 19.6 | 20.2 |
| 373384 2013 GB ₉₀ | 17.0 | X | 285.77750 | 112.59174 | 187.63559 | 6.47451 | 0.1256488 | 0.27187624 | 2.3598725 | 20 | 4 7.1 | 19.9 |
| 373385 2013 JX ₃₆ | 15.1 | X | 59.16337 | 184.23154 | 93.01332 | 10.51764 | 0.0617874 | 0.17552556 | 3.1591904 | 20 | 10 3.0 | 19.7 |
| 373386 2013 MS ₄ | 16.0 | X | 191.25338 | 28.56019 | 283.48573 | 13.42754 | 0.1808408 | 0.21965536 | 2.7204548 | 20 | 1 19.1 | 20.6 |
| 373387 2013 MQ ₆ | 15.5 | X | 215.67164 | 51.96622 | 261.14271 | 11.73053 | 0.1718844 | 0.22958163 | 2.6414636 | 20 | 2 5.6 | 20.1 |
| 373388 2013 NU ₃ | 18.2 | X | 347.61212 | 120.87914 | 192.01493 | 6.92163 | 0.1366498 | 0.28076244 | 2.3098124 | 20 | 8 16.5 | 20.3 |
| 373389 2013 NU ₆ | 16.2 | X | 329.92719 | 303.27784 | 334.15821 | 21.94508 | 0.2447502 | 0.26910503 | 2.3760460 | 20 | 4 9.4 | 19.1 |
| 373390 2013 NJ ₁₃ | 16.1 | X | 168.77177 | 69.47181 | 218.31724 | 10.92973 | 0.1726785 | 0.20474736 | 2.8509560 | 20 | — | — |
| 373391 2013 OA ₇ | 17.2 | X | 350.92682 | 85.55074 | 203.30614 | 5.76768 | 0.1423019 | 0.27460055 | 2.3442384 | 20 | 7 14.4 | 19.2 |
| 373392 2013 PR | 16.0 | X | 151.03029 | 1.49056 | 249.72950 | 7.95223 | 0.0418859 | 0.17588758 | 3.1548540 | 20 | 12 7.3 | 20.5 |
| 373393 1972 RB | 19.1 | X | 62.91830 | 152.97608 | 177.08276 | 5.25129 | 0.0876405 | 0.31325090 | 2.1472099 | 20 | — | — |
| 373394 1990 TQ ₉ | 17.0 | X | 234.63405 | 34.20164 | 359.51457 | 7.50051 | 0.2336494 | 0.25517923 | 2.4617229 | 20 | 5 29.7 | 21.1 |
| 373395 1990 TF ₆ | 16.1 | X | 143.09077 | 124.59417 | 217.99329 | 10.88690 | 0.1572746 | 0.19634824 | 2.9316900 | 20 | 1 12.2 | 20.8 |
| 373396 1994 SH ₁₀ | 16.2 | X | 124.73187 | 21.38069 | 21.74272 | 5.43017 | 0.0244047 | 0.20880085 | 2.8139381 | 20 | 2 20.9 | 20.2 |
| 373397 1995 KJ ₄ | 16.3 | X | 140.64837 | 208.72747 | 65.02496 | 3.99286 | 0.2293819 | 0.17548816 | 3.1596393 | 20 | 12 23.4 | 21.8 |
| 373398 1995 SY ₉ | 18.2 | X | 326.28814 | 350.66465 | 358.77517 | 6.02107 | 0.1971712 | 0.27519698 | 2.3410050 | 20 | 8 30.9 | 19.6 |
| 373399 1995 SK ₂₅ | 17.8 | X | 159.89870 | 219.56368 | 211.35830 | 2.40946 | 0.2609276 | 0.22160419 | 2.7044818 | 20 | 5 17.8 | 22.6 |
| 373400 1995 SP ₂₈ | 17.9 | X | 349.80471 | 323.88373 | 342.13733 | 1.15528 | 0.1899106 | 0.27508742 | 2.3414716 | 20 | 8 14.6 | 19.4 |
| 373401 1995 SS ₄₇ | 16.7 | X | 175.14567 | 36.47827 | 19.85152 | 6.07913 | 0.2461363 | 0.22263096 | 2.6961601 | 20 | 5 9.8 | 21.5 |
| 373402 1995 TD ₁₁ | 17.1 | X | 126.68170 | 32.95074 | 18.81322 | 5.21351 | 0.1649767 | 0.21677133 | 2.7445311 | 20 | 3 20.4 | 21.2 |
| 373403 1995 UJ ₆₄ | 15.3 | X | 274.43187 | 71.83102 | 48.70590 | 11.17468 | 0.0584514 | 0.16061202 | 3.3518457 | 20 | 11 18.2 | 19.8 |
| 373404 1995 VO ₁₅ | 16.5 | X | 136.46646 | 181.41247 | 235.65682 | 7.74836 | 0.1380798 | 0.27480882 | 2.7480882 | 20 | 3 30.8 | 20.8 |
| 373405 1995 WO ₂₁ | 17.4 | X | 306.50237 | 273.22683 | 80.39806 | 6.88130 | 0.1424422 | 0.26971169 | 2.3724817 | 20 | 7 28.1 | 19.8 |
| 373406 1996 RW ₁₄ | 16.6 | X | 256.73876 | 325.22256 | 355.65780 | 7.40602 | 0.1658170 | 0.23560659 | 2.5962376 | 20 | 3 27.1 | 20.5 |
| 373407 1997 AQ ₃ | 16.1 | X | 207.03267 | 253.86150 | 113.14496 | 12.31420 | 0.2062317 | 0.22495647 | 2.6775467 | 20 | 4 12.5 | 20.9 |
| 373408 1997 EF ₁₁ | 17.4 | X | 318.62607 | 182.86120 | 227.36271 | 5.9828 | 0.2198851 | 0.28218070 | 2.3020664 | 20 | 11 28.0 | 18.5 |
| 373409 1997 FE ₂₁ | 16.6 | X | 199.74570 | 16.79165 | 330.78096 | 9.40379 | 0.0493953 | 0.21577239 | 2.7529953 | 20 | 3 7.9 | 20.6 |
| 373410 1997 RL ₁₂ | 16.8 | X | 124.39904 | 172.28036 | 177.52337 | 7.81006 | 0.2522487 | 0.18889206 | 3.0083400 | 20 | 1 14.6 | 21.5 |
| 373411 1997 SX ₁₄ | 16.0 | X | 336.63356 | 122.42429 | 6.60730 | 13.45042 | 0.2453872 | 0.18092052 | 3.0960704 | 20 | — | — |
| 373412 1997 SD ₂₆ | 16.6 | X | 44.48013 | 70.08301 | 348.56984 | 5.14073 | 0.1615512 | 0.18487329 | 3.0517803 | 20 | — | — |
| 373413 1997 TU | 16.8 | X | 58.21384 | 23.92411 | 25.41684 | 9.79136 | 0.2643366 | 0.18354767 | 3.0664564 | 20 | 1 3.2 | 20.1 |
| 373414 1998 HA ₁₇ | 16.1 | X | 113.19924 | 131.01090 | 7.03329 | 32.48127 | 0.2386115 | 0.23225101 | 2.6211848 | 20 | 7 5.0 | 21.1 |
| 373415 1998 HB ₂₇ | 16.5 | X | 134.26006 | 100.05128 | 59.37781 | 4.84200 | 0.2071168 | 0.23614555 | 2.5922858 | 20 | 8 14.8 | 20.8 |
| 373416 1998 QG ₁ | 17.8 | X | 14.50918 | 54.98987 | 196.81622 | 6.40503 | 0.24629871 | 0.26893854 | 2.3770265 | 20 | 8 31.4 | 19.3 |
| 373417 1998 SW ₃₈ | 16.9 | X | 145.74540 | 141.26775 | 209.61099 | 1.57713 | 0.0748656 | 0.19973390 | 2.8984659 | 20 | 1 17.0 | 21.1 |
| 373418 1998 TE ₁₁ | 17.6 | X | 233.21484 | 59.52775 | 19.84957 | 4.89505 | 0.1984975 | 0.26249004 | 2.4157992 | 20 | 8 3.8 | 21.1 |
| 373419 1998 TX ₂₉ | 17.3 | X | 274.30523 | 84.94888 | 303.10344 | 4.12808 | 0.2441398 | 0.26268741 | 2.4145890 | 20 | 7 5.7 | 20.3 |
| 373420 1998 XL ₈ | 15.6 | X | 346.81223 | 260.60504 | 238.46488 | 16.80678 | 0.0886827 | 0.19039300 | 2.9925085 | 20 | — | — |
| 373421 1998 XF ₁₇ | 17.5 | X | 312.42246 | 265.69785 | 158.86205 | 2.70818 | 0.2467145 | 0.22319861 | 2.6915868 | 20 | 11 7.7 | 19.5 |
| 373422 1999 CD ₇₄ | 16.4 | X | 33.01310 | 43.72056 | 160.45144 | 6.24519 | 0.1130913 | 0.24168294 | 2.5525371 | 20 | 5 25.8 | 19.2 |
| 373423 1999 CR ₁₂₈ | 15.6 | X | 35.35323 | 111.77494 | 23.64574 | 14.10995 | 0.4467187 | 0.18863115 | 3.0111134 | 20 | 4 11.3 | 17.3 |
| 373424 1999 LP ₃ | 16.6 | X | 264.12963 | 48.50413 | 222.23808 | 12.84592 | 0.2318261 | 0.22407908 | 2.6845315 | 20 | 1 25.4 | 21.3 |
| 373425 1999 MU ₁ | 17.2 | X | 25.77495 | 27.46485 | 267.85266 | 13.66680 | 0.3450406 | 0.28641268 | 2.2793336 | 20 | 11 7.1 | 20.1 |
| 373426 1999 RE ₁₇₈ | 17.4 | X | 97.94674 | 245.88125 | 172.75184 | 6.73293 | 0.0170180 | 0.21213084 | 2.7844121 | 20 | 2 1.8 | 21.2 |
| 373427 1999 RB ₂₅₂ | 16.5 | X | 164.46071 | 114.15278 | 263.74535 | 6.45964 | 0.2407461 | 0.21428808 | 2.7656934 | 20 | 3 15.1 | 21.4 |
| 373428 1999 TC ₅ | 18.4 | X | 44.53277 | 282.63222 | 192.41602 | 29.10729 | 0.5474987 | 0.34444856 | 2.0155170 | 20 | 2 23.9* | 18.7 |
| 373429 1999 TN ₄₄ | 16.9 | X | 185.33419 | 36.00547 | 323.78828 | 2.81568 | 0.1076032 | 0.21328429 | 2.7743642 | 20 | 3 9.7 | 21.3 |
| 373430 1999 TP ₆₁ | 18.1 | X | 305.94237 | 39.79810 | 356.38978 | 7.18549 | 0.0956967 | 0.28276060 | 2.2989179 | 20 | 10 6.8 | 20.4 |
| 373431 1999 TU ₆₂ | 16.7 | X | 181.87081 | 166.17996 | 215.61283 | 3.18401 | 0.1089250 | 0.21399661 | 2.7682042 | 20 | 4 2.2 | 20.9 |
| 373432 1999 TZ ₆₈ | 17.3 | X | 219.56323 | 280.84249 | 224.27211 | 5.29685 | 0.1047410 | 0.28262982 | 2.2996270 | 20 | 10 28.7 | 20.0 |
| 373433 1999 TF ₈₄ | 17.6 | X | 2.50783 | 283.33207 | 6.72801 | 6.37536 | 0.2244625 | 0.27777054 | 2.3263690 | 20 | 8 26.9 | 19.1 |
| 373434 1999 TC ₁₁₁ | 17 | | | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|--------------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 373441 1999 <i>TB</i> ₃₂₈ | 17.7 | X | 339.02383 | 94.33054 | 270.25066 | 2.79494 | 0.2546456 | 0.28224035 | 2.3017420 | 20 | 11 6.9 | 19.0 |
| 373442 1999 <i>TQ</i> ₃₃₂ | 16.6 | X | 109.88109 | 70.70878 | 4.31993 | 4.08852 | 0.1004985 | 0.21129877 | 2.7917171 | 20 | 3 21.9 | 20.6 |
| 373443 1999 <i>UY</i> ₄ | 17.5 | X | 290.46739 | 29.73790 | 35.94728 | 6.30819 | 0.2376311 | 0.28003980 | 2.3137843 | 20 | 10 7.1 | 19.2 |
| 373444 1999 <i>UG</i> ₁₈ | 16.5 | X | 30.91088 | 110.37352 | 53.19160 | 4.43571 | 0.0342436 | 0.21447620 | 2.7640759 | 20 | 3 22.8 | 20.0 |
| 373445 1999 <i>UP</i> ₃₀ | 18.2 | X | 16.50575 | 266.76891 | 36.33991 | 7.11568 | 0.2104302 | 0.28180392 | 2.3041179 | 20 | 10 14.9 | 20.4 |
| 373446 1999 <i>UL</i> ₃₃ | 18.1 | X | 13.47966 | 310.61571 | 34.07357 | 5.03673 | 0.1685751 | 0.28433107 | 2.2904448 | 20 | 11 30.8 | 20.5 |
| 373447 1999 <i>VA</i> ₇₈ | 16.8 | X | 301.40185 | 185.22924 | 222.39913 | 24.34758 | 0.2366359 | 0.28149003 | 2.3058304 | 20 | 9 25.8 | 19.0 |
| 373448 1999 <i>VG</i> ₁₂₂ | 18.2 | X | 253.75247 | 356.29556 | 79.83395 | 3.37879 | 0.1594037 | 0.27567940 | 2.3381184 | 20 | 8 31.7 | 20.9 |
| 373449 1999 <i>WJ</i> ₁₂₉ | 17.7 | X | 170.22650 | 241.52781 | 272.38531 | 2.07791 | 0.1089178 | 0.27647430 | 2.3336347 | 20 | 9 10.7 | 21.0 |
| 373450 1999 <i>WA</i> ₁₁ | 16.3 | X | 164.47494 | 312.96228 | 48.84090 | 7.83625 | 0.2175166 | 0.21009848 | 2.8023397 | 20 | 3 2.5 | 21.1 |
| 373451 1999 <i>XZ</i> ₂₁₆ | 17.8 | X | 313.54544 | 106.92688 | 286.07006 | 1.75096 | 0.1900535 | 0.27615333 | 2.3354426 | 20 | 10 10.9 | 19.3 |
| 373452 2000 <i>AO</i> ₂₁₂ | 17.4 | X | 296.75667 | 150.15306 | 255.45965 | 5.87355 | 0.1756841 | 0.27834063 | 2.3231914 | 20 | 9 21.6 | 19.5 |
| 373453 2000 <i>DD</i> ₂₂ | 17.4 | X | 155.95169 | 194.70870 | 328.58625 | 7.42739 | 0.1335678 | 0.26623743 | 2.3930768 | 20 | 9 6.4 | 21.1 |
| 373454 2000 <i>DP</i> ₁₁₃ | 17.5 | X | 133.70015 | 154.37669 | 346.08506 | 2.32670 | 0.1278416 | 0.26014381 | 2.4303028 | 20 | 7 16.1 | 21.1 |
| 373455 2000 <i>ES</i> ₅₂ | 17.8 | X | 260.03859 | 239.17566 | 169.29568 | 1.60563 | 0.1812940 | 0.26485701 | 2.4013847 | 20 | 7 24.9 | 20.8 |
| 373456 2000 <i>EE</i> ₆₂ | 16.4 | X | 303.07807 | 251.54641 | 357.82350 | 28.78477 | 0.3769716 | 0.24074414 | 2.5591686 | 20 | 2 3.9 | 20.8 |
| 373457 2000 <i>FJ</i> ₂ | 16.9 | X | 165.52554 | 125.66651 | 19.87148 | 6.79781 | 0.0943461 | 0.26109548 | 2.4243937 | 20 | 8 28.1 | 20.5 |
| 373458 2000 <i>FB</i> ₁₀ | 17.8 | X | 152.23903 | 133.73098 | 20.64008 | 4.66853 | 0.1786929 | 0.26146474 | 2.4221105 | 20 | 8 25.2 | 21.7 |
| 373459 2000 <i>GH</i> ₄₅ | 15.8 | X | 223.58998 | 223.11385 | 29.61776 | 11.18308 | 0.1679847 | 0.18183511 | 3.0856800 | 20 | — | — |
| 373460 2000 <i>GX</i> ₁₆₄ | 17.3 | X | 92.57773 | 351.00714 | 200.57279 | 1.85660 | 0.1716727 | 0.25701348 | 2.4499964 | 20 | 8 11.6 | 20.7 |
| 373461 2000 <i>JE</i> ₈₇ | 16.0 | X | 103.35017 | 242.20397 | 101.44722 | 3.20010 | 0.1527946 | 0.17827947 | 3.1265725 | 20 | — | — |
| 373462 2000 <i>OP</i> ₂₁ | 16.8 | X | 224.90842 | 47.35007 | 391.24443 | 13.31803 | 0.2892726 | 0.23234966 | 2.6204429 | 20 | 3 8.2 | 21.8 |
| 373463 2000 <i>PK</i> ₁₇ | 18.0 | X | 31.21772 | 33.80649 | 217.27876 | 4.83563 | 0.2572269 | 0.30578596 | 2.1820148 | 20 | — | — |
| 373464 2000 <i>QK</i> ₁₇₇ | 16.3 | X | 216.67976 | 25.97590 | 328.61912 | 9.26128 | 0.2054217 | 0.23107088 | 2.6301019 | 20 | 3 26.7 | 20.8 |
| 373465 2000 <i>QJ</i> ₂₂₁ | 16.4 | X | 230.37183 | 193.30701 | 132.51675 | 15.22481 | 0.2637924 | 0.23123287 | 2.6288734 | 20 | 3 7.6 | 21.1 |
| 373466 2000 <i>RT</i> ₁₉ | 17.4 | X | 250.83817 | 83.05419 | 236.28867 | 5.16317 | 0.3445281 | 0.23279251 | 2.6171184 | 20 | 3 5.1 | 22.2 |
| 373467 2000 <i>RJ</i> ₉₉ | 16.5 | X | 219.72591 | 138.16017 | 214.01300 | 12.77191 | 0.2823121 | 0.23060794 | 2.6336206 | 20 | 3 24.9 | 21.3 |
| 373468 2000 <i>SS</i> ₂₁ | 16.7 | X | 182.93495 | 19.93999 | 1.59544 | 19.28192 | 0.2613285 | 0.22731010 | 2.6590320 | 20 | 4 2.1 | 21.4 |
| 373469 2000 <i>SO</i> ₄₂ | 16.9 | X | 244.75905 | 109.29711 | 172.28645 | 10.80705 | 0.4366895 | 0.22826215 | 2.6516332 | 20 | 1 16.3 | 22.3 |
| 373470 2000 <i>SF</i> ₅₁ | 16.6 | X | 221.31066 | 150.14793 | 207.40069 | 12.05191 | 0.1737113 | 0.23181902 | 2.6244402 | 20 | 4 7.5 | 20.9 |
| 373471 2000 <i>SE</i> ₈₁ | 16.9 | X | 231.36359 | 302.69988 | 23.80630 | 13.24459 | 0.2786989 | 0.22914449 | 2.6448220 | 20 | 3 10.6 | 21.7 |
| 373472 2000 <i>SY</i> ₁₁₃ | 15.9 | X | 259.38053 | 295.87910 | 26.49777 | 13.00869 | 0.1856835 | 0.23130720 | 2.6283102 | 20 | 4 2.1 | 19.8 |
| 373473 2000 <i>SR</i> ₁₃₇ | 16.4 | X | 242.27470 | 324.99837 | 356.35958 | 14.72313 | 0.2013025 | 0.22963647 | 2.6410430 | 20 | 3 13.0 | 20.5 |
| 373474 2000 <i>SS</i> ₁₇₄ | 16.9 | X | 159.93579 | 43.77697 | 328.47728 | 8.64632 | 0.2319547 | 0.22231837 | 2.6986868 | 20 | 3 5.7 | 21.4 |
| 373475 2000 <i>SH</i> ₁₈₁ | 16.3 | X | 271.81954 | 290.46556 | 80.05948 | 4.20887 | 0.2754782 | 0.23966182 | 2.5668677 | 20 | 6 3.0 | 19.8 |
| 373476 2000 <i>SO</i> ₁₈₉ | 16.8 | X | 215.39506 | 175.17662 | 207.11292 | 13.29729 | 0.2930668 | 0.23103161 | 2.6303999 | 20 | 4 29.2 | 21.6 |
| 373477 2000 <i>SG</i> ₂₂₈ | 17.7 | X | 356.48643 | 8.65683 | 13.87148 | 6.30443 | 0.2152666 | 0.30078369 | 2.2061406 | 20 | — | — |
| 373478 2000 <i>SF</i> ₂₃₅ | 16.8 | X | 183.58269 | 253.07864 | 180.15751 | 6.19251 | 0.2306155 | 0.23266450 | 2.6180783 | 20 | 6 7.8 | 21.4 |
| 373479 2000 <i>SQ</i> ₂₉₁ | 16.7 | X | 173.56092 | 212.04340 | 221.94889 | 4.13077 | 0.2985537 | 0.22953178 | 2.6418460 | 20 | 5 31.9 | 21.4 |
| 373480 2000 <i>SB</i> ₃₁₆ | 16.8 | X | 219.01150 | 107.09406 | 235.88436 | 15.50340 | 0.2498297 | 0.23030556 | 2.6359253 | 20 | 3 11.2 | 21.8 |
| 373481 2000 <i>TP</i> | 16.7 | X | 243.70714 | 286.59909 | 45.88763 | 13.28357 | 0.2960853 | 0.23115041 | 2.6294985 | 20 | 3 26.3 | 21.4 |
| 373482 2000 <i>TR</i> ₂₁ | 16.3 | X | 196.28493 | 226.98998 | 161.08068 | 14.06620 | 0.2714199 | 0.22888948 | 2.6467860 | 20 | 4 26.1 | 21.2 |
| 373483 2000 <i>TV</i> ₃₄ | 16.8 | X | 219.24941 | 191.32229 | 182.55428 | 8.16536 | 0.2036601 | 0.23092715 | 2.6311931 | 20 | 4 26.6 | 21.2 |
| 373484 2000 <i>UG</i> ₃ | 17.7 | X | 112.47741 | 224.45417 | 210.67055 | 20.62899 | 0.1004070 | 0.37263218 | 1.9125633 | 20 | 3 1.6 | 20.1 |
| 373485 2000 <i>UJ</i> ₆ | 16.7 | X | 191.65875 | 193.63501 | 219.11910 | 12.47271 | 0.2752200 | 0.22922938 | 2.6441689 | 20 | 5 19.4 | 21.5 |
| 373486 2000 <i>UJ</i> ₇₆ | 15.8 | X | 148.11027 | 219.29002 | 228.97125 | 21.30116 | 0.0540746 | 0.22821483 | 2.6519997 | 20 | 5 17.5 | 19.5 |
| 373487 2000 <i>VB</i> ₃ | 16.8 | X | 151.84140 | 220.78411 | 220.72784 | 7.18216 | 0.2477434 | 0.22577733 | 2.6710529 | 20 | 5 24.2 | 21.3 |
| 373488 2000 <i>VZ</i> ₅₄ | 16.4 | X | 151.98611 | 5.62334 | 39.59897 | 11.38555 | 0.2109344 | 0.22222442 | 2.6994474 | 20 | 4 10.3 | 20.9 |
| 373489 2000 <i>WA</i> ₁₂ | 18.1 | X | 56.03566 | 225.66979 | 118.70884 | 2.65338 | 0.2073594 | 0.30593822 | 2.1812908 | 20 | — | — |
| 373490 2000 <i>WW</i> ₂₃ | 16.3 | X | 199.92023 | 308.36131 | 54.99513 | 14.06860 | 0.1708683 | 0.22365944 | 2.6878884 | 20 | 4 3.2 | 20.9 |
| 373491 2000 <i>WQ</i> ₇₁ | 16.8 | X | 147.85607 | 119.14596 | 285.37713 | 6.74512 | 0.2158477 | 0.22208507 | 2.7005764 | 20 | 3 31.2 | 21.4 |
| 373492 2000 <i>WU</i> ₈₁ | 16.6 | X | 158.44090 | 24.83363 | 52.40540 | 7.32905 | 0.1974479 | 0.22551548 | 2.6731202 | 20 | 5 21.5 | 20.9 |
| 373493 2000 <i>WS</i> ₈₅ | 16.1 | X | 99.16487 | 196.39063 | 260.23551 | 13.02521 | 0.1458515 | 0.21874827 | 2.7279702 | 20 | 4 5.9 | 20.1 |
| 373494 2000 <i>WE</i> ₁₈₇ | 16.4 | X | 205.58508 | 316.35563 | 62.45138 | 14.28326 | 0.1855369 | 0.22712873 | 2.6604473 | 20 | 4 24.4 | 20.9 |
| 373495 2000 <i>XO</i> | 16.6 | X | 184.05220 | 162.64390 | 229.93723 | 12.25537 | 0.1686812 | 0.22508382 | 2.6765367 | 20 | 4 16.9 | 21.1 |
| 373496 2000 <i>XK</i> ₂₀ | 17.0 | X | 161.21226 | 110.43093 | 328.97288 | 7.77311 | 0.3259095 | 0.22546218 | 2.6735414 | 20 | 5 29.0 | 22.1 |
| 373497 2000 <i>XD</i> ₄₉ | 16.5 | X | 131.90753 | 50.45383 | 49.62921 | 13.41117 | 0.2609052 | 0.22149145 | 2.7053995 | 20 | 5 29.7 | 21.2 |
| 373498 2000 <i>YC</i> ₈ | 17.1 | X | 257.96720 | 31.44223 | 93.35364 | 6.62117 | 0.0831741 | 0.29397733 | 2.2400626 | 20 | 12 2.2 | 19.4 |
| 373499 2000 <i>YT</i> ₁₆ | 17.6 | X | 136.64316 | 131.39316 | 282.97316 | 16.54602 | 0.1245535 | 0.36961164 | 1.9229690 | 20 | 3 4.9 | 20.2 |
| 373500 2000 <i>YH</i> ₁₀₀ | 17.5 | X | 86.50219 | 207.88958 | 267.52691 | 17.57666 | 0.0834637 | 0.36725111 | 1.9312002 | 20 | 3 15.0 | 19.8 |
| 373501 2001 <i>BD</i> ₁₀ | 16.4 | X | 124.88727 | 125.14818 | 278.09541 | 4.67337 | 0.0998313 | 0.21230860 | 2.7828576 | 20 | 2 26.4 | 20.4 |
| 373502 2001 <i>BE</i> ₆₃ | 16.0 | X | 88.92454 | 150.72530 | 296.12170 | 12.73125 | 0.2300662 | 0.21268952 | 2.7795340 | 20 | 3 22.1 | 20.0 |
| 373503 2001 <i>CK</i> ₄₂ | 20.0 | X | 89.49804 | 220.06451 | 5.99049 | 10.27254 | 0.2807555 | 0.58198526 | 1.4207840 | 20 | 11 7.4 | 21.5 |
| 373504 2001 <i>EG</i> ₂₃ | 17.0 | X | 183.69639 | 208.93316 | 309.02700 | 7.27248 | 0.1751469 | 0.28136173 | 2.3065313 | 20 | 9 24.4 | 20.7 |
| 373505 2001 <i>FC</i> ₁₁ | 17.7 | X | 156.16522 | 176.58295 | 11.93164 | 2.35604 | 0.1332876 | 0.27998983 | 2.3140596 | 20 | 10 12.2 | 21.1 |
| 373506 2001 <i>FY</i> ₇₉ | 17.0 | X | 172.54709 | 340.64616 | 201.38326 | 22.76823 | 0.2644688 | 0.28109978 | 2.3079641 | 20 | 10 13.9 | 20.9 |
| 373507 2001 <i>FX</i> ₁₁₉ | 17.9 | X | 164.09922 | 184.56102 | 350.81975 | 4.10621 | 0.1426824 | 0.28036685 | 2.3119846 | 20 | 10 2.2 | 21.3 |
| 373508 2001 <i>KW</i> ₃₁ | 16.0 | X | 102.18498 | 82.57306 | 220.43669 | 23.17735 | 0.3911421 | 0.17282721 | 3.1919884 | 20 | 12 31.1 | 22.3 |
| 373509 2001 <i>KB</i> ₄₄ | 16.0 | X | 346.61606 | 50.23264 | 127.26016 | 9.77304 | 0.2923302 | 0.19966348 | 2.8991474 | 20 | 1 6.7 | 19.1 |
| 373510 2001 <i>NX</i> ₁₈ | 15.1 | X | 77.12614 | 112.34191 | 250.10741 | 12.06955 | 0.2906421 | 0.17239528 | 3.1973178 | 20 | — | — |
| 373511 2001 <i>OT</i> ₄₈ | 15.1 | X | 94.20235 | 204.53510 | 149.84059 | 27.40670 | 0.1683370 | 0.17383 | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|--------------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 373521 2001 <i>SH</i> ₁₅₆ | 15.4 | X | 60.49527 | 47.60026 | 342.38652 | 15.51228 | 0.1788602 | 0.17058620 | 3.2198832 | 20 | — | — |
| 373522 2001 <i>ST</i> ₁₅₈ | 17.3 | X | 206.62397 | 199.64651 | 189.53012 | 20.25905 | 0.2679355 | 0.24325904 | 2.5414997 | 20 | 5 3.1 | 22.0 |
| 373523 2001 <i>SR</i> ₁₉₈ | 16.1 | X | 54.63504 | 226.10262 | 154.46703 | 5.53381 | 0.1844773 | 0.16956417 | 3.2328085 | 20 | — | — |
| 373524 2001 <i>SV</i> ₂₀₅ | 17.5 | X | 233.44622 | 168.27370 | 175.70163 | 16.03254 | 0.2142268 | 0.24388676 | 2.5371369 | 20 | 3 31.8 | 21.8 |
| 373525 2001 <i>SG</i> ₂₀₆ | 16.1 | X | 62.79380 | 347.31862 | 35.72413 | 0.35484 | 0.1896045 | 0.17056385 | 3.2201645 | 20 | — | — |
| 373526 2001 <i>SP</i> ₂₁₃ | 18.0 | X | 242.21638 | 317.54706 | 19.34374 | 5.25909 | 0.2696126 | 0.24461329 | 2.5321107 | 20 | 3 26.4 | 22.3 |
| 373527 2001 <i>SN</i> ₂₃₆ | 15.8 | X | 55.42505 | 199.12399 | 182.68035 | 10.81625 | 0.1277904 | 0.16873925 | 3.2433363 | 20 | — | — |
| 373528 2001 <i>SS</i> ₂₄₃ | 17.7 | X | 208.52341 | 29.71594 | 9.96915 | 11.93782 | 0.1666942 | 0.24505066 | 2.5290969 | 20 | 5 15.5 | 21.9 |
| 373529 2001 <i>ST</i> ₂₆₈ | 15.5 | X | 42.89004 | 238.80688 | 171.81690 | 22.79577 | 0.1317608 | 0.17210052 | 3.2009674 | 20 | — | — |
| 373530 2001 <i>SS</i> ₂₇₅ | 17.9 | X | 191.68442 | 231.94271 | 183.49066 | 11.41746 | 0.1423349 | 0.24445403 | 2.5332103 | 20 | 5 25.7 | 22.0 |
| 373531 2001 <i>SF</i> ₃₀₅ | 17.1 | X | 199.48169 | 39.12999 | 359.91941 | 14.17305 | 0.1091097 | 0.24366766 | 2.5386575 | 20 | 5 6.0 | 21.2 |
| 373532 2001 <i>SA</i> ₃₄₈ | 18.2 | X | 200.59055 | 178.58657 | 225.99183 | 5.26143 | 0.2837545 | 0.24337851 | 2.5406679 | 20 | 5 15.2 | 22.7 |
| 373533 2001 <i>TF</i> ₁₁ | 16.8 | X | 333.49392 | 76.88182 | 286.14280 | 1.51792 | 0.1925344 | 0.25810010 | 2.4431151 | 20 | 10 4.8 | 18.7 |
| 373534 2001 <i>TR</i> ₁₆₉ | 16.5 | X | 235.95177 | 350.75967 | 17.71363 | 17.94399 | 0.1884332 | 0.24289684 | 2.5440256 | 20 | 4 29.5 | 20.7 |
| 373535 2001 <i>TX</i> ₁₇₄ | 17.3 | X | 234.63517 | 346.41515 | 26.56964 | 11.71841 | 0.2149297 | 0.24586797 | 2.5234890 | 20 | 5 4.5 | 21.4 |
| 373536 2001 <i>TM</i> ₁₇₆ | 16.9 | X | 281.07973 | 163.09021 | 215.48723 | 3.99184 | 0.0546918 | 0.25199864 | 2.4823933 | 20 | 7 31.3 | 19.9 |
| 373537 2001 <i>TJ</i> ₁₇₈ | 17.2 | X | 268.12001 | 352.45553 | 333.00463 | 3.87487 | 0.1458688 | 0.24457766 | 2.5323566 | 20 | 4 15.6 | 20.8 |
| 373538 2001 <i>TA</i> ₁₈₁ | 17.3 | X | 216.77917 | 105.49221 | 283.64130 | 1.98451 | 0.1782165 | 0.24384026 | 2.5374594 | 20 | 5 12.4 | 21.2 |
| 373539 2001 <i>TV</i> ₁₉₅ | 16.5 | X | 200.29782 | 337.82958 | 84.26048 | 13.25729 | 0.1616765 | 0.24393179 | 2.5368246 | 20 | 6 9.7 | 20.6 |
| 373540 2001 <i>TV</i> ₂₀₇ | 18.0 | X | 247.71829 | 315.54912 | 61.51645 | 1.37171 | 0.1427755 | 0.24778217 | 2.5104757 | 20 | 6 1.3 | 21.4 |
| 373541 2001 <i>TL</i> ₂₀₉ | 16.8 | X | 235.76831 | 72.50368 | 308.46756 | 6.67030 | 0.1630391 | 0.24593162 | 2.5230536 | 20 | 5 20.6 | 20.8 |
| 373542 2001 <i>TF</i> ₂₁₅ | 16.7 | X | 201.78471 | 152.52909 | 284.58527 | 7.85881 | 0.1407921 | 0.24631815 | 2.5204133 | 20 | 7 1.6 | 20.4 |
| 373543 2001 <i>TH</i> ₂₅₀ | 13.6 | X | 252.49263 | 302.90081 | 22.51282 | 24.11142 | 0.0395729 | 0.08403559 | 5.1621093 | 20 | 4 17.8 | 20.6 |
| 373544 2001 <i>UQ</i> ₅₄ | 17.0 | X | 48.36875 | 353.87283 | 28.88810 | 13.03833 | 0.2152808 | 0.21872725 | 2.7281450 | 20 | — | — |
| 373545 2001 <i>UP</i> ₉₁ | 17.3 | X | 201.06100 | 351.60358 | 5.65842 | 0.78386 | 0.1136019 | 0.24360575 | 2.5390877 | 20 | 5 18.5 | 21.2 |
| 373546 2001 <i>UP</i> ₉₇ | 17.0 | X | 227.65996 | 2.90823 | 46.14422 | 9.16036 | 0.1037004 | 0.24718361 | 2.5145268 | 20 | 6 25.3 | 20.7 |
| 373547 2001 <i>US</i> ₁₁₃ | 18.0 | X | 230.39727 | 342.20268 | 54.16020 | 3.74948 | 0.2223470 | 0.24593473 | 2.5230323 | 20 | 5 31.5 | 21.9 |
| 373548 2001 <i>UL</i> ₁₂₀ | 17.4 | X | 191.48966 | 321.55418 | 71.44045 | 5.06752 | 0.1934013 | 0.23976683 | 2.5661182 | 20 | 4 26.4 | 21.7 |
| 373549 2001 <i>UX</i> ₁₄₃ | 16.0 | X | 35.43245 | 238.43512 | 170.00779 | 0.87701 | 0.2659209 | 0.16543781 | 3.2863429 | 20 | — | — |
| 373550 2001 <i>UX</i> ₁₆₁ | 16.3 | X | 163.10319 | 236.60490 | 221.41462 | 12.12912 | 0.1061732 | 0.24088253 | 2.5581884 | 20 | 6 18.5 | 20.3 |
| 373551 2001 <i>UC</i> ₁₇₁ | 17.5 | X | 219.07480 | 19.01384 | 26.75899 | 5.62086 | 0.2386152 | 0.24420976 | 2.5348993 | 20 | 5 31.7 | 21.7 |
| 373552 2001 <i>UP</i> ₂₂₂ | 16.9 | X | 131.41996 | 87.88755 | 43.60958 | 5.20432 | 0.0376216 | 0.24330500 | 2.5411796 | 20 | 6 22.4 | 20.3 |
| 373553 2001 <i>UY</i> ₂₂₆ | 15.8 | X | 319.34335 | 112.26100 | 52.33057 | 10.81366 | 0.2087800 | 0.17332531 | 3.1858701 | 20 | — | — |
| 373554 2001 <i>UF</i> ₂₂₇ | 17.2 | X | 240.88399 | 289.88307 | 86.48614 | 3.92774 | 0.1762816 | 0.24670658 | 2.5177671 | 20 | 5 20.8 | 21.1 |
| 373555 2001 <i>VE</i> ₂₁ | 16.0 | X | 194.41529 | 213.60283 | 233.17653 | 12.33954 | 0.1994512 | 0.24426019 | 2.5345503 | 20 | 7 2.4 | 20.3 |
| 373556 2001 <i>VX</i> ₃₀ | 16.9 | X | 179.04272 | 28.23405 | 55.35282 | 3.45398 | 0.2240829 | 0.24061723 | 2.5600684 | 20 | 6 16.4 | 21.3 |
| 373557 2001 <i>VP</i> ₉₅ | 16.6 | X | 215.57177 | 212.31863 | 202.38173 | 14.66767 | 0.1115154 | 0.24422668 | 2.5347822 | 20 | 6 17.9 | 20.6 |
| 373558 2001 <i>VE</i> ₁₂₄ | 17.2 | X | 216.82025 | 189.33231 | 230.87653 | 5.02911 | 0.1644870 | 0.24545374 | 2.5263273 | 20 | 6 22.8 | 21.1 |
| 373559 2001 <i>WE</i> ₂₅ | 17.9 | X | 179.29918 | 212.99519 | 222.47338 | 3.95409 | 0.2715938 | 0.24164314 | 2.5528173 | 20 | 6 6.7 | 22.5 |
| 373560 2001 <i>WX</i> ₂₇ | 16.8 | X | 202.04825 | 200.05161 | 231.73700 | 15.83222 | 0.0967885 | 0.24372987 | 2.5382256 | 20 | 6 25.2 | 20.7 |
| 373561 2001 <i>WG</i> ₃₁ | 17.0 | X | 185.71217 | 266.78896 | 191.91424 | 3.93672 | 0.2286682 | 0.24381035 | 2.5376670 | 20 | 7 10.3 | 21.3 |
| 373562 2001 <i>WS</i> ₈₇ | 17.9 | X | 204.54218 | 123.68903 | 268.70670 | 4.46885 | 0.2198266 | 0.24092232 | 2.5579067 | 20 | 5 3.6 | 22.2 |
| 373563 2001 <i>XP</i> ₆ | 16.1 | X | 230.31194 | 64.83270 | 309.78549 | 13.34558 | 0.2489743 | 0.24265337 | 2.5457270 | 20 | 4 26.7 | 20.7 |
| 373564 2001 <i>XY</i> ₁₂ | 17.0 | X | 112.92038 | 154.81108 | 306.32337 | 11.68193 | 0.2362698 | 0.23183560 | 2.6243151 | 20 | 5 9.6 | 21.3 |
| 373565 2001 <i>XM</i> ₃₂ | 16.4 | X | 31.20135 | 294.55823 | 243.84864 | 8.58153 | 0.0680639 | 0.23396085 | 2.6083984 | 20 | 4 7.2 | 19.6 |
| 373566 2001 <i>XG</i> ₅₇ | 16.2 | X | 182.81089 | 174.13565 | 253.48762 | 7.35363 | 0.1563093 | 0.23924748 | 2.5698304 | 20 | 5 30.9 | 20.4 |
| 373567 2001 <i>XT</i> ₁₀₅ | 16.6 | X | 196.09061 | 145.88189 | 310.91829 | 4.52438 | 0.2019734 | 0.24468275 | 2.5316314 | 20 | 7 18.7 | 20.8 |
| 373568 2001 <i>XX</i> ₁₀₆ | 17.1 | X | 94.96081 | 36.16617 | 80.40291 | 6.19920 | 0.1603399 | 0.23295357 | 2.6159120 | 20 | 5 5.3 | 20.6 |
| 373569 2001 <i>XH</i> ₂₀₄ | 16.9 | X | 177.19795 | 147.08190 | 290.99858 | 6.46507 | 0.1653999 | 0.23925568 | 2.5697717 | 20 | 6 7.8 | 21.1 |
| 373570 2001 <i>XP</i> ₂₅₉ | 17.4 | X | 185.73694 | 344.06944 | 96.08975 | 5.57131 | 0.2692084 | 0.24221929 | 2.5487675 | 20 | 6 17.2 | 22.0 |
| 373571 2001 <i>YF</i> ₅ | 16.5 | X | 165.89090 | 345.13371 | 92.89894 | 15.36605 | 0.2196306 | 0.23542779 | 2.5975519 | 20 | 5 31.8 | 21.0 |
| 373572 2001 <i>YA</i> ₇ | 16.8 | X | 255.72109 | 9.23826 | 351.02274 | 5.48638 | 0.2213812 | 0.24358629 | 2.5392229 | 20 | 5 7.9 | 20.8 |
| 373573 2001 <i>YM</i> ₁₃ | 15.5 | X | 316.10511 | 357.85304 | 75.82346 | 10.01950 | 0.0923744 | 0.15382268 | 3.4497620 | 20 | 11 15.6 | 20.0 |
| 373574 2001 <i>YH</i> ₅₁ | 17.1 | X | 227.87158 | 93.85954 | 273.48428 | 10.85521 | 0.3417954 | 0.24128998 | 2.5553076 | 20 | 4 12.7 | 22.0 |
| 373575 2001 <i>YP</i> ₇₂ | 16.5 | X | 215.76026 | 125.02075 | 294.93043 | 9.76392 | 0.2318648 | 0.24185054 | 2.5513576 | 20 | 6 17.3 | 20.8 |
| 373576 2001 <i>YR</i> ₇₅ | 16.7 | X | 147.76271 | 161.24704 | 291.02141 | 6.32883 | 0.1616599 | 0.23549002 | 2.5970943 | 20 | 5 28.6 | 20.9 |
| 373577 2001 <i>YB</i> ₈₅ | 17.1 | X | 164.52696 | 150.90926 | 296.98815 | 4.15270 | 0.3264139 | 0.23696476 | 2.5863078 | 20 | 6 11.7 | 21.8 |
| 373578 2001 <i>YU</i> ₁₅₁ | 16.7 | X | 169.99150 | 124.93564 | 346.22210 | 6.01556 | 0.1819718 | 0.24181246 | 2.5516255 | 20 | 7 15.1 | 20.9 |
| 373579 2002 <i>AW</i> ₁₁ | 18.7 | X | 174.68612 | 91.13105 | 95.56007 | 18.33126 | 0.3304435 | 0.56636094 | 1.4467956 | 20 | 12 4.1 | 19.4 |
| 373580 2002 <i>AU</i> ₄₈ | 16.9 | X | 208.62954 | 257.67409 | 141.69052 | 2.54894 | 0.2207880 | 0.23749299 | 2.5824714 | 20 | 5 17.5 | 21.3 |
| 373581 2002 <i>AV</i> ₅₀ | 17.2 | X | 164.64760 | 162.06864 | 301.03157 | 4.31975 | 0.2589998 | 0.23748627 | 2.5825201 | 20 | 6 29.8 | 21.9 |
| 373582 2002 <i>AA</i> ₁₁₄ | 17.0 | X | 176.06386 | 341.57920 | 104.28423 | 5.02645 | 0.1881842 | 0.23724507 | 2.5842702 | 20 | 6 17.1 | 21.3 |
| 373583 2002 <i>AJ</i> ₁₃₇ | 16.3 | X | 12.76375 | 46.02449 | 132.65195 | 6.53472 | 0.0333742 | 0.22497286 | 2.6774167 | 20 | 3 16.2 | 19.7 |
| 373584 2002 <i>AN</i> ₁₇₄ | 17.0 | X | 179.76179 | 58.57992 | 49.61955 | 2.05665 | 0.1646717 | 0.23953093 | 2.5678027 | 20 | 7 19.5 | 21.2 |
| 373585 2002 <i>AY</i> ₁₇₄ | 15.1 | X | 358.74295 | 302.31397 | 109.74153 | 8.84796 | 0.0736278 | 0.15118156 | 3.4898237 | 20 | 12 17.7 | 19.7 |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> | | |
|--------|----------|-------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----------|---------|------|
| 373601 | 2002 | CU ₂₂₇ | 16.7 | X | 128.75292 | 170.06868 | 271.53166 | 7.06077 | 0.1543548 | 0.22804045 | 2.6533515 | 20 | 4 23.7 | 20.8 |
| 373602 | 2002 | CM ₂₃₉ | 17.0 | X | 141.60867 | 150.11464 | 323.42710 | 4.42754 | 0.2525862 | 0.23238355 | 2.6201881 | 20 | 6 24.6 | 21.5 |
| 373603 | 2002 | CR ₂₄₁ | 16.3 | X | 91.34756 | 200.82760 | 318.17499 | 11.21095 | 0.1846633 | 0.22933146 | 2.6433842 | 20 | 6 29.6 | 20.2 |
| 373604 | 2002 | CP ₂₄₄ | 16.3 | X | 183.40832 | 99.23695 | 345.89653 | 12.95151 | 0.2546421 | 0.23420659 | 2.6065735 | 20 | 6 22.1 | 21.1 |
| 373605 | 2002 | CO ₂₅₁ | 16.9 | X | 136.89141 | 97.36015 | 49.30521 | 4.98649 | 0.2120916 | 0.23761177 | 2.5816107 | 20 | 7 31.9 | 21.2 |
| 373606 | 2002 | CF ₂₇₁ | 16.6 | X | 200.07393 | 292.72260 | 107.23849 | 4.27780 | 0.1918749 | 0.23390451 | 2.6088172 | 20 | 5 12.4 | 20.9 |
| 373607 | 2002 | CZ ₃₀₅ | 16.7 | X | 107.20965 | 325.82307 | 180.39657 | 7.42456 | 0.1325106 | 0.23269364 | 2.6178598 | 20 | 6 23.1 | 20.6 |
| 373608 | 2002 | CG ₃₁₅ | 17.1 | X | 180.31278 | 225.03534 | 216.28525 | 3.48357 | 0.0806632 | 0.23479346 | 2.6022282 | 20 | 6 15.7 | 20.9 |
| 373609 | 2002 | CJ ₃₁₅ | 16.9 | X | 2.62014 | 284.89999 | 270.44848 | 6.65570 | 0.1642072 | 0.22138224 | 2.7062892 | 20 | 3 11.5 | 19.9 |
| 373610 | 2002 | DE ₇ | 15.9 | X | 135.05040 | 96.57359 | 34.53692 | 13.36150 | 0.2834285 | 0.23493445 | 2.6011870 | 20 | 7 14.9 | 20.7 |
| 373611 | 2002 | EQ ₂ | 16.6 | X | 28.18091 | 138.47301 | 51.17439 | 12.36482 | 0.1706724 | 0.22267120 | 2.6958352 | 20 | 5 1.4 | 19.2 |
| 373612 | 2002 | EU ₅ | 17.7 | X | 32.49280 | 240.92829 | 346.27784 | 20.88283 | 0.0726125 | 0.39328963 | 1.8449916 | 20 | 7 5.3 | 19.7 |
| 373613 | 2002 | ER ₄₈ | 16.9 | X | 132.26707 | 297.79849 | 176.57290 | 7.88988 | 0.1676315 | 0.22955833 | 2.6416423 | 20 | 6 12.5 | 21.1 |
| 373614 | 2002 | ES ₇₃ | 16.1 | X | 10.65761 | 189.88979 | 359.58736 | 16.24300 | 0.1619176 | 0.21842455 | 2.7306649 | 20 | 3 23.2 | 18.6 |
| 373615 | 2002 | EW ₉₃ | 16.7 | X | 175.94079 | 285.00349 | 149.70785 | 6.04553 | 0.2542306 | 0.23363145 | 2.6108495 | 20 | 6 4.0 | 21.4 |
| 373616 | 2002 | EU ₁₁₀ | 16.3 | X | 119.16735 | 104.87178 | 56.59072 | 7.82372 | 0.1612910 | 0.23210319 | 2.6222976 | 20 | 7 31.5 | 20.4 |
| 373617 | 2002 | ER ₁₁₄ | 16.8 | X | 113.69624 | 11.58122 | 128.39770 | 3.01750 | 0.1431085 | 0.22953937 | 2.6417878 | 20 | 6 23.4 | 20.6 |
| 373618 | 2002 | FM | 16.3 | X | 75.84831 | 245.12991 | 353.40578 | 22.60870 | 0.4712965 | 0.17814808 | 3.1281095 | 20 | 10 8.6 | 22.0 |
| 373619 | 2002 | FA ₁ | 16.2 | X | 140.59387 | 100.58991 | 0.00805 | 6.59053 | 0.2950172 | 0.22976706 | 2.6400422 | 20 | 6 8.9 | 21.0 |
| 373620 | 2002 | GQ ₄ | 17.5 | X | 201.74409 | 209.66409 | 194.69339 | 23.99731 | 0.0023397 | 0.38806394 | 1.8615178 | 20 | 5 25.9 | 19.7 |
| 373621 | 2002 | GQ ₆ | 16.6 | X | 150.63061 | 92.55646 | 30.90730 | 28.40847 | 0.3585840 | 0.23272850 | 2.6175983 | 20 | 7 23.6 | 22.1 |
| 373622 | 2002 | GG ₈₈ | 15.4 | X | 104.64305 | 43.87832 | 201.40441 | 27.68993 | 0.1631178 | 0.18224153 | 3.0810907 | 20 | 10 22.3 | 20.2 |
| 373623 | 2002 | GQ ₁₆₁ | 15.8 | X | 6.81092 | 166.92005 | 48.69727 | 15.09145 | 0.1783244 | 0.22282023 | 2.6946331 | 20 | 4 26.0 | 18.3 |
| 373624 | 2002 | GP ₁₈₅ | 17.4 | X | 304.39249 | 39.45611 | 33.68602 | 8.58592 | 0.0616617 | 0.29858762 | 2.2169447 | 20 | 12 4.5 | 19.7 |
| 373625 | 2002 | JV ₈₂ | 17.6 | X | 67.33456 | 204.01176 | 48.23120 | 3.27726 | 0.1730330 | 0.28648804 | 2.2789339 | 20 | 10 8.8 | 20.5 |
| 373626 | 2002 | JQ ₉₉ | 16.7 | X | 70.75219 | 32.43159 | 117.79146 | 14.38313 | 0.2259378 | 0.22167010 | 2.7039458 | 20 | 5 30.8 | 20.4 |
| 373627 | 2002 | JG ₁₄₇ | 17.1 | X | 151.42296 | 237.61943 | 29.74778 | 2.49037 | 0.4098157 | 0.18839585 | 3.0136200 | 20 | 12 23.8 | 23.0 |
| 373628 | 2002 | LR ₃₁ | 17.2 | X | 9.51093 | 226.91060 | 74.53763 | 6.42735 | 0.2776475 | 0.28000552 | 2.3139732 | 20 | 10 13.6 | 19.1 |
| 373629 | 2002 | LF ₅₈ | 15.7 | X | 227.59073 | 163.96207 | 113.17271 | 7.17997 | 0.0500171 | 0.20285989 | 2.8686128 | 20 | 1 16.4 | 19.8 |
| 373630 | 2002 | NH ₅₅ | 17.7 | X | 7.91804 | 246.72669 | 65.20803 | 1.34666 | 0.2406500 | 0.27820054 | 2.3239712 | 20 | 10 13.2 | 19.6 |
| 373631 | 2002 | NH ₅₈ | 15.9 | X | 83.62329 | 225.24537 | 166.86664 | 19.44836 | 0.0617505 | 0.19021180 | 2.9944087 | 20 | — | — |
| 373632 | 2002 | NZ ₆₈ | 17.4 | X | 156.26923 | 279.70624 | 275.03695 | 6.10173 | 0.0465913 | 0.28398851 | 2.2922863 | 20 | 10 21.5 | 20.5 |
| 373633 | 2002 | NA ₆₉ | 16.2 | X | 112.46075 | 219.32890 | 137.65814 | 10.85672 | 0.1120624 | 0.18941761 | 3.0027728 | 20 | — | — |
| 373634 | 2002 | NJ ₇₀ | 18.0 | X | 337.20886 | 130.01571 | 214.22803 | 4.80638 | 0.2433702 | 0.27652382 | 2.3333561 | 20 | 9 19.4 | 19.1 |
| 373635 | 2002 | OO ₂₀ | 18.3 | X | 359.52616 | 97.10797 | 184.56510 | 4.85702 | 0.2883754 | 0.27414057 | 2.3468600 | 20 | 8 5.9 | 19.3 |
| 373636 | 2002 | OJ ₂₅ | 18.1 | X | 299.02900 | 254.62458 | 120.75615 | 5.38932 | 0.2378186 | 0.27287559 | 2.3541073 | 20 | 7 30.6 | 19.8 |
| 373637 | 2002 | OY ₂₈ | 17.7 | X | 111.31041 | 276.30081 | 310.70624 | 5.84177 | 0.1391993 | 0.28205334 | 2.3027593 | 20 | 10 14.6 | 21.2 |
| 373638 | 2002 | OY ₃₂ | 16.4 | X | 60.70155 | 57.95823 | 316.79988 | 14.60854 | 0.0673049 | 0.18287645 | 3.0739552 | 20 | — | — |
| 373639 | 2002 | PB ₂ | 16.4 | X | 80.32052 | 9.20914 | 309.81030 | 17.18749 | 0.1965261 | 0.17738646 | 3.1370569 | 20 | 12 27.6 | 21.5 |
| 373640 | 2002 | PF ₆ | 16.6 | X | 103.94721 | 105.29747 | 223.23078 | 3.20516 | 0.1755047 | 0.18238160 | 3.0795130 | 20 | — | — |
| 373641 | 2002 | PJ ₉ | 15.5 | X | 87.43032 | 141.51983 | 262.07092 | 5.45015 | 0.2625284 | 0.18925964 | 3.0044435 | 20 | 2 7.8 | 19.6 |
| 373642 | 2002 | PM ₂₈ | 18.2 | X | 10.80847 | 41.89795 | 264.99650 | 3.47055 | 0.1953337 | 0.27712489 | 2.3299809 | 20 | 10 2.8 | 20.3 |
| 373643 | 2002 | PR ₃₄ | 17.9 | X | 11.71760 | 95.69674 | 175.28610 | 4.60968 | 0.1925078 | 0.27307165 | 2.3529804 | 20 | 8 6.4 | 19.8 |
| 373644 | 2002 | PA ₈₀ | 17.9 | X | 324.00063 | 284.03352 | 57.98760 | 2.18975 | 0.2047008 | 0.27340829 | 2.3510486 | 20 | 8 9.6 | 19.3 |
| 373645 | 2002 | PS ₁₀₀ | 16.1 | X | 84.76554 | 239.10870 | 134.91500 | 14.17533 | 0.1815995 | 0.18516414 | 3.0485837 | 20 | — | — |
| 373646 | 2002 | PT ₁₀₁ | 15.7 | X | 147.87597 | 106.36953 | 244.31359 | 9.03500 | 0.0771812 | 0.19326380 | 2.9628003 | 20 | 1 19.0 | 20.2 |
| 373647 | 2002 | PG ₁₄₇ | 18.2 | X | 321.05305 | 210.07379 | 162.23531 | 1.60345 | 0.2013964 | 0.27607163 | 2.3359033 | 20 | 9 25.4 | 19.7 |
| 373648 | 2002 | PK ₁₆₅ | 16.6 | X | 6.56338 | 28.93278 | 333.76413 | 9.60164 | 0.2509569 | 0.22574555 | 2.6713036 | 20 | 12 10.9 | 19.7 |
| 373649 | 2002 | PA ₁₇₂ | 16.1 | X | 93.88934 | 107.61365 | 286.77723 | 3.84726 | 0.2311088 | 0.18892700 | 3.0079690 | 20 | 2 1.5 | 20.0 |
| 373650 | 2002 | PB ₁₇₂ | 16.2 | X | 71.35605 | 249.00313 | 153.86324 | 8.18688 | 0.1144872 | 0.18815284 | 3.0162143 | 20 | — | — |
| 373651 | 2002 | PZ ₁₇₆ | 17.7 | X | 325.20313 | 161.63070 | 184.26526 | 6.81363 | 0.1407329 | 0.27442139 | 2.3452586 | 20 | 8 21.2 | 19.7 |
| 373652 | 2002 | PR ₁₈₀ | 18.1 | X | 342.63723 | 143.72543 | 175.80397 | 2.28402 | 0.1983423 | 0.27413658 | 2.3468827 | 20 | 8 18.8 | 19.7 |
| 373653 | 2002 | QD ₆ | 15.3 | X | 81.91884 | 78.24961 | 272.87535 | 25.47597 | 0.1857713 | 0.17906999 | 3.1173639 | 20 | — | — |
| 373654 | 2002 | QJ ₁₂ | 16.5 | X | 104.99643 | 197.85405 | 184.11365 | 7.44686 | 0.1971850 | 0.18867949 | 3.0105990 | 20 | 1 25.1 | 20.8 |
| 373655 | 2002 | QV ₂₇ | 18.0 | X | 337.72676 | 313.62863 | 356.88808 | 4.32126 | 0.2042119 | 0.27188910 | 2.3597981 | 20 | 7 20.9 | 19.5 |
| 373656 | 2002 | QV ₅₆ | 16.8 | X | 105.54058 | 266.10723 | 64.40064 | 2.77707 | 0.2711385 | 0.18171423 | 3.0870482 | 20 | — | — |
| 373657 | 2002 | QO ₆₂ | 18.1 | X | 107.60137 | 110.03935 | 329.76400 | 18.59507 | 0.0952154 | 0.36447478 | 1.9409949 | 20 | 3 3.4 | 19.8 |
| 373658 | 2002 | QW ₆₆ | 18.2 | X | 319.76642 | 235.02034 | 109.54496 | 3.89987 | 0.1923766 | 0.27266730 | 2.3553060 | 20 | 8 3.8 | 19.8 |
| 373659 | 2002 | QU ₆₇ | 18.1 | X | 10.67176 | 101.23326 | 216.78105 | 1.77051 | 0.2069398 | 0.27761909 | 2.3272149 | 20 | 10 23.8 | 20.2 |
| 373660 | 2002 | QU ₆₉ | 16.5 | X | 112.33268 | 340.81926 | 16.33877 | 2.19202 | 0.1993237 | 0.18689362 | 3.0297472 | 20 | 1 6.3 | 20.8 |
| 373661 | 2002 | QA ₇₀ | 16.0 | X | 49.44852 | 72.94579 | 323.40878 | 15.29214 | 0.2425463 | 0.18113962 | 3.0935733 | 20 | — | — |
| 373662 | 2002 | QW ₇₃ | 16.2 | X | 123.19992 | 304.22373 | 19.35654 | 4.16496 | 0.1617911 | 0.18445527 | 3.0563893 | 20 | — | — |
| 373663 | 2002 | QF ₈₀ | 16.3 | X | 70.04165 | 129.90714 | 285.56098 | 4.77809 | 0.1998695 | 0.18723330 | 3.0260817 | 20 | 1 20.9 | 19.9 |
| 373664 | 2002 | QJ ₈₁ | 16.2 | X | 101.75847 | 45.14611 | 334.37647 | 9.25258 | 0.1162127 | 0.18941669 | 3.0027826 | 20 | 1 10.0 | 20.4 |
| 373665 | 2002 | QP ₈₁ | 16.6 | X | 68.02787 | 293.27993 | 92.76808 | 4.46527 | 0.3246374 | 0.18202720 | 3.0835087 | 20 | — | — |
| 373666 | 2002 | QY ₈₂ | 16.9 | X | 81.69795 | 203.43489 | 191.77271 | 4.18299 | 0.2668383 | 0.18618788 | 3.0373985 | 20 | 1 22.8 | 20.7 |
| 373667 | 2002 | QX ₈₈ | 17.1 | X | 172.35275 | 39.66425 | 228.55934 | 1.05812 | 0.2229971 | 0.18574561 | 3.0422180 | 20 | — | — |
| 373668 | 2002 | QS ₈₉ | 18.4 | X | 315.52508 | 142.41943 | 176.53047 | 1.10394 | 0.1883949 | 0.26896484 | 2.3768715 | 20 | 6 11.3 | 20.3 |
| 373669 | 2002 | QL ₉₂ | 16.4 | X | 139.26310 | 258.81299 | 56.08543 | 1.68851 | 0.1774579 | 0.18527892 | 3.0473246 | 20 | — | — |
| 373670 | 2002 | QC ₉₆ | 16.1 | X | 82.76708 | 258.18278 | 123.0175 | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|--------------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|------------|----|---------|----------|
| 373681 2002 <i>RJ</i> ₄ | 16.0 | X | 112.64965 | 98.73558 | 246.35036 | 10.37488 | 0.1593469 | 0.18498435 | 3.0505587 | 20 | — | — |
| 373682 2002 <i>RT</i> ₅ | 16.3 | X | 84.00005 | 88.84930 | 301.08511 | 9.83124 | 0.3270949 | 0.18327453 | 3.0695023 | 20 | 1 29.6 | 20.3 |
| 373683 2002 <i>RH</i> ₉ | 15.9 | X | 94.86157 | 28.74223 | 8.80411 | 3.23947 | 0.2832478 | 0.18773958 | 3.0206390 | 20 | 2 15.6 | 20.1 |
| 373684 2002 <i>RG</i> ₁₂ | 15.5 | X | 133.13915 | 335.45777 | 352.17722 | 12.12321 | 0.1710186 | 0.18420556 | 3.0591508 | 20 | — | — |
| 373685 2002 <i>RB</i> ₂₀ | 16.9 | X | 306.01529 | 11.59875 | 15.13245 | 7.18913 | 0.1542597 | 0.27344874 | 2.3508167 | 20 | 9 18.3 | 18.8 |
| 373686 2002 <i>RT</i> ₃₁ | 15.5 | X | 139.67235 | 335.00414 | 327.86865 | 10.26268 | 0.1401116 | 0.18244027 | 3.0788527 | 20 | — | — |
| 373687 2002 <i>RB</i> ₄₅ | 17.7 | X | 333.08237 | 228.02648 | 115.17329 | 2.93270 | 0.2300352 | 0.27355834 | 2.3501887 | 20 | 9 6.6 | 18.9 |
| 373688 2002 <i>RL</i> ₆₈ | 15.8 | X | 136.06030 | 114.29003 | 178.07431 | 17.60839 | 0.2644107 | 0.18156151 | 3.0887792 | 20 | — | — |
| 373689 2002 <i>RN</i> ₇₆ | 17.2 | X | 302.58180 | 342.76971 | 20.58947 | 2.67134 | 0.2368623 | 0.27036241 | 2.3686733 | 20 | 7 18.9 | 19.4 |
| 373690 2002 <i>RL</i> ₇₈ | 15.7 | X | 179.50015 | 308.63759 | 345.03500 | 11.11177 | 0.0778650 | 0.18686754 | 3.0300291 | 20 | — | — |
| 373691 2002 <i>RT</i> ₈₀ | 16.1 | X | 111.34200 | 150.99259 | 179.63927 | 9.52283 | 0.2929859 | 0.18152853 | 3.0891532 | 20 | — | — |
| 373692 2002 <i>RM</i> ₈₉ | 17.9 | X | 311.63026 | 155.68859 | 181.13067 | 2.04460 | 0.2322123 | 0.26953966 | 2.3734911 | 20 | 6 24.3 | 19.9 |
| 373693 2002 <i>RL</i> ₁₁₄ | 16.0 | X | 98.14958 | 206.45084 | 155.20562 | 8.52471 | 0.2014506 | 0.18278502 | 3.0749802 | 20 | — | — |
| 373694 2002 <i>RL</i> ₁₁₅ | 17.7 | X | 327.89301 | 27.85142 | 300.88069 | 5.12119 | 0.1753512 | 0.27125304 | 2.3634857 | 20 | 7 28.0 | 19.5 |
| 373695 2002 <i>RJ</i> ₁₁₇ | 17.3 | X | 293.81275 | 305.38735 | 82.57112 | 6.16033 | 0.2396955 | 0.26956838 | 2.3733225 | 20 | 8 10.6 | 19.5 |
| 373696 2002 <i>RE</i> ₁₄₁ | 17.0 | X | 254.70641 | 15.67869 | 39.73501 | 11.08485 | 0.1882023 | 0.26808456 | 2.3820718 | 20 | 7 31.4 | 20.3 |
| 373697 2002 <i>RH</i> ₁₄₃ | 16.4 | X | 77.25879 | 189.89112 | 185.26349 | 4.93991 | 0.1604849 | 0.18184263 | 3.0855949 | 20 | — | — |
| 373698 2002 <i>RY</i> ₁₅₀ | 16.3 | X | 122.42041 | 120.41968 | 213.88498 | 8.60188 | 0.1381997 | 0.18477064 | 3.0529105 | 20 | — | — |
| 373699 2002 <i>RL</i> ₁₅₈ | 18.0 | X | 336.79141 | 30.88594 | 303.04588 | 1.36677 | 0.2230576 | 0.27267921 | 2.3552375 | 20 | 8 28.9 | 19.4 |
| 373700 2002 <i>RG</i> ₁₇₁ | 17.4 | X | 336.94353 | 251.82908 | 83.07283 | 3.50777 | 0.2139352 | 0.27339037 | 2.3511513 | 20 | 9 3.4 | 18.8 |
| 373701 2002 <i>RK</i> ₁₇₅ | 15.7 | X | 157.12492 | 313.00964 | 337.94085 | 23.22567 | 0.2285430 | 0.18444280 | 3.0565271 | 20 | — | — |
| 373702 2002 <i>RL</i> ₁₉₇ | 18.0 | X | 310.10628 | 233.40068 | 137.37482 | 1.95552 | 0.1936261 | 0.27240042 | 2.3568441 | 20 | 8 25.0 | 19.8 |
| 373703 2002 <i>RS</i> ₂₀₄ | 16.5 | X | 83.54944 | 205.11562 | 166.99472 | 5.47376 | 0.2536479 | 0.18301337 | 3.0724218 | 20 | — | — |
| 373704 2002 <i>RD</i> ₂₃₇ | 16.3 | X | 82.44450 | 1.35616 | 4.71532 | 5.45853 | 0.1433754 | 0.18277179 | 3.0751285 | 20 | — | — |
| 373705 2002 <i>RK</i> ₂₃₇ | 15.6 | X | 72.70397 | 26.25477 | 358.39138 | 10.67671 | 0.1040035 | 0.18340533 | 3.0680428 | 20 | — | — |
| 373706 2002 <i>RY</i> ₂₄₁ | 16.6 | X | 124.53139 | 88.22492 | 278.30691 | 3.78371 | 0.1358003 | 0.18918697 | 3.0052129 | 20 | 1 21.6 | 21.1 |
| 373707 2002 <i>RK</i> ₂₄₇ | 18.0 | X | 299.26980 | 2.65451 | 3.75057 | 4.13248 | 0.2088845 | 0.27133812 | 2.3629916 | 20 | 7 22.9 | 20.1 |
| 373708 2002 <i>RB</i> ₂₄₉ | 16.4 | X | 88.58169 | 29.65827 | 344.27520 | 5.11483 | 0.1394563 | 0.18446238 | 3.0563108 | 20 | — | — |
| 373709 2002 <i>RZ</i> ₂₅₂ | 18.4 | X | 320.81936 | 129.40213 | 196.51248 | 4.82299 | 0.1536915 | 0.26922308 | 2.3753513 | 20 | 7 8.3 | 20.7 |
| 373710 2002 <i>RK</i> ₂₅₆ | 16.5 | X | 139.31796 | 123.72875 | 202.68988 | 10.10600 | 0.1300896 | 0.18715272 | 3.0269503 | 20 | — | — |
| 373711 2002 <i>RL</i> ₂₅₈ | 16.2 | X | 150.01561 | 306.78211 | 345.88845 | 10.81932 | 0.0753004 | 0.18171454 | 3.0870448 | 20 | — | — |
| 373712 2002 <i>RR</i> ₂₅₉ | 16.2 | X | 104.72222 | 330.59634 | 25.47376 | 3.64922 | 0.1175328 | 0.18434843 | 3.0575701 | 20 | — | — |
| 373713 2002 <i>RJ</i> ₂₆₀ | 16.6 | X | 132.01238 | 277.40666 | 23.81325 | 3.40463 | 0.1638702 | 0.18176730 | 3.0864473 | 20 | — | — |
| 373714 2002 <i>RA</i> ₂₆₁ | 17.7 | X | 308.85391 | 279.98182 | 39.76065 | 10.67660 | 0.2399319 | 0.26790380 | 2.3831432 | 20 | 5 18.9 | 20.2 |
| 373715 2002 <i>RH</i> ₂₆₇ | 16.0 | X | 194.96611 | 271.67608 | 356.36192 | 8.82095 | 0.0291882 | 0.18313635 | 3.0710462 | 20 | — | — |
| 373716 2002 <i>RE</i> ₂₆₉ | 16.3 | X | 51.89133 | 64.17557 | 339.40558 | 8.55601 | 0.0825431 | 0.18390472 | 3.0624861 | 20 | — | — |
| 373717 2002 <i>RF</i> ₂₇₃ | 16.1 | X | 348.94160 | 154.81727 | 341.52443 | 9.61465 | 0.0598964 | 0.18895871 | 3.0076325 | 20 | — | — |
| 373718 2002 <i>RS</i> ₂₇₆ | 16.7 | X | 45.28392 | 211.85467 | 199.51882 | 3.20865 | 0.2083174 | 0.18118657 | 3.0932347 | 20 | — | — |
| 373719 2002 <i>RX</i> ₂₇₇ | 16.3 | X | 71.59893 | 161.59017 | 253.04872 | 7.50408 | 0.1032845 | 0.18711205 | 3.0273888 | 20 | 1 8.9 | 20.2 |
| 373720 2002 <i>RG</i> ₂₇₈ | 16.1 | X | 86.05053 | 115.98254 | 261.82905 | 2.46191 | 0.2526890 | 0.18452809 | 3.0555852 | 20 | 1 6.4 | 19.9 |
| 373721 2002 <i>RV</i> ₂₈₂ | 17.6 | X | 266.30213 | 237.50944 | 200.69843 | 1.74931 | 0.1622633 | 0.27263458 | 2.3554945 | 20 | 9 19.4 | 20.0 |
| 373722 2002 <i>SR</i> ₅ | 16.6 | X | 71.11676 | 303.75490 | 107.01493 | 2.24925 | 0.3339333 | 0.18226491 | 3.0808272 | 20 | 2 8.5 | 20.2 |
| 373723 2002 <i>SV</i> ₁₂ | 15.9 | X | 74.90053 | 205.73079 | 192.97097 | 15.33773 | 0.1950272 | 0.18209131 | 3.0827850 | 20 | 1 6.1 | 20.0 |
| 373724 2002 <i>SW</i> ₁₆ | 17.0 | X | 256.91064 | 65.00687 | 354.19540 | 2.11249 | 0.1823850 | 0.26787969 | 2.3832861 | 20 | 8 6.0 | 20.0 |
| 373725 2002 <i>SZ</i> ₂₂ | 15.5 | X | 98.98503 | 323.49858 | 31.94187 | 8.27464 | 0.2742411 | 0.18237490 | 3.0795884 | 20 | — | — |
| 373726 2002 <i>SO</i> ₂₄ | 17.3 | X | 2.19642 | 291.26680 | 30.18543 | 6.92455 | 0.2068300 | 0.27416702 | 2.3467090 | 20 | 10 12.7 | 19.1 |
| 373727 2002 <i>SX</i> ₂₉ | 17.6 | X | 308.07418 | 267.80401 | 127.34552 | 3.02214 | 0.2247680 | 0.27408629 | 2.3471698 | 20 | 9 29.5 | 18.9 |
| 373728 2002 <i>SF</i> ₄₃ | 17.4 | X | 309.67880 | 17.71034 | 350.25680 | 2.34542 | 0.2081155 | 0.27063530 | 2.3670808 | 20 | 8 17.1 | 19.2 |
| 373729 2002 <i>SM</i> ₄₉ | 17.7 | X | 283.66970 | 31.48522 | 15.05632 | 7.05026 | 0.1403855 | 0.27183879 | 2.3600893 | 20 | 9 7.9 | 20.2 |
| 373730 2002 <i>SL</i> ₆₄ | 17.5 | X | 322.31002 | 228.81684 | 113.90466 | 5.27491 | 0.1716635 | 0.27258474 | 2.3557816 | 20 | 8 9.4 | 19.2 |
| 373731 2002 <i>SA</i> ₆₉ | 17.7 | X | 262.98736 | 29.79837 | 350.23028 | 2.86393 | 0.1078977 | 0.26555754 | 2.3971597 | 20 | 6 30.7 | 20.6 |
| 373732 2002 <i>TC</i> ₁₂ | 15.9 | X | 38.14280 | 216.60804 | 181.95788 | 27.92077 | 0.1395877 | 0.17778341 | 3.1323857 | 20 | — | — |
| 373733 2002 <i>TS</i> ₁₄ | 17.5 | X | 309.89062 | 322.16349 | 52.59352 | 2.98104 | 0.2137061 | 0.27143792 | 2.3624124 | 20 | 8 30.1 | 19.1 |
| 373734 2002 <i>TH</i> ₁₉ | 15.5 | X | 78.80177 | 48.40262 | 8.48206 | 18.94220 | 0.1216498 | 0.18567517 | 2.36429875 | 20 | 2 2.3 | 19.8 |
| 373735 2002 <i>TB</i> ₂₅ | 18.0 | X | 295.67816 | 217.55789 | 163.83797 | 2.51657 | 0.1845798 | 0.26937734 | 2.3744444 | 20 | 8 11.1 | 20.1 |
| 373736 2002 <i>TQ</i> ₂₇ | 17.2 | X | 286.08682 | 161.22325 | 212.72491 | 2.42767 | 0.2019350 | 0.26676680 | 2.3899099 | 20 | 7 9.7 | 20.0 |
| 373737 2002 <i>TF</i> ₃₃ | 17.4 | X | 301.27603 | 176.15251 | 208.60706 | 2.19308 | 0.1861048 | 0.27162083 | 2.3613516 | 20 | 8 27.8 | 19.5 |
| 373738 2002 <i>TA</i> ₃₅ | 15.7 | X | 84.91694 | 11.95516 | 14.40084 | 13.35331 | 0.1555578 | 0.18194731 | 3.0844114 | 20 | — | — |
| 373739 2002 <i>TE</i> ₅₂ | 17.0 | X | 275.37101 | 332.06773 | 50.62675 | 6.59120 | 0.2917931 | 0.26471068 | 2.4022696 | 20 | 6 21.5 | 20.1 |
| 373740 2002 <i>TY</i> ₆₀ | 17.5 | X | 253.28534 | 62.99967 | 7.92057 | 2.08750 | 0.1855124 | 0.26774864 | 2.3840638 | 20 | 8 17.4 | 20.6 |
| 373741 2002 <i>TK</i> ₆₇ | 15.8 | X | 100.53677 | 71.02396 | 252.66510 | 8.11501 | 0.2975468 | 0.17850466 | 3.1239423 | 20 | — | — |
| 373742 2002 <i>TE</i> ₇₂ | 15.2 | X | 82.67389 | 157.96991 | 210.51682 | 27.53279 | 0.1384087 | 0.17946826 | 3.1127503 | 20 | — | — |
| 373743 2002 <i>TH</i> ₇₃ | 16.0 | X | 87.56285 | 127.23532 | 234.23264 | 7.36102 | 0.2167958 | 0.17964674 | 3.1106882 | 20 | — | — |
| 373744 2002 <i>TO</i> ₇₄ | 15.7 | X | 75.87455 | 55.02674 | 31.21973 | 10.60789 | 0.2341335 | 0.18820134 | 3.0156961 | 20 | 3 18.3 | 19.6 |
| 373745 2002 <i>TL</i> ₈₄ | 15.6 | X | 48.70781 | 306.53095 | 99.01807 | 6.51666 | 0.1674759 | 0.17890503 | 3.1192799 | 20 | — | — |
| 373746 2002 <i>TS</i> ₈₅ | 15.7 | X | 61.02708 | 213.12799 | 210.03456 | 9.73358 | 0.1428090 | 0.18345321 | 3.0675089 | 20 | 1 8.4 | 19.6 |
| 373747 2002 <i>TF</i> ₉₄ | 16.2 | X | 81.40506 | 154.96443 | 197.65213 | 0.62829 | 0.1744466 | 0.17892435 | 3.1190554 | 20 | — | — |
| 373748 2002 <i>TM</i> ₁₃₀ | 17.8 | X | 314.46005 | 132.79716 | 236.63314 | 3.78915 | 0.1554071 | 0.27285186 | 2.3542438 | 20 | 9 3.6 | 19.9 |
| 373749 2002 <i>TN</i> ₁₃₈ | 17.4 | X | 291.91433 | 10.16550 | 355.49910 | 11.91870 | 0.2537946 | 0.26670408 | 2.3902846 | 20 | 6 29.2 | 20.4 |
| 373750 2002 <i>TW</i> ₁₄₂ | 17.4 | X | 277.08123 | 310.29072 | 92.12954 | 4.37957 | 0.2340561 | 0.26845943 | 2.3798538 | 20 | 8 2.6 | 20.0 |
| 373751 2002 <i>TF</i> ₁₄₃ | 15.9 | X | 122.67860 | 198.15971 | 145.32153 | 8.37565 | 0.2273647 | 0.18345579 | 3.0674802 | 20 | 1 4.5 | 20.6 |
| 373752 2002 <i>TW</i> ₁₄₄ | 17.4 | X | 250.88525 | 114.93519 | 256.33655 | 1.19508 | 0.1875625 | 0.26195391 | 2.4190943 | 20 | 5 22.7 | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 373761 2002 TQ ₂₀₄ | 15.5 | X | 82.13366 | 13.30542 | 39.69391 | 12.03793 | 0.1633154 | 0.18495642 | 3.0508658 | 20 | 2 4.9 | 19.7 |
| 373762 2002 TE ₂₁₁ | 15.4 | X | 29.36758 | 35.23865 | 42.80096 | 20.25702 | 0.2141010 | 0.17666744 | 3.1455628 | 20 | — | — |
| 373763 2002 TO ₂₂₁ | 15.5 | X | 127.71736 | 295.48249 | 9.95766 | 14.96072 | 0.2848810 | 0.17955843 | 3.1117081 | 20 | — | — |
| 373764 2002 TF ₂₃₉ | 15.7 | X | 13.12387 | 257.40051 | 217.32153 | 14.57369 | 0.3717093 | 0.17666274 | 3.1456187 | 20 | — | — |
| 373765 2002 TW ₂₄₆ | 17.8 | X | 333.58674 | 183.79521 | 168.64712 | 1.06311 | 0.2117450 | 0.27216022 | 2.3582307 | 20 | 9 23.1 | 19.1 |
| 373766 2002 TA ₂₄₇ | 15.4 | X | 26.87192 | 57.00220 | 32.23009 | 16.55456 | 0.0376452 | 0.18088001 | 3.0965326 | 20 | — | — |
| 373767 2002 TS ₂₄₇ | 16.0 | X | 88.85287 | 181.80597 | 202.02298 | 22.33879 | 0.1534790 | 0.18167884 | 3.0874492 | 20 | — | — |
| 373768 2002 TT ₂₅₅ | 15.8 | X | 3.06788 | 235.07371 | 199.85718 | 25.37607 | 0.2529754 | 0.17278303 | 3.1925325 | 20 | — | — |
| 373769 2002 TE ₂₆₈ | 17.4 | X | 287.08437 | 48.02512 | 339.84284 | 5.50050 | 0.1947164 | 0.26843955 | 2.3799713 | 20 | 8 4.9 | 19.8 |
| 373770 2002 TM ₂₇₃ | 17.4 | X | 239.64491 | 85.36176 | 358.02475 | 4.58970 | 0.1948917 | 0.26743074 | 2.3859527 | 20 | 8 16.9 | 20.7 |
| 373771 2002 TM ₂₈₂ | 15.3 | X | 60.95503 | 149.25817 | 244.91222 | 8.69136 | 0.1345961 | 0.17742793 | 3.1365681 | 20 | — | — |
| 373772 2002 TJ ₂₉₀ | 17.2 | X | 274.68633 | 155.37363 | 257.25442 | 6.47915 | 0.2391397 | 0.26846735 | 2.3798070 | 20 | 8 9.2 | 19.9 |
| 373773 2002 TR ₃₀₃ | 18.4 | X | 281.34756 | 270.90340 | 109.95332 | 3.35026 | 0.2254539 | 0.26736559 | 2.3863403 | 20 | 7 8.7 | 21.2 |
| 373774 2002 TL ₃₀₅ | 16.0 | X | 82.61236 | 340.36245 | 38.73059 | 16.46258 | 0.0802754 | 0.18095916 | 3.0956296 | 20 | — | — |
| 373775 2002 TJ ₃₀₇ | 17.5 | X | 249.27975 | 327.25014 | 55.32758 | 8.73545 | 0.0809217 | 0.26259013 | 2.4151853 | 20 | 6 18.9 | 20.8 |
| 373776 2002 TF ₃₂₀ | 15.7 | X | 16.58631 | 107.70754 | 350.71885 | 7.50775 | 0.2424263 | 0.18106509 | 3.0944222 | 20 | — | — |
| 373777 2002 TJ ₃₂₁ | 16.8 | X | 62.66865 | 34.28557 | 320.66638 | 0.15615 | 0.1529940 | 0.17646735 | 3.1479402 | 20 | — | — |
| 373778 2002 TS ₃₃₁ | 18.1 | X | 232.67609 | 21.97017 | 68.56486 | 2.38719 | 0.1559289 | 0.26901719 | 2.3765632 | 20 | 8 23.5 | 21.3 |
| 373779 2002 TH ₃₃₆ | 15.8 | X | 43.54152 | 62.20145 | 32.98310 | 12.60948 | 0.0852073 | 0.18568429 | 3.0428878 | 20 | 1 21.7 | 19.9 |
| 373780 2002 TK ₃₄₁ | 16.3 | X | 354.24329 | 353.44694 | 95.18231 | 6.18646 | 0.1300674 | 0.17575286 | 3.1564660 | 20 | — | — |
| 373781 2002 TG ₃₄₄ | 15.5 | X | 100.20650 | 313.32640 | 54.29766 | 12.86342 | 0.0744946 | 0.18166921 | 3.0875583 | 20 | — | — |
| 373782 2002 TS ₃₄₆ | 15.7 | X | 54.54778 | 356.70599 | 62.32602 | 11.31615 | 0.1441916 | 0.18053506 | 3.1004757 | 20 | — | — |
| 373783 2002 TG ₃₅₀ | 15.8 | X | 95.68446 | 164.14374 | 224.30561 | 9.60769 | 0.1281155 | 0.18796488 | 3.0182247 | 20 | 1 11.5 | 20.1 |
| 373784 2002 TM ₃₅₅ | 17.8 | X | 200.02629 | 296.25135 | 197.25019 | 7.10520 | 0.0542341 | 0.27429893 | 2.3459566 | 20 | 9 22.3 | 20.8 |
| 373785 2002 TL ₃₅₆ | 18.4 | X | 338.51837 | 104.63957 | 205.90128 | 2.12201 | 0.2256972 | 0.27041643 | 2.3683579 | 20 | 7 19.5 | 19.9 |
| 373786 2002 UU ₄ | 15.2 | X | 24.94935 | 300.20172 | 126.05813 | 18.60143 | 0.2663666 | 0.17454893 | 3.1709635 | 20 | — | — |
| 373787 2002 UJ ₅ | 15.6 | X | 87.68296 | 313.49546 | 52.14841 | 16.36432 | 0.2396506 | 0.18082278 | 3.0971860 | 20 | — | — |
| 373788 2002 UL ₂₀ | 16.0 | X | 86.61394 | 66.87061 | 339.05903 | 6.08951 | 0.3337150 | 0.18443400 | 3.0566242 | 20 | 2 22.9 | 20.0 |
| 373789 2002 UU ₃₂ | 17.5 | X | 292.64854 | 149.76949 | 234.51107 | 4.28144 | 0.2430937 | 0.26758493 | 2.3850360 | 20 | 7 28.5 | 20.0 |
| 373790 2002 UQ ₄₁ | 17.3 | X | 282.96389 | 293.05956 | 99.30418 | 3.25751 | 0.2147636 | 0.26673057 | 2.3901263 | 20 | 7 31.0 | 19.7 |
| 373791 2002 UJ ₆₁ | 15.9 | X | 291.28671 | 274.55589 | 270.63382 | 9.16462 | 0.0315452 | 0.18826972 | 3.0149659 | 20 | — | — |
| 373792 2002 UN ₆₁ | 16.9 | X | 125.97549 | 93.71012 | 207.97666 | 15.87058 | 0.2977367 | 0.18261570 | 3.0768806 | 20 | — | — |
| 373793 2002 UB ₇₂ | 15.5 | X | 80.17183 | 355.52392 | 15.75513 | 9.55538 | 0.0745545 | 0.17647335 | 3.1478688 | 20 | — | — |
| 373794 2002 UP ₇₂ | 15.7 | X | 81.83137 | 324.46775 | 37.65817 | 8.74871 | 0.1075883 | 0.17637886 | 3.1489930 | 20 | — | — |
| 373795 2002 UY ₇₄ | 15.5 | X | 66.04183 | 289.07830 | 77.91891 | 15.55567 | 0.2602896 | 0.17493856 | 3.1662535 | 20 | — | — |
| 373796 2002 UP ₇₅ | 16.3 | X | 97.46646 | 277.77571 | 66.55481 | 2.26957 | 0.1599617 | 0.17726210 | 3.1385240 | 20 | — | — |
| 373797 2002 VQ ₂ | 15.5 | X | 16.73003 | 219.13891 | 231.99177 | 16.04055 | 0.2076841 | 0.17643514 | 3.1483233 | 20 | — | — |
| 373798 2002 VG ₁₇ | 17.1 | X | 318.25572 | 349.79911 | 73.69248 | 5.21205 | 0.2171338 | 0.27472425 | 2.3435347 | 20 | 12 15.4 | 18.6 |
| 373799 2002 VL ₂₉ | 17.1 | X | 253.86480 | 11.27181 | 45.93329 | 5.06724 | 0.1581105 | 0.26408113 | 2.4060859 | 20 | 8 3.9 | 20.2 |
| 373800 2002 VJ ₃₂ | 17.2 | X | 262.52356 | 313.06931 | 97.09627 | 3.17004 | 0.1904609 | 0.26431154 | 2.4046874 | 20 | 7 30.1 | 20.0 |
| 373801 2002 VA ₃₆ | 17.4 | X | 274.61525 | 332.98070 | 56.70284 | 2.15765 | 0.1916956 | 0.26505020 | 2.4002176 | 20 | 7 17.7 | 20.3 |
| 373802 2002 VP ₄₁ | 15.4 | X | 122.19820 | 314.96509 | 44.94739 | 10.30144 | 0.1057522 | 0.18139639 | 3.0906533 | 20 | 1 10.2 | 20.0 |
| 373803 2002 VE ₄₅ | 15.5 | X | 46.74445 | 128.36409 | 290.05083 | 10.00022 | 0.1884538 | 0.17675082 | 3.1445736 | 20 | — | — |
| 373804 2002 VY ₆₇ | 15.9 | X | 41.54715 | 281.94963 | 120.49351 | 6.44439 | 0.1580676 | 0.17278999 | 3.1924467 | 20 | — | — |
| 373805 2002 VG ₇₅ | 15.8 | X | 87.97383 | 239.90618 | 115.77925 | 2.99006 | 0.1793554 | 0.17630792 | 3.1498376 | 20 | — | — |
| 373806 2002 VW ₉₂ | 15.6 | X | 47.81161 | 202.30315 | 209.87183 | 7.86949 | 0.1999036 | 0.17614507 | 3.1517788 | 20 | — | — |
| 373807 2002 VV ₁₁₃ | 15.3 | X | 57.70167 | 315.34594 | 53.98600 | 11.52806 | 0.2036190 | 0.17297727 | 3.1901420 | 20 | — | — |
| 373808 2002 VV ₁₁₄ | 16.0 | X | 51.42924 | 68.74142 | 315.19451 | 8.64596 | 0.2353601 | 0.17562834 | 3.1579578 | 20 | — | — |
| 373809 2002 VZ ₁₁₄ | 15.8 | X | 21.22983 | 170.54130 | 258.20195 | 16.78232 | 0.1978382 | 0.17610547 | 3.1522512 | 20 | — | — |
| 373810 2002 VV ₁₂₅ | 15.5 | X | 10.29020 | 187.74861 | 269.01153 | 13.62132 | 0.0595127 | 0.17612806 | 3.1519816 | 20 | — | — |
| 373811 2002 VY ₁₂₉ | 16.6 | X | 56.53210 | 145.87980 | 219.49885 | 10.19070 | 0.1040240 | 0.17287423 | 3.1914096 | 20 | — | — |
| 373812 2002 VC ₁₃₄ | 16.0 | X | 84.12029 | 304.46523 | 66.18869 | 1.90679 | 0.1824252 | 0.17865031 | 3.1222442 | 20 | — | — |
| 373813 2002 VP ₁₃₉ | 12.9 | X | 238.54180 | 301.77933 | 31.55794 | 17.04301 | 0.0271747 | 0.08181718 | 5.2550037 | 20 | 4 16.5 | 19.9 |
| 373814 2002 VU ₁₄₁ | 15.8 | X | 63.88598 | 323.74008 | 68.81806 | 16.90762 | 0.0845937 | 0.17573934 | 3.1566279 | 20 | — | — |
| 373815 2002 VV ₁₄₂ | 16.4 | X | 96.23475 | 148.28577 | 202.46944 | 8.00577 | 0.2076889 | 0.17753865 | 3.1352639 | 20 | — | — |
| 373816 2002 WA ₂₃ | 17.0 | X | 157.69223 | 89.43603 | 67.64774 | 7.39616 | 0.2182113 | 0.26111004 | 2.4243036 | 20 | 9 4.4 | 21.2 |
| 373817 2002 WL ₂₄ | 16.4 | X | 70.99783 | 300.56938 | 78.29047 | 2.17868 | 0.1743190 | 0.17570628 | 3.1570238 | 20 | — | — |
| 373818 2002 WV ₂₆ | 16.0 | X | 352.22324 | 49.60959 | 48.11830 | 11.85462 | 0.0896783 | 0.17459804 | 3.1703689 | 20 | — | — |
| 373819 2002 WH ₂₇ | 15.8 | X | 83.74358 | 285.27836 | 96.77228 | 8.66536 | 0.2368117 | 0.17883257 | 3.1201225 | 20 | 1 7.4 | 19.7 |
| 373820 2002 WG ₂₉ | 13.2 | X | 148.04451 | 11.40212 | 58.97858 | 11.91779 | 0.0465264 | 0.08288078 | 5.2099492 | 20 | 4 30.7 | 20.3 |
| 373821 2002 XG ₈ | 17.5 | X | 269.81730 | 315.53769 | 96.33337 | 2.33993 | 0.1794502 | 0.26601583 | 2.3944056 | 20 | 8 14.4 | 20.2 |
| 373822 2002 XH ₈ | 17.5 | X | 252.22413 | 331.19423 | 93.47725 | 2.61860 | 0.1660462 | 0.26462271 | 2.4028020 | 20 | 8 9.9 | 20.4 |
| 373823 2002 XJ ₁₀ | 17.4 | X | 254.91148 | 1.60988 | 46.88805 | 2.36498 | 0.1825612 | 0.26331949 | 2.4107234 | 20 | 7 18.9 | 20.7 |
| 373824 2002 XJ ₁₁ | 16.8 | X | 222.53039 | 4.78420 | 73.76545 | 7.75423 | 0.1728235 | 0.26158829 | 2.4213478 | 20 | 7 24.4 | 20.4 |
| 373825 2002 XD ₁₂ | 17.7 | X | 115.34359 | 145.61025 | 274.00115 | 9.36910 | 0.2007125 | 0.35548528 | 1.9735811 | 20 | 3 2.5 | 19.9 |
| 373826 2002 XP ₁₅ | 15.7 | X | 91.40844 | 14.51963 | 352.75150 | 12.11543 | 0.1838759 | 0.17862215 | 3.1225723 | 20 | — | — |
| 373827 2002 XD ₂₀ | 15.9 | X | 47.13033 | 108.02569 | 326.32234 | 4.94604 | 0.1564052 | 0.17790243 | 3.1309884 | 20 | 1 4.7 | 19.5 |
| 373828 2002 XH ₃₉ | 17.4 | X | 271.57147 | 150.08997 | 256.47904 | 4.90703 | 0.1871179 | 0.26549254 | 2.3975509 | 20 | 8 5.2 | 20.3 |
| 373829 2002 XN ₅₀ | 17.5 | | | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 373841 2003 ED ₄₃ | 16.5 | X | 304.35182 | 101.83976 | 164.15358 | 15.23710 | 0.0893779 | 0.23113169 | 2.6296406 | 20 | 3 27.7 | 19.9 |
| 373842 2003 FT | 16.4 | X | 322.44579 | 226.80220 | 28.00109 | 11.93609 | 0.0779985 | 0.23402581 | 2.6079157 | 20 | 4 8.4 | 19.6 |
| 373843 2003 FE ₆₇ | 16.5 | X | 307.35414 | 210.33258 | 27.77796 | 12.26237 | 0.1606861 | 0.22681023 | 2.6629374 | 20 | 2 17.7 | 20.2 |
| 373844 2003 FE ₇₉ | 16.2 | X | 259.61395 | 64.67327 | 211.72649 | 8.30919 | 0.2226308 | 0.22272084 | 2.6954347 | 20 | 1 30.4 | 20.8 |
| 373845 2003 FO ₈₂ | 16.3 | X | 338.56884 | 47.86660 | 175.77136 | 11.61090 | 0.1304889 | 0.22915281 | 2.6447579 | 20 | 3 13.7 | 19.1 |
| 373846 2003 GN ₅ | 16.1 | X | 356.56859 | 226.99706 | 15.00623 | 14.81526 | 0.0418033 | 0.23656730 | 2.5892038 | 20 | 5 9.8 | 19.5 |
| 373847 2003 GM ₁₂ | 16.6 | X | 292.51211 | 234.64799 | 8.21040 | 8.09502 | 0.1935173 | 0.22542723 | 2.6738177 | 20 | 1 29.6 | 20.6 |
| 373848 2003 GU ₂₅ | 16.5 | X | 267.10375 | 249.80581 | 11.42019 | 14.76197 | 0.2493283 | 0.22401299 | 2.6850595 | 20 | 1 23.9 | 21.2 |
| 373849 2003 GD ₃₉ | 17.3 | X | 354.21204 | 130.64937 | 72.47730 | 2.21255 | 0.1375102 | 0.23028123 | 2.6361110 | 20 | 3 12.9 | 19.9 |
| 373850 2003 HK ₄₃ | 17.1 | X | 0.60469 | 345.13723 | 217.99197 | 4.84945 | 0.2547169 | 0.22933578 | 2.6433510 | 20 | 3 11.7 | 19.4 |
| 373851 2003 HW ₄₃ | 15.8 | X | 194.56632 | 266.12771 | 51.65916 | 13.52689 | 0.2679244 | 0.21488401 | 2.7605777 | 20 | 2 5.1 | 21.0 |
| 373852 2003 JD ₅ | 16.3 | X | 334.05826 | 36.52570 | 203.98527 | 13.04443 | 0.1357235 | 0.22937481 | 2.6430512 | 20 | 3 27.6 | 19.4 |
| 373853 2003 OP ₂₃ | 18.4 | X | 38.98295 | 93.80966 | 223.87319 | 1.49416 | 0.1853423 | 0.29929119 | 2.2134689 | 20 | 12 5.4 | 21.2 |
| 373854 2003 OO ₃₃ | 16.4 | X | 107.73959 | 78.60340 | 257.56836 | 13.17139 | 0.2073938 | 0.19200365 | 2.9757497 | 20 | — | — |
| 373855 2003 QY ₆ | 17.7 | X | 28.33536 | 43.43206 | 318.67819 | 4.22591 | 0.2038026 | 0.30132344 | 2.2035053 | 20 | — | — |
| 373856 2003 QV ₁₀ | 18.2 | X | 319.48668 | 303.72687 | 340.65764 | 32.37575 | 0.1351958 | 0.39807128 | 1.8301871 | 20 | 3 30.3 | 20.5 |
| 373857 2003 QM ₁₉ | 17.9 | X | 76.27076 | 156.54652 | 161.84411 | 1.56149 | 0.1993746 | 0.30451946 | 2.1880606 | 20 | — | — |
| 373858 2003 QV ₃₅ | 17.8 | X | 42.91843 | 352.77798 | 332.92631 | 6.08977 | 0.2242869 | 0.30038225 | 2.2081057 | 20 | 12 25.7 | 21.0 |
| 373859 2003 QW ₈₃ | 17.1 | X | 163.40763 | 79.33440 | 263.82317 | 0.91594 | 0.0764825 | 0.20484563 | 2.8500441 | 20 | 1 27.1 | 21.3 |
| 373860 2003 QQ ₁₀₁ | 17.1 | X | 63.08876 | 204.80433 | 95.05348 | 6.53160 | 0.1975986 | 0.29907882 | 2.2145166 | 20 | 12 9.8 | 20.2 |
| 373861 2003 RO ₂ | 16.0 | X | 164.88398 | 17.86903 | 338.27853 | 15.03304 | 0.1523586 | 0.20591295 | 2.8401871 | 20 | 2 19.7 | 20.6 |
| 373862 2003 RK ₄ | 15.5 | X | 247.72128 | 17.52258 | 256.93983 | 12.94798 | 0.2027902 | 0.20988613 | 2.8042295 | 20 | 1 20.3 | 20.4 |
| 373863 2003 SA ₂ | 17.0 | X | 177.93208 | 346.27916 | 344.15042 | 1.46419 | 0.0666401 | 0.20290287 | 2.8682076 | 20 | 1 27.4 | 21.2 |
| 373864 2003 SO ₇ | 16.6 | X | 63.86959 | 242.31913 | 180.59515 | 9.25350 | 0.0143345 | 0.20012055 | 2.8947313 | 20 | — | — |
| 373865 2003 SP ₉ | 16.7 | X | 148.06074 | 40.08866 | 319.46071 | 6.78836 | 0.0646685 | 0.20221299 | 2.8747275 | 20 | 1 29.9 | 20.9 |
| 373866 2003 SX ₂₃ | 18.0 | X | 55.48530 | 154.43711 | 157.73958 | 1.96034 | 0.1706263 | 0.29911980 | 2.2143144 | 20 | 12 14.9 | 21.1 |
| 373867 2003 SG ₃₃ | 16.7 | X | 124.11515 | 358.48410 | 13.03055 | 6.39137 | 0.1258188 | 0.19965081 | 2.8992701 | 20 | 1 26.8 | 20.9 |
| 373868 2003 SY ₄₀ | 16.5 | X | 161.75699 | 130.58450 | 206.58774 | 14.09054 | 0.1952914 | 0.20192481 | 2.8774620 | 20 | 1 23.9 | 21.5 |
| 373869 2003 SF ₄₉ | 17.4 | X | 42.31842 | 149.79421 | 197.40174 | 4.13625 | 0.1929429 | 0.30022993 | 2.2088525 | 20 | — | — |
| 373870 2003 SW ₅₁ | 18.0 | X | 19.92051 | 199.41367 | 155.95517 | 5.95877 | 0.1668870 | 0.29743251 | 2.2226808 | 20 | 12 28.8 | 20.6 |
| 373871 2003 ST ₅₃ | 16.8 | X | 118.54119 | 28.29297 | 317.82231 | 5.15248 | 0.1228832 | 0.19575036 | 2.9376565 | 20 | — | — |
| 373872 2003 SN ₆₃ | 16.2 | X | 347.10146 | 218.90985 | 292.75001 | 4.83794 | 0.0094920 | 0.20083710 | 2.8878419 | 20 | 1 10.8 | 20.2 |
| 373873 2003 SO ₆₅ | 17.8 | X | 63.14109 | 79.36208 | 224.54251 | 6.71369 | 0.2215812 | 0.30070271 | 2.2065367 | 20 | 12 17.1 | 21.1 |
| 373874 2003 SL ₆₇ | 16.2 | X | 148.09908 | 334.98964 | 29.99899 | 13.16011 | 0.1659348 | 0.20304638 | 2.8668561 | 20 | 2 20.5 | 20.9 |
| 373875 2003 SP ₁₁₇ | 17.9 | X | 23.44318 | 124.77817 | 194.33694 | 6.01588 | 0.2279437 | 0.29363250 | 2.2418160 | 20 | 11 23.5 | 20.5 |
| 373876 2003 SH ₁₂₄ | 16.6 | X | 115.82930 | 295.75419 | 77.62862 | 2.29765 | 0.1674953 | 0.19813179 | 2.9140698 | 20 | 1 21.2 | 20.8 |
| 373877 2003 SQ ₁₃₉ | 17.2 | X | 352.23198 | 185.20516 | 142.83892 | 7.05481 | 0.2354317 | 0.28988855 | 2.2610769 | 20 | 10 13.1 | 18.7 |
| 373878 2003 SO ₁₅₈ | 17.9 | X | 32.59272 | 314.13933 | 200.80185 | 7.92090 | 0.1985047 | 0.29990968 | 2.2104247 | 20 | — | — |
| 373879 2003 SM ₁₇₄ | 16.3 | X | 151.94546 | 99.55993 | 184.29078 | 9.97872 | 0.0834341 | 0.19102140 | 2.9859420 | 20 | — | — |
| 373880 2003 SD ₂₁₄ | 16.2 | X | 87.53573 | 44.91005 | 47.44604 | 12.95986 | 0.0764294 | 0.20006351 | 2.8952815 | 20 | 3 19.7 | 20.3 |
| 373881 2003 SU ₂₂₂ | 17.7 | X | 349.37674 | 0.81361 | 344.11386 | 2.77514 | 0.1672030 | 0.29085647 | 2.2560578 | 20 | 10 19.8 | 19.3 |
| 373882 2003 SG ₂₂₇ | 17.7 | X | 24.23562 | 3.99042 | 18.69758 | 1.96006 | 0.0360838 | 0.30349669 | 2.1929736 | 20 | — | — |
| 373883 2003 SB ₂₃₄ | 17.9 | X | 62.24971 | 176.42822 | 112.40706 | 3.60961 | 0.2725758 | 0.29747482 | 2.2224700 | 20 | 12 1.9 | 21.3 |
| 373884 2003 SB ₂₄₇ | 18.2 | X | 27.64027 | 170.03144 | 172.67222 | 1.82854 | 0.2420048 | 0.29750105 | 2.2223394 | 20 | — | — |
| 373885 2003 SA ₂₇₅ | 16.2 | X | 51.85954 | 66.96587 | 349.10418 | 9.35971 | 0.1160071 | 0.19205361 | 2.9752335 | 20 | — | — |
| 373886 2003 SM ₃₀₁ | 16.2 | X | 134.89118 | 307.06016 | 76.08513 | 3.08733 | 0.0844424 | 0.20269608 | 2.8701581 | 20 | 2 15.7 | 20.3 |
| 373887 2003 SS ₃₀₆ | 15.4 | X | 119.23090 | 99.48044 | 247.16533 | 8.75320 | 0.1227654 | 0.19134805 | 2.9825428 | 20 | — | — |
| 373888 2003 SA ₃₁₉ | 16.4 | X | 331.77241 | 311.39000 | 193.63642 | 10.09630 | 0.0517854 | 0.19682116 | 2.9269919 | 20 | — | — |
| 373889 2003 SC ₃₂₃ | 16.5 | X | 136.97813 | 18.66824 | 341.14929 | 11.48158 | 0.0922509 | 0.20037009 | 2.8923274 | 20 | 1 23.7 | 20.8 |
| 373890 2003 SQ ₃₂₆ | 17.0 | X | 103.33925 | 33.56157 | 358.45030 | 11.64949 | 0.0491491 | 0.19911343 | 2.9044842 | 20 | 1 17.6 | 21.2 |
| 373891 2003 SU ₃₂₈ | 17.0 | X | 136.71568 | 302.31690 | 52.07616 | 2.91677 | 0.0844799 | 0.19799453 | 2.9154163 | 20 | 1 13.9 | 21.1 |
| 373892 2003 SJ ₃₂₉ | 18.3 | X | 335.43158 | 93.23803 | 305.28456 | 1.82065 | 0.1953610 | 0.29446054 | 2.2376113 | 20 | 12 22.2 | 19.9 |
| 373893 2003 SG ₃₃₃ | 16.6 | X | 94.46013 | 214.61079 | 176.78250 | 12.15389 | 0.1586419 | 0.19697706 | 2.9254474 | 20 | 1 16.6 | 20.7 |
| 373894 2003 SM ₃₃₄ | 16.8 | X | 79.37833 | 248.91329 | 182.98134 | 10.37796 | 0.1182758 | 0.20035417 | 2.8924806 | 20 | 2 8.8 | 20.7 |
| 373895 2003 SM ₃₃₅ | 18.1 | X | 54.44159 | 216.68296 | 64.33682 | 6.67054 | 0.1371204 | 0.29172524 | 2.2515765 | 20 | 10 29.1 | 20.9 |
| 373896 2003 SO ₃₃₈ | 16.6 | X | 109.02131 | 231.57192 | 143.08347 | 2.90370 | 0.0920768 | 0.19637526 | 2.9314211 | 20 | 1 6.7 | 20.6 |
| 373897 2003 TK ₁₄ | 18.5 | X | 282.03270 | 119.18901 | 217.06942 | 20.18693 | 0.0981740 | 0.39544688 | 1.8382755 | 20 | 5 26.6 | 20.1 |
| 373898 2003 TO ₃₁ | 16.3 | X | 106.58255 | 340.60650 | 22.94752 | 9.58976 | 0.0565017 | 0.19319358 | 2.9635181 | 20 | — | — |
| 373899 2003 TS ₄₂ | 17.6 | X | 327.29954 | 79.89257 | 342.80726 | 4.07745 | 0.1049247 | 0.29683611 | 2.2256570 | 20 | — | — |
| 373900 2003 TB ₅₅ | 17.9 | X | 297.65269 | 17.28260 | 56.08144 | 7.36815 | 0.1155776 | 0.29311708 | 2.2444433 | 20 | 11 21.1 | 19.7 |
| 373901 2003 UP ₁₃ | 18.2 | X | 220.28963 | 3.54978 | 8.69377 | 21.11826 | 0.0850093 | 0.38976881 | 1.8560856 | 20 | 4 17.2 | 20.4 |
| 373902 2003 UE ₁₉ | 16.4 | X | 58.26898 | 209.89506 | 225.94976 | 8.25061 | 0.1911007 | 0.19269621 | 2.9686154 | 20 | 1 22.9 | 19.8 |
| 373903 2003 UR ₂₃ | 17.7 | X | 335.25535 | 149.55021 | 218.61814 | 9.68014 | 0.2308721 | 0.28960664 | 2.2625440 | 20 | 11 3.8 | 18.9 |
| 373904 2003 UO ₂₉ | 17.4 | X | 355.59802 | 163.12786 | 246.74163 | 5.01093 | 0.2258912 | 0.29801813 | 2.2197680 | 20 | — | — |
| 373905 2003 UC ₃₁ | 17.0 | X | 161.25477 | 38.49058 | 321.61675 | 1.28978 | 0.1088584 | 0.20175504 | 2.8790760 | 20 | 2 17.0 | 21.4 |
| 373906 2003 UK ₃₆ | 17.4 | X | 52.83616 | 11.39762 | 305.68890 | 6.91420 | 0.1685978 | 0.29619859 | 2.2288494 | 20 | 12 17.5 | 20.4 |
| 373907 2003 UE ₆₃ | 17.9 | X | 16.67783 | 244.29535 | 87.57397 | 4.99752 | 0.3179513 | 0.29503198 | 2.2347210 | 20 | 12 15.5 | 20.6 |
| 373908 2003 UG ₇₅ | 17.8 | X | 26.82880 | 5.36518 | 347.54550 | 6.63697 | 0.1362378 | 0.29751519 | 2.2222690 | 20 | 12 30.9 | 20.5 |
| 373909 2003 UA ₇₇ | 17.9 | X | 11.25891 | 15.89698 | 331.80509 | 6.81234 | 0.1640100 | 0.29338236 | 2.2430901 | 20 | 12 3.1 | 20.4 |
| 373910 2003 UV ₉₂ | 15.9 | X | 122.11880 | 355.23941 | 29.75386 | 8.90651 | 0.1592827 | 0.19715088 | 2.9237276 | 20 | 2 16.1 | 20.3 |
| 373911 2003 UO ₁₀₆ | 15.6 | X | 142.19860 | 67.24826 | 275.84491 | 9.30798 | 0.1506058 | 0.19515833 | 2.9435945 | 20 | 1 12.9 | 20.0 |
| 373912 2003 UT ₁₁₄ | 17.7 | X | 10.10298 | 334.58643 | 32.14461 | 5.41981 | 0.2100645 | 0.29534301 | 2.2331518 | 20 | — | — |
| 373913 2003 UT ₁₂₅ | 17.8 | X | 353.92961 | 243.94184 | 150.51255 | 2.57549 | 0.0847301 | 0.29664476 | 2.2266139 | 20 | — | — |
| 373914 2003 UL ₁₂₉ | 16.2 | X | 121.56926 | 73.89650 | 244.2371 | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 373921 2003 UH ₂₀₀ | 18.0 | X | 0.07915 | 178.96558 | 175.29525 | 2.67060 | 0.1760177 | 0.29269947 | 2.2465776 | 20 | 11 28.1 | 20.0 |
| 373922 2003 UH ₂₀₁ | 16.1 | X | 93.35380 | 354.65094 | 27.99773 | 14.40997 | 0.1341060 | 0.19284121 | 2.9671271 | 20 | 1 4.5 | 20.3 |
| 373923 2003 UN ₂₁₉ | 17.4 | X | 56.40170 | 75.38180 | 247.55624 | 5.08778 | 0.1390075 | 0.29692087 | 2.2252334 | 20 | 12 25.6 | 20.5 |
| 373924 2003 UD ₂₂₇ | 17.7 | X | 20.48332 | 43.22598 | 304.37649 | 2.92837 | 0.1964042 | 0.29476453 | 2.2360726 | 20 | 12 23.1 | 20.3 |
| 373925 2003 UV ₂₃₆ | 17.5 | X | 1.54202 | 317.93519 | 61.74919 | 6.55141 | 0.1501923 | 0.29602754 | 2.2297079 | 20 | — | — |
| 373926 2003 UE ₂₄₃ | 18.0 | X | 125.31169 | 203.43473 | 191.43888 | 1.82356 | 0.2146130 | 0.25783353 | 2.4447988 | 20 | 2 27.5 | 21.5 |
| 373927 2003 UX ₂₄₆ | 16.2 | X | 131.36234 | 11.01881 | 358.38999 | 1.27243 | 0.1197238 | 0.19744117 | 2.9208611 | 20 | 1 30.2 | 20.5 |
| 373928 2003 UD ₂₄₇ | 15.0 | X | 136.29240 | 270.48383 | 56.56206 | 16.75941 | 0.1182658 | 0.18926561 | 3.0043803 | 20 | — | — |
| 373929 2003 UV ₂₄₈ | 17.3 | X | 292.38555 | 3.51444 | 71.92720 | 6.52855 | 0.1060829 | 0.29225421 | 2.2488588 | 20 | 11 15.6 | 19.4 |
| 373930 2003 UN ₂₅₆ | 17.8 | X | 3.65289 | 249.99758 | 124.85649 | 2.79334 | 0.1879556 | 0.29463787 | 2.2367134 | 20 | — | — |
| 373931 2003 UT ₂₅₆ | 17.0 | X | 111.43110 | 194.69794 | 195.79084 | 5.73307 | 0.3058755 | 0.19603712 | 2.9347910 | 20 | 2 23.6 | 21.5 |
| 373932 2003 UA ₂₈₆ | 16.4 | X | 19.76666 | 237.67789 | 211.13254 | 9.75902 | 0.0871719 | 0.18956822 | 3.0011822 | 20 | — | — |
| 373933 2003 UP ₂₈₇ | 16.5 | X | 167.93044 | 310.28483 | 62.18943 | 1.07302 | 0.1803113 | 0.20475293 | 2.8509043 | 20 | 3 13.2 | 21.0 |
| 373934 2003 UG ₂₈₈ | 17.4 | X | 324.77779 | 61.26538 | 21.12367 | 5.77503 | 0.1050175 | 0.29790359 | 2.2203370 | 20 | — | — |
| 373935 2003 UO ₂₉₅ | 16.3 | X | 80.35118 | 353.11778 | 16.11774 | 9.88744 | 0.1055079 | 0.18925800 | 3.0044609 | 20 | — | — |
| 373936 2003 UV ₂₉₈ | 16.5 | X | 108.68787 | 208.85305 | 166.31589 | 15.34461 | 0.2179236 | 0.19495688 | 2.9456220 | 20 | 1 22.9 | 20.9 |
| 373937 2003 UA ₃₁₁ | 16.4 | X | 78.40264 | 349.77163 | 91.25513 | 2.06660 | 0.1669561 | 0.19720235 | 2.9232189 | 20 | 2 29.9 | 20.2 |
| 373938 2003 UM ₃₂₃ | 16.8 | X | 77.47594 | 29.45200 | 31.22460 | 2.22006 | 0.0660779 | 0.19548091 | 2.9403553 | 20 | 1 19.9 | 20.7 |
| 373939 2003 UR ₃₂₉ | 16.4 | X | 93.25623 | 207.11084 | 221.50209 | 5.56171 | 0.0485789 | 0.20392006 | 2.8586616 | 20 | 2 12.9 | 20.3 |
| 373940 2003 US ₃₅₄ | 16.4 | X | 199.08805 | 289.96486 | 21.28220 | 14.91467 | 0.1548168 | 0.20264757 | 2.8706161 | 20 | 2 2.0 | 21.4 |
| 373941 2003 UL ₃₆₃ | 16.3 | X | 85.82824 | 197.02329 | 115.54421 | 5.97991 | 0.1008420 | 0.18207099 | 3.0830144 | 20 | 12 15.8 | 21.0 |
| 373942 2003 UJ ₃₇₂ | 17.5 | X | 4.06492 | 94.75749 | 286.78662 | 7.94855 | 0.1771244 | 0.30031597 | 2.2084306 | 20 | — | — |
| 373943 2003 UJ ₃₇₅ | 17.1 | X | 156.64167 | 24.50429 | 305.93015 | 3.47343 | 0.2061432 | 0.20007823 | 2.8951395 | 20 | 1 16.5 | 21.8 |
| 373944 2003 UU ₃₉₇ | 16.6 | X | 352.32479 | 306.47649 | 183.32006 | 18.94812 | 0.3047725 | 0.18569147 | 3.0428094 | 20 | — | — |
| 373945 2003 UA ₄₀₃ | 16.8 | X | 179.59903 | 176.73380 | 164.64084 | 2.32420 | 0.0756680 | 0.20356336 | 2.8620000 | 20 | 2 10.9 | 21.2 |
| 373946 2003 UT ₄₀₈ | 17.9 | X | 246.69076 | 355.48847 | 137.86690 | 6.76329 | 0.1251991 | 0.29297703 | 2.2451585 | 20 | 11 21.2 | 20.4 |
| 373947 2003 VC ₁₀ | 16.3 | X | 173.72950 | 142.47667 | 34.24976 | 25.66647 | 0.1622033 | 0.28478893 | 2.2879892 | 20 | 10 18.2 | 19.8 |
| 373948 2003 WZ | 15.9 | X | 102.14123 | 159.56765 | 231.37940 | 9.45222 | 0.1117580 | 0.19265005 | 2.9690896 | 20 | 1 19.1 | 20.2 |
| 373949 2003 WW ₁₀ | 17.3 | X | 0.93307 | 30.87383 | 342.26174 | 6.52798 | 0.1116693 | 0.29437592 | 2.2380401 | 20 | 12 16.0 | 19.8 |
| 373950 2003 WT ₂₄ | 17.5 | X | 121.92219 | 195.21705 | 264.29999 | 17.60293 | 0.0940472 | 0.38342968 | 1.8764870 | 20 | 4 23.6 | 19.8 |
| 373951 2003 WF ₃₁ | 17.8 | X | 21.57703 | 62.82718 | 305.08528 | 3.58450 | 0.1418256 | 0.29702549 | 2.2247108 | 20 | — | — |
| 373952 2003 WK ₄₈ | 18.0 | X | 319.02291 | 323.99726 | 86.34243 | 7.49424 | 0.1295240 | 0.29082997 | 2.2561949 | 20 | 11 28.4 | 19.7 |
| 373953 2003 WP ₆₁ | 18.0 | X | 11.32887 | 126.07884 | 227.85544 | 2.44006 | 0.1835223 | 0.29243915 | 2.2479106 | 20 | 12 16.3 | 20.5 |
| 373954 2003 WN ₆₂ | 16.0 | X | 358.46486 | 232.20430 | 223.28361 | 5.13178 | 0.2099652 | 0.18286970 | 3.0740308 | 20 | — | — |
| 373955 2003 WH ₆₉ | 15.4 | X | 300.60523 | 240.02450 | 244.08167 | 15.78878 | 0.1143999 | 0.17712452 | 3.1401490 | 20 | 12 26.4 | 19.5 |
| 373956 2003 WS ₇₆ | 18.1 | X | 256.22034 | 148.66279 | 311.25455 | 5.10710 | 0.1070381 | 0.28748697 | 2.2736517 | 20 | 10 15.0 | 20.8 |
| 373957 2003 WK ₇₈ | 15.6 | X | 109.43668 | 106.80296 | 260.34256 | 8.93695 | 0.0675966 | 0.19051396 | 2.9912418 | 20 | — | — |
| 373958 2003 WB ₉₁ | 17.6 | X | 324.33012 | 359.85514 | 53.58417 | 5.87082 | 0.1315873 | 0.29187279 | 2.2508176 | 20 | 12 13.1 | 19.5 |
| 373959 2003 WB ₉₉ | 15.9 | X | 50.73436 | 193.30884 | 251.59142 | 8.20466 | 0.2020731 | 0.19065953 | 2.9897190 | 20 | 1 23.2 | 19.2 |
| 373960 2003 WW ₁₁₀ | 16.2 | X | 80.99311 | 198.53786 | 251.56693 | 7.09175 | 0.1967301 | 0.19619969 | 2.9331695 | 20 | 3 16.1 | 20.2 |
| 373961 2003 WJ ₁₄₄ | 17.6 | X | 13.95198 | 294.06318 | 56.05484 | 7.44322 | 0.1703483 | 0.29266525 | 2.2467527 | 20 | 12 12.1 | 20.0 |
| 373962 2003 WM ₁₅₉ | 15.8 | X | 108.08198 | 294.96515 | 72.38688 | 15.41762 | 0.2140108 | 0.19086122 | 2.9876124 | 20 | 1 15.7 | 20.2 |
| 373963 2003 WW ₁₈₂ | 16.2 | X | 100.63252 | 124.34475 | 227.79792 | 11.07806 | 0.1711507 | 0.18879492 | 3.0093718 | 20 | — | — |
| 373964 2003 WV ₁₉₀ | 17.8 | X | 313.28846 | 329.07221 | 113.19868 | 5.74491 | 0.1905124 | 0.29358283 | 2.2420689 | 20 | — | — |
| 373965 2003 WD ₁₉₄ | 16.9 | X | 91.39298 | 326.45247 | 61.32419 | 12.82739 | 0.1970047 | 0.19006775 | 2.9959215 | 20 | 1 18.5 | 21.0 |
| 373966 2003 XO ₄ | 15.0 | X | 344.96109 | 224.01822 | 247.37967 | 16.63650 | 0.2683495 | 0.18012049 | 3.1052314 | 20 | — | — |
| 373967 2003 XJ ₅ | 15.4 | X | 67.07738 | 2.80677 | 41.74885 | 9.85672 | 0.1445867 | 0.18482521 | 3.0523095 | 20 | — | — |
| 373968 2003 XA ₂₉ | 16.4 | X | 93.09637 | 166.27693 | 248.84493 | 9.08916 | 0.0946708 | 0.19338888 | 2.9615226 | 20 | 2 2.9 | 20.5 |
| 373969 2003 YM ₄ | 17.4 | X | 295.58605 | 147.74608 | 279.65119 | 5.76076 | 0.2240278 | 0.28568979 | 2.2831770 | 20 | 10 21.9 | 19.0 |
| 373970 2003 YM ₁₀ | 15.5 | X | 18.68858 | 78.50375 | 20.96056 | 10.44350 | 0.0367037 | 0.18549388 | 3.0449698 | 20 | — | — |
| 373971 2003 YB ₄₈ | 16.1 | X | 80.64670 | 151.71141 | 278.88494 | 3.30736 | 0.2220236 | 0.19220163 | 2.9737059 | 20 | 2 26.3 | 19.9 |
| 373972 2003 YJ ₄₈ | 15.9 | X | 72.89857 | 346.74603 | 72.71146 | 10.80073 | 0.1000879 | 0.18870378 | 3.0103406 | 20 | 1 18.2 | 19.9 |
| 373973 2003 YP ₅₅ | 15.3 | X | 112.84304 | 105.14557 | 252.72374 | 9.67811 | 0.2454650 | 0.18953354 | 3.0015482 | 20 | 1 11.4 | 19.8 |
| 373974 2003 YW ₇₉ | 16.5 | X | 178.60006 | 84.30880 | 75.27048 | 6.14168 | 0.1189892 | 0.27745700 | 2.3281212 | 20 | 10 1.5 | 19.9 |
| 373975 2003 YW ₉₅ | 17.5 | X | 275.19179 | 331.94946 | 97.45779 | 7.50470 | 0.1855313 | 0.28415922 | 2.2913682 | 20 | 9 24.7 | 19.8 |
| 373976 2003 YJ ₉₉ | 15.6 | X | 36.44012 | 137.11576 | 273.72084 | 15.56448 | 0.2389287 | 0.18121080 | 3.0927632 | 20 | — | — |
| 373977 2003 YP ₁₁₁ | 15.6 | X | 29.43116 | 162.51409 | 271.91469 | 15.88231 | 0.1059032 | 0.18451607 | 3.0557178 | 20 | — | — |
| 373978 2003 YN ₁₂₆ | 17.3 | X | 289.11088 | 117.86033 | 353.62115 | 5.66908 | 0.2152518 | 0.29026068 | 2.2591440 | 20 | 12 28.3 | 18.6 |
| 373979 2003 YM ₁₃₂ | 15.8 | X | 11.82747 | 152.63219 | 327.61337 | 11.97680 | 0.0963719 | 0.18460653 | 3.0547195 | 20 | 1 4.1 | 19.7 |
| 373980 2003 YQ ₁₃₇ | 15.6 | X | 52.33080 | 110.28594 | 309.99338 | 10.91814 | 0.1409690 | 0.18179732 | 3.0861076 | 20 | — | — |
| 373981 2003 YW ₁₄₁ | 15.4 | X | 109.06007 | 337.80267 | 47.20810 | 12.06733 | 0.1075268 | 0.18787900 | 3.0191445 | 20 | 1 26.2 | 19.8 |
| 373982 2003 YZ ₁₄₁ | 16.4 | X | 60.35781 | 87.88690 | 3.19006 | 8.87307 | 0.2609984 | 0.18949844 | 3.0019190 | 20 | 3 2.4 | 19.7 |
| 373983 2003 YG ₁₆₀ | 14.9 | X | 293.43486 | 222.18534 | 285.40147 | 21.20100 | 0.0192205 | 0.17770829 | 3.1332684 | 20 | — | — |
| 373984 2003 YE ₁₆₃ | 16.0 | X | 78.26382 | 26.06699 | 66.23672 | 17.20888 | 0.3069928 | 0.19107139 | 2.9854212 | 20 | 4 13.3 | 20.3 |
| 373985 2003 YL ₁₆₅ | 13.0 | X | 231.22809 | 252.39294 | 90.75560 | 12.59960 | 0.0546344 | 0.08446187 | 5.1447259 | 20 | 4 21.3 | 20.1 |
| 373986 2004 AK | 15.4 | X | 339.21573 | 172.04509 | 282.87494 | 8.16042 | 0.0597669 | 0.17523953 | 3.1626272 | 20 | — | — |
| 373987 2004 AG ₂₅ | 16.5 | X | 33.98144 | 304.74050 | 118.08285 | 9.79018 | 0.2407844 | 0.18083029 | 3.0971003 | 20 | — | — |
| 373988 2004 BU ₃ | 16.1 | X | 22.95722 | 108.27962 | 342.09517 | 4.30330 | 0.1213045 | 0.17982753 | 3.1086030 | 20 | — | — |
| 373989 2004 BX ₉ | 15.7 | X | 7.36925 | 0.89239 | 118.54584 | 8.83950 | 0.1092557 | 0.18021430 | 3.1041537 | 20 | — | — |
| 373990 2004 BE ₁₄ | 16.9 | X | 45.95467 | 103.73978 | 354.20333 | 3.49267 | 0.2484626 | 0.18555681 | 3.0442813 | 20 | 2 10.3 | 20.0 |
| 373991 2004 BB ₂₈ | 16.4 | X | 111.49621 | 85.00128 | 121.86494 | 11.74852 | 0.1412645 | 0.27001045 | 2.3707313 | 20 | 9 25.1 | 20.1 |
| 373992 2004 BN ₃₁ | 18.2 | X | 257.59725 | 99.73340 | 346.58604 | 3.39805 | 0.1854681 | 0.28025970 | 2.3125739 | 20 | 9 15.2 | 20.9 |
| 373993 2004 BP ₃₅ | 16.6 | X | 8.46561 | 37.03543 | 61.24562 | 2.56584 | 0.1611760 | 0.17870023 | 3.1216627 | 20 | — | — |
| 373994 2004 BW ₄₀ | 17.5 | X | 218.92494 | 198.85512 | 298.46478 | 1.36378 | 0.1526483 | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 374001 2004 BX ₁₂₁ | 15.3 | X | 334.23104 | 143.29548 | 7.44117 | 21.20326 | 0.1270663 | 0.18079491 | 3.0975043 | 20 | — | — |
| 374002 2004 BW ₁₂₈ | 18.0 | X | 317.58781 | 96.43731 | 298.01911 | 2.06748 | 0.1837978 | 0.28299017 | 2.2976744 | 20 | 10 26.3 | 19.6 |
| 374003 2004 BW ₁₆₁ | 15.8 | X | 18.42622 | 300.79543 | 139.82519 | 13.10996 | 0.1440376 | 0.17805983 | 3.1291430 | 20 | — | — |
| 374004 2004 BL ₁₆₂ | 15.6 | X | 17.55913 | 153.81415 | 311.33385 | 16.48934 | 0.1743542 | 0.17826751 | 3.1267122 | 20 | — | — |
| 374005 2004 CA ₁₃ | 17.3 | X | 197.70501 | 341.33109 | 150.21744 | 5.88398 | 0.0634169 | 0.27318983 | 2.3523018 | 20 | 9 17.8 | 20.5 |
| 374006 2004 CT ₂₂ | 17.2 | X | 86.99276 | 21.56204 | 47.04904 | 2.51937 | 0.2880400 | 0.18985261 | 2.9981844 | 20 | 3 15.7 | 21.2 |
| 374007 2004 CZ ₃₆ | 15.9 | X | 356.08207 | 229.12054 | 250.15914 | 8.65560 | 0.1984099 | 0.17734564 | 3.1375383 | 20 | — | — |
| 374008 2004 CL ₄₂ | 15.8 | X | 43.23881 | 113.73947 | 335.65307 | 17.59800 | 0.2268244 | 0.18240970 | 3.0791966 | 20 | 1 26.4 | 19.1 |
| 374009 2004 CS ₅₇ | 15.7 | X | 8.15436 | 60.32363 | 52.43559 | 11.79540 | 0.1754608 | 0.17911881 | 3.1167975 | 20 | — | — |
| 374010 2004 CH ₇₁ | 16.2 | X | 223.44004 | 182.86016 | 5.58776 | 4.11474 | 0.2262033 | 0.16319579 | 3.3163733 | 20 | 11 19.3 | 21.4 |
| 374011 2004 CX ₉₉ | 17.2 | X | 133.57024 | 130.66108 | 60.06138 | 3.28564 | 0.1647503 | 0.26818200 | 2.3814947 | 20 | 9 23.6 | 20.9 |
| 374012 2004 CZ ₁₁₄ | 15.4 | X | 337.53133 | 93.39714 | 35.84659 | 16.84194 | 0.1445860 | 0.17561175 | 3.1581566 | 20 | — | — |
| 374013 2004 DP ₇ | 18.3 | X | 228.15117 | 170.05163 | 325.10302 | 1.71787 | 0.1011157 | 0.27827618 | 2.3235500 | 20 | 10 25.5 | 21.2 |
| 374014 2004 DB ₈ | 17.3 | X | 79.29720 | 228.28366 | 340.65828 | 2.20360 | 0.1306262 | 0.26277531 | 2.4140505 | 20 | 8 15.5 | 20.5 |
| 374015 2004 DW ₁₃ | 17.7 | X | 224.93669 | 85.66933 | 14.36331 | 10.22332 | 0.1592084 | 0.27330408 | 2.3516461 | 20 | 8 30.4 | 21.0 |
| 374016 2004 DD ₄₃ | 17.1 | X | 156.81738 | 150.12677 | 4.86083 | 3.03130 | 0.1276989 | 0.26894626 | 2.3769810 | 20 | 8 29.7 | 20.5 |
| 374017 2004 DZ ₄₈ | 17.1 | X | 156.34433 | 149.11380 | 353.30034 | 5.32013 | 0.1767035 | 0.26586563 | 2.3953074 | 20 | 8 13.3 | 20.9 |
| 374018 2004 DG ₆₁ | 17.7 | X | 202.36264 | 331.02385 | 158.96722 | 4.75527 | 0.1666630 | 0.27336151 | 2.3513167 | 20 | 9 10.3 | 21.0 |
| 374019 2004 DY ₆₅ | 17.5 | X | 235.43976 | 11.84591 | 113.77380 | 1.86426 | 0.1607643 | 0.27773609 | 2.3265613 | 20 | 10 14.7 | 20.4 |
| 374020 2004 EC ₅ | 17.1 | X | 57.84457 | 216.49252 | 1.45935 | 7.40433 | 0.0898492 | 0.25919705 | 2.4362173 | 20 | 7 24.4 | 20.1 |
| 374021 2004 EP ₁₉ | 17.5 | X | 215.81521 | 146.98719 | 349.07958 | 4.57581 | 0.1308220 | 0.27531248 | 2.3401954 | 20 | 10 5.9 | 20.7 |
| 374022 2004 EM ₂₃ | 17.9 | X | 140.11288 | 111.76714 | 347.03561 | 20.24158 | 0.1863890 | 0.37815615 | 1.8938923 | 20 | 5 25.5 | 21.0 |
| 374023 2004 EE ₄₃ | 17.3 | X | 112.72985 | 157.05933 | 21.10824 | 3.09310 | 0.1632550 | 0.26215955 | 2.4178291 | 20 | 8 16.9 | 20.9 |
| 374024 2004 EX ₄₅ | 15.8 | X | 25.87543 | 17.16650 | 2.60030 | 6.39146 | 0.1533649 | 0.16246758 | 3.3262756 | 20 | 12 28.6 | 20.3 |
| 374025 2004 EF ₆₂ | 16.1 | X | 31.06833 | 293.52344 | 171.85261 | 10.14767 | 0.1294909 | 0.17900277 | 3.1181443 | 20 | 1 15.1 | 19.5 |
| 374026 2004 EA ₈₂ | 17.1 | X | 114.77330 | 114.50636 | 62.49645 | 3.74530 | 0.1571750 | 0.26231841 | 2.4168528 | 20 | 8 17.4 | 20.8 |
| 374027 2004 FS ₃ | 17.6 | X | 115.31235 | 269.82909 | 180.95868 | 22.29010 | 0.0832375 | 0.37160881 | 1.9160730 | 20 | 4 5.8 | 19.3 |
| 374028 2004 FN ₆ | 17.8 | X | 245.43474 | 282.10397 | 17.84611 | 21.05769 | 0.0922814 | 0.36428623 | 1.9416646 | 20 | 2 22.9 | 20.6 |
| 374029 2004 FJ ₉ | 16.4 | X | 38.00040 | 125.46141 | 307.28578 | 2.65701 | 0.2625656 | 0.17667152 | 3.1455145 | 20 | — | — |
| 374030 2004 FR ₁₉ | 17.7 | X | 113.61999 | 347.39236 | 181.26460 | 3.41941 | 0.1459806 | 0.26194148 | 2.4191708 | 20 | 8 1.4 | 21.2 |
| 374031 2004 FA ₄₇ | 15.6 | X | 291.33784 | 238.51098 | 296.93684 | 3.39017 | 0.0783771 | 0.17354595 | 3.1831692 | 20 | — | — |
| 374032 2004 FK ₅₉ | 15.7 | X | 23.64282 | 287.07601 | 165.63924 | 14.59163 | 0.2449639 | 0.17776625 | 3.1325873 | 20 | — | — |
| 374033 2004 FF ₁₁₁ | 16.7 | X | 123.62817 | 330.18275 | 210.52485 | 8.89294 | 0.1842357 | 0.26161562 | 2.4211792 | 20 | 8 27.8 | 20.8 |
| 374034 2004 FG ₁₁₅ | 16.8 | X | 215.10565 | 67.81624 | 40.15462 | 6.98376 | 0.0997959 | 0.26780151 | 2.3837500 | 20 | 9 4.7 | 20.1 |
| 374035 2004 FZ ₁₄₂ | 16.7 | X | 136.09025 | 155.67929 | 25.12183 | 10.52021 | 0.1623649 | 0.26407554 | 2.4061199 | 20 | 9 15.1 | 20.5 |
| 374036 2004 GH ₄ | 17.9 | X | 38.70799 | 136.44331 | 20.11979 | 19.56661 | 0.0435311 | 0.36613892 | 1.9351091 | 20 | 3 14.1 | 19.7 |
| 374037 2004 GO ₈₀ | 17.9 | X | 177.68965 | 14.72519 | 114.03433 | 2.19436 | 0.1283145 | 0.26695101 | 2.3888104 | 20 | 8 16.1 | 21.5 |
| 374038 2004 HW | 17.1 | X | 226.43977 | 62.82801 | 219.88642 | 0.83016 | 0.6346383 | 0.22278817 | 2.6948916 | 20 | 1 7.9 | 23.2 |
| 374039 2004 HP ₁₄ | 17.0 | X | 218.50085 | 76.69155 | 42.76325 | 5.04991 | 0.0837389 | 0.27102448 | 2.3648143 | 20 | 9 25.6 | 20.1 |
| 374040 2004 HV ₄₄ | 17.3 | X | 152.10948 | 147.30668 | 34.52297 | 7.69231 | 0.1876436 | 0.26728612 | 2.3868133 | 20 | 9 29.9 | 21.1 |
| 374041 2004 JB ₄₁ | 16.4 | X | 295.34661 | 98.49081 | 186.17002 | 11.92387 | 0.2416183 | 0.23876892 | 2.5732631 | 20 | 3 13.4 | 19.9 |
| 374042 2004 KZ ₃ | 16.9 | X | 65.34094 | 349.81908 | 235.23657 | 3.91251 | 0.1516537 | 0.25478896 | 2.4642361 | 20 | 8 19.7 | 20.0 |
| 374043 2004 LH ₆ | 17.4 | X | 204.16375 | 48.66069 | 245.59179 | 18.46359 | 0.0794601 | 0.35048414 | 1.9923110 | 20 | — | — |
| 374044 2004 MU ₇ | 15.6 | X | 208.86723 | 181.98489 | 149.94181 | 32.90991 | 0.1468715 | 0.23253767 | 2.6190302 | 20 | 2 27.1 | 19.8 |
| 374045 2004 ND ₁₃ | 18.0 | X | 219.31171 | 21.64319 | 257.18373 | 2.37617 | 0.3324958 | 0.22251454 | 2.6971005 | 20 | 1 3.2 | 23.0 |
| 374046 2004 OV ₈ | 16.6 | X | 250.20447 | 356.75352 | 304.21685 | 8.97773 | 0.1500130 | 0.22974166 | 2.6402368 | 20 | 2 24.6 | 20.8 |
| 374047 2004 OF ₁₁ | 16.9 | X | 189.69920 | 325.90520 | 351.19251 | 8.78244 | 0.3153421 | 0.21947691 | 2.7219292 | 20 | 1 30.5 | 22.0 |
| 374048 2004 PJ ₃ | 17.3 | X | 192.85899 | 348.05399 | 331.84870 | 3.99198 | 0.2977568 | 0.22079203 | 2.7111099 | 20 | 2 2.4 | 22.1 |
| 374049 2004 PM ₄ | 16.8 | X | 211.26635 | 127.89593 | 254.64053 | 10.34132 | 0.2998344 | 0.23039646 | 2.6352320 | 20 | 4 23.5 | 21.7 |
| 374050 2004 PK ₁₄ | 16.2 | X | 212.11858 | 23.98048 | 334.95199 | 13.46627 | 0.2696276 | 0.22739317 | 2.6583843 | 20 | 3 25.6 | 21.1 |
| 374051 2004 PM ₃₄ | 16.3 | X | 188.97115 | 68.33330 | 320.36043 | 12.23450 | 0.1889816 | 0.22803524 | 2.6533920 | 20 | 4 11.8 | 20.9 |
| 374052 2004 PM ₃₅ | 16.1 | X | 223.64185 | 337.51924 | 333.10847 | 10.60554 | 0.0722372 | 0.22272441 | 2.6954059 | 20 | 2 18.6 | 20.1 |
| 374053 2004 PQ ₄₃ | 16.8 | X | 202.99106 | 182.90925 | 182.62239 | 2.75137 | 0.2471115 | 0.22673216 | 2.6635487 | 20 | 4 1.1 | 21.3 |
| 374054 2004 PB ₆₉ | 16.9 | X | 210.80732 | 21.58773 | 357.36521 | 4.49416 | 0.1927499 | 0.23036550 | 2.6354680 | 20 | 4 23.2 | 21.2 |
| 374055 2004 PY ₇₀ | 16.4 | X | 187.85107 | 210.57678 | 141.62481 | 17.22545 | 0.3075351 | 0.22446409 | 2.6814609 | 20 | 3 8.6 | 21.4 |
| 374056 2004 PP ₈₄ | 16.4 | X | 267.47855 | 320.40820 | 32.52712 | 4.78997 | 0.2818401 | 0.23401159 | 2.6080213 | 20 | 5 5.3 | 20.4 |
| 374057 2004 PN ₈₉ | 16.5 | X | 227.03590 | 178.41146 | 170.56224 | 14.65785 | 0.2694827 | 0.22980139 | 2.6397793 | 20 | 3 30.9 | 21.2 |
| 374058 2004 PU ₉₀ | 15.9 | X | 127.56198 | 13.65890 | 359.12433 | 9.35338 | 0.2430142 | 0.21107854 | 2.7936586 | 20 | 2 13.8 | 20.3 |
| 374059 2004 PZ ₉₆ | 16.6 | X | 188.13127 | 57.61019 | 330.95644 | 12.58392 | 0.2170043 | 0.22500529 | 2.6771594 | 20 | 4 11.4 | 21.4 |
| 374060 2004 PY ₁₀₄ | 16.0 | X | 254.84126 | 11.84751 | 285.73079 | 13.17037 | 0.2437488 | 0.22850807 | 2.6497304 | 20 | 2 15.9 | 20.6 |
| 374061 2004 RY ₅ | 16.4 | X | 198.89016 | 296.24042 | 7.54439 | 16.18708 | 0.1545589 | 0.21772582 | 2.7365041 | 20 | 1 21.9 | 21.2 |
| 374062 2004 RS ₈ | 16.6 | X | 257.68894 | 50.69552 | 241.21197 | 5.82544 | 0.2316343 | 0.22713652 | 2.6603865 | 20 | 2 15.0 | 21.1 |
| 374063 2004 RY ₂₉ | 17.1 | X | 229.39662 | 309.16996 | 355.31171 | 4.73260 | 0.2692941 | 0.22452880 | 2.6809457 | 20 | 2 9.8 | 21.9 |
| 374064 2004 RF ₃₃ | 16.5 | X | 166.76416 | 32.70558 | 354.77999 | 13.25676 | 0.2135005 | 0.22305681 | 2.6927274 | 20 | 3 27.8 | 21.1 |
| 374065 2004 RF ₃₅ | 16.2 | X | 157.33875 | 15.19104 | 354.28494 | 12.37390 | 0.1983626 | 0.21911931 | 2.7248899 | 20 | 3 1.9 | 20.7 |
| 374066 2004 RR ₄₇ | 16.8 | X | 189.34247 | 19.62027 | 351.23880 | 2.82996 | 0.2702132 | 0.22355768 | 2.6887040 | 20 | 3 28.0 | 21.6 |
| 374067 2004 RK ₅₈ | 17.3 | X | 215.10872 | 156.18823 | 221.20179 | 4.95673 | 0.2036995 | 0.22916371 | 2.6446740 | 20 | 4 25.7 | 21.7 |
| 374068 2004 RE ₇₀ | 17.6 | X | 173.55217 | 216.92733 | 138.79683 | 4.26973 | 0.1864476 | 0.28171821 | 2.3045852 | 20 | 2 21.0 | 21.0 |
| 374069 2004 RJ ₁₀₀ | 16.3 | X | 234.65309 | 313.87860 | 340.39858 | 12.77854 | 0.2503237 | 0.22285857 | 2.6943240 | 20 | 2 4.3 | 21.0 |
| 374070 2004 RH ₁₁₃ | 16.9 | X | 334.28727 | 41.96746 | 183.71134 | 8.95211 | 0.0909950 | 0.22676787 | 2.6632690 | 20 | 3 14.5 | 20.0 |
| 374071 2004 RS ₁₂₄ | 16.8 | X | 115.95324 | 259.61838 | 179.91875 | 8.53443 | 0.1820360 | 0.22094284 | 2.7098761 | 20 | 4 14.8 | 20.8 |
| 374072 2004 RY ₁₂₇ | 17.2 | X | 290.13174 | 308.79462 | 313.54630 | 1.93056 | 0.0349677 | 0.22452856 | 2.6809476 | 20 | 3 9.9 | 20.9 |
| 374073 2004 RZ ₁₃₈ | 16.1 | X | 217.31572 | 153.18763 | 225.61726 | 11.72846 | 0.1661552 | 0.22995966 | 2.6385680 | 20 | 5 1.1 | 20.1 |
| 374074 2004 RD ₁₃ | | | | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|--------|----------|
| 374081 2004 RJ ₁₆₇ | 16.7 | X | 205.86540 | 344.67911 | 16.05294 | 13.49807 | 0.1372926 | 0.22570000 | 2.6716630 | 20 | 3 31.4 | 21.0 |
| 374082 2004 RU ₁₆₈ | 16.7 | X | 187.63323 | 172.83331 | 184.41507 | 13.75639 | 0.1899211 | 0.22274771 | 2.6952179 | 20 | 3 9.0 | 21.3 |
| 374083 2004 RT ₁₈₁ | 16.5 | X | 223.43688 | 3.78982 | 329.46051 | 10.69394 | 0.0789220 | 0.22377402 | 2.6869707 | 20 | 3 13.5 | 20.5 |
| 374084 2004 RY ₁₈₈ | 16.3 | X | 158.59746 | 199.03647 | 224.91338 | 8.25301 | 0.2693680 | 0.22239053 | 2.6981030 | 20 | 5 8.5 | 21.1 |
| 374085 2004 RR ₁₉₉ | 16.2 | X | 189.68353 | 80.53551 | 279.07749 | 7.39607 | 0.2800022 | 0.21911229 | 2.7249480 | 20 | 3 12.2 | 21.2 |
| 374086 2004 RX ₂₀₅ | 16.0 | X | 223.42049 | 357.25361 | 328.99232 | 16.34646 | 0.1742822 | 0.22305540 | 2.6927388 | 20 | 3 1.2 | 20.6 |
| 374087 2004 RQ ₂₀₇ | 16.5 | X | 256.79194 | 71.08086 | 230.04414 | 12.65135 | 0.2718554 | 0.22826165 | 2.6516371 | 20 | 2 19.5 | 21.3 |
| 374088 2004 RK ₂₁₀ | 17.1 | X | 213.66104 | 135.48109 | 235.23528 | 12.32742 | 0.2594796 | 0.22831166 | 2.6512498 | 20 | 4 12.3 | 21.8 |
| 374089 2004 RV ₂₁₁ | 16.6 | X | 191.08893 | 81.22432 | 297.24449 | 12.20744 | 0.2187080 | 0.22500319 | 2.6771761 | 20 | 4 1.0 | 21.4 |
| 374090 2004 RX ₂₂₆ | 16.1 | X | 227.13154 | 315.06725 | 16.38014 | 12.11384 | 0.2060932 | 0.22325631 | 2.6911230 | 20 | 3 14.8 | 20.6 |
| 374091 2004 RT ₂₂₉ | 16.7 | X | 221.61956 | 106.69506 | 193.50292 | 9.50990 | 0.3156554 | 0.21955744 | 2.7212636 | 20 | 1 26.8 | 21.9 |
| 374092 2004 RV ₂₃₀ | 17.5 | X | 184.31166 | 148.68957 | 203.53387 | 2.91154 | 0.2087651 | 0.21824607 | 2.7321535 | 20 | 3 1.5 | 22.3 |
| 374093 2004 RX ₂₃₃ | 16.3 | X | 140.42260 | 35.28493 | 32.57648 | 5.20253 | 0.1434224 | 0.22028100 | 2.7153013 | 20 | 4 20.2 | 20.5 |
| 374094 2004 RA ₂₃₅ | 16.6 | X | 184.01887 | 195.11095 | 212.89380 | 10.29034 | 0.2064749 | 0.22642849 | 2.6659296 | 20 | 5 8.2 | 21.1 |
| 374095 2004 RM ₂₃₇ | 17.0 | X | 173.47151 | 90.17925 | 321.41562 | 3.30789 | 0.2206637 | 0.22526236 | 2.6751222 | 20 | 5 2.2 | 21.5 |
| 374096 2004 RL ₂₃₉ | 17.2 | X | 336.32009 | 10.00724 | 206.61619 | 1.70581 | 0.1372178 | 0.22489609 | 2.6780259 | 20 | 2 28.7 | 20.4 |
| 374097 2004 RQ ₂₅₆ | 17.1 | X | 183.41791 | 225.13178 | 146.16925 | 3.33203 | 0.1130039 | 0.22324655 | 2.6912015 | 20 | 3 22.9 | 21.1 |
| 374098 2004 RX ₂₅₉ | 17.3 | X | 296.64055 | 52.48823 | 181.49306 | 5.02067 | 0.0521980 | 0.22014915 | 2.7163853 | 20 | 2 8.5 | 21.1 |
| 374099 2004 RW ₂₇₀ | 17.2 | X | 123.66391 | 42.48762 | 358.33827 | 5.50772 | 0.0715108 | 0.21751182 | 2.7382986 | 20 | 2 21.2 | 20.9 |
| 374100 2004 RL ₂₈₀ | 17.2 | X | 206.69969 | 18.54683 | 323.21811 | 2.83977 | 0.1097239 | 0.22268718 | 2.6957063 | 20 | 3 8.1 | 21.4 |
| 374101 2004 RO ₂₈₉ | 16.4 | X | 249.83454 | 255.28700 | 47.29692 | 12.37580 | 0.2877369 | 0.22762288 | 2.6565955 | 20 | 2 25.9 | 21.2 |
| 374102 2004 RT ₂₈₉ | 15.8 | X | 187.20848 | 313.66018 | 58.61352 | 15.38909 | 0.0644686 | 0.22101959 | 2.7092487 | 20 | 4 3.1 | 20.0 |
| 374103 2004 RT ₂₉₁ | 17.0 | X | 179.10809 | 125.49144 | 214.50343 | 10.72854 | 0.2173448 | 0.21743889 | 2.7389108 | 20 | 2 9.8 | 21.9 |
| 374104 2004 RR ₃₁₅ | 17.1 | X | 229.12865 | 292.71993 | 45.29643 | 11.26600 | 0.3306120 | 0.22772238 | 2.6558216 | 20 | 3 20.5 | 22.1 |
| 374105 2004 RJ ₃₃₉ | 16.2 | X | 272.81663 | 267.99400 | 19.25505 | 12.60928 | 0.1447914 | 0.22349923 | 2.6891727 | 20 | 3 10.9 | 20.2 |
| 374106 2004 RP ₃₅₆ | 17.3 | X | 144.04622 | 174.67666 | 187.50249 | 7.30656 | 0.1552495 | 0.21230770 | 2.7828655 | 20 | 2 3.5 | 21.6 |
| 374107 2004 SE | 16.1 | X | 178.61399 | 173.38333 | 231.97382 | 28.94889 | 0.1194844 | 0.22708644 | 2.6607776 | 20 | 4 27.8 | 20.4 |
| 374108 2004 SY ₇ | 17.3 | X | 162.71712 | 11.20654 | 10.29722 | 4.78265 | 0.2718416 | 0.21936035 | 2.7228933 | 20 | 3 22.7 | 21.9 |
| 374109 2004 SZ ₂₃ | 17.1 | X | 164.64951 | 227.49100 | 179.47417 | 3.74892 | 0.1833301 | 0.22108477 | 2.7087161 | 20 | 4 20.3 | 21.6 |
| 374110 2004 SH ₂₄ | 16.8 | X | 209.17840 | 281.90282 | 38.68845 | 5.14199 | 0.1221606 | 0.21704543 | 2.7422200 | 20 | 2 17.2 | 21.1 |
| 374111 2004 SU ₂₈ | 16.4 | X | 170.20239 | 226.20036 | 178.32173 | 12.23327 | 0.1898738 | 0.22230892 | 2.6987633 | 20 | 4 23.8 | 20.9 |
| 374112 2004 SW ₃₄ | 16.6 | X | 129.04949 | 14.79462 | 24.15556 | 13.58374 | 0.1908311 | 0.21423525 | 2.7661481 | 20 | 3 14.0 | 20.9 |
| 374113 2004 SQ ₃₅ | 16.6 | X | 177.79287 | 339.92814 | 26.61167 | 12.73942 | 0.1741902 | 0.21872988 | 2.7281232 | 20 | 3 17.4 | 21.2 |
| 374114 2004 SP ₅₀ | 16.7 | X | 179.89321 | 188.54229 | 193.74549 | 12.07676 | 0.1129695 | 0.22111194 | 2.7084942 | 20 | 3 31.9 | 21.0 |
| 374115 2004 TO ₂ | 16.3 | X | 161.81154 | 196.73640 | 209.29016 | 10.57599 | 0.1842253 | 0.22080127 | 2.7110343 | 20 | 4 15.7 | 20.7 |
| 374116 2004 TG ₆ | 16.4 | X | 256.28150 | 263.48097 | 35.56161 | 12.47950 | 0.2821086 | 0.22821123 | 2.6520276 | 20 | 2 26.9 | 21.1 |
| 374117 2004 TO ₁₇ | 16.8 | X | 134.96933 | 181.32249 | 222.02902 | 12.82916 | 0.2802211 | 0.21459439 | 2.7630610 | 20 | 3 24.7 | 21.6 |
| 374118 2004 TR ₁₉ | 16.5 | X | 146.19472 | 331.26686 | 88.48392 | 5.01893 | 0.1809695 | 0.21957639 | 2.7211070 | 20 | 4 20.7 | 20.9 |
| 374119 2004 TU ₂₇ | 17.0 | X | 245.64093 | 285.99637 | 1.67547 | 2.90441 | 0.1815674 | 0.22052097 | 2.7133311 | 20 | 2 7.0 | 21.4 |
| 374120 2004 TJ ₃₅ | 16.8 | X | 76.99562 | 103.87320 | 15.84334 | 4.27668 | 0.0800263 | 0.21802589 | 2.7339926 | 20 | 4 2.2 | 20.1 |
| 374121 2004 TN ₃₆ | 17.3 | X | 114.40345 | 69.89446 | 21.97313 | 3.43790 | 0.1686133 | 0.21861975 | 2.7290393 | 20 | 4 25.4 | 21.3 |
| 374122 2004 TR ₄₅ | 16.4 | X | 192.57735 | 167.93370 | 212.16880 | 7.11184 | 0.1656882 | 0.22203911 | 2.7009491 | 20 | 4 10.3 | 20.9 |
| 374123 2004 TP ₆₅ | 16.2 | X | 149.34780 | 308.10563 | 84.56769 | 10.50560 | 0.2239657 | 0.21631889 | 2.7483566 | 20 | 3 28.2 | 20.9 |
| 374124 2004 TC ₆₉ | 15.8 | X | 265.98725 | 260.24273 | 30.63114 | 15.20967 | 0.0695035 | 0.2225708 | 2.6991829 | 20 | 3 18.8 | 19.7 |
| 374125 2004 TM ₆₉ | 16.6 | X | 183.66805 | 355.56928 | 24.70122 | 12.78154 | 0.1967857 | 0.22214712 | 2.7000735 | 20 | 4 5.1 | 21.1 |
| 374126 2004 TQ ₇₂ | 16.5 | X | 190.34499 | 321.99420 | 36.71152 | 6.47804 | 0.0514170 | 0.21853994 | 2.7297037 | 20 | 3 15.5 | 20.4 |
| 374127 2004 TO ₇₄ | 15.8 | X | 57.00398 | 132.74226 | 33.54256 | 24.07828 | 0.2112003 | 0.21910488 | 2.7250095 | 20 | 5 19.2 | 19.3 |
| 374128 2004 TR ₁₀₆ | 16.3 | X | 227.66919 | 315.05501 | 41.84122 | 9.43562 | 0.1415977 | 0.22709678 | 2.6606968 | 20 | 4 16.9 | 20.4 |
| 374129 2004 TY ₁₀₆ | 16.3 | X | 177.45357 | 20.70654 | 14.67422 | 6.68203 | 0.0659787 | 0.22324407 | 2.6912214 | 20 | 4 12.9 | 20.1 |
| 374130 2004 TP ₁₁₄ | 16.4 | X | 184.84065 | 311.75328 | 64.84037 | 9.58922 | 0.2146474 | 0.22432203 | 2.6825929 | 20 | 4 4.6 | 21.1 |
| 374131 2004 TS ₁₁₅ | 16.5 | X | 161.94546 | 175.99783 | 236.75633 | 9.14351 | 0.2440183 | 0.21964931 | 2.7205047 | 20 | 4 25.6 | 21.2 |
| 374132 2004 TQ ₁₁₆ | 15.6 | X | 120.71518 | 195.22549 | 249.84717 | 12.76909 | 0.1022136 | 0.21849624 | 2.7300677 | 20 | 4 12.6 | 19.7 |
| 374133 2004 TQ ₁₂₂ | 16.5 | X | 181.96424 | 175.03966 | 197.22503 | 5.60339 | 0.0585449 | 0.22034386 | 2.7147848 | 20 | 3 19.6 | 20.5 |
| 374134 2004 TA ₁₂₅ | 16.5 | X | 207.37090 | 136.97244 | 213.34312 | 5.34810 | 0.0886808 | 0.22245269 | 2.6976004 | 20 | 3 18.9 | 20.6 |
| 374135 2004 TO ₁₃₀ | 16.7 | X | 212.65304 | 191.56689 | 142.05956 | 5.04647 | 0.2318500 | 0.22160914 | 2.7044416 | 20 | 3 2.9 | 21.3 |
| 374136 2004 TW ₁₃₂ | 16.4 | X | 214.82367 | 59.32693 | 282.38500 | 7.74468 | 0.1884832 | 0.22134768 | 2.7065709 | 20 | 3 10.5 | 21.1 |
| 374137 2004 TH ₁₃₃ | 16.0 | X | 206.25092 | 321.84943 | 5.48124 | 14.06334 | 0.2202432 | 0.21752337 | 2.7382016 | 20 | 2 24.1 | 20.8 |
| 374138 2004 TB ₁₃₆ | 16.2 | X | 191.40429 | 180.67592 | 228.13807 | 13.52068 | 0.1577249 | 0.22586139 | 2.6703902 | 20 | 5 15.5 | 20.5 |
| 374139 2004 TQ ₁₃₇ | 17.1 | X | 204.30568 | 314.66931 | 45.73555 | 4.44179 | 0.3137158 | 0.22299057 | 2.6932607 | 20 | 3 27.7 | 22.1 |
| 374140 2004 TP ₁₆₀ | 16.7 | X | 82.32836 | 228.13989 | 227.21203 | 3.90203 | 0.0876846 | 0.21282421 | 2.7783611 | 20 | 3 8.4 | 20.4 |
| 374141 2004 TU ₁₇₄ | 16.5 | X | 208.63126 | 345.74116 | 28.15501 | 9.32201 | 0.0815538 | 0.22567925 | 2.6718267 | 20 | 4 20.2 | 20.5 |
| 374142 2004 TB ₁₈₇ | 16.6 | X | 271.44881 | 299.29343 | 9.91047 | 6.32563 | 0.0700264 | 0.22599520 | 2.6693360 | 20 | 4 10.6 | 20.4 |
| 374143 2004 TJ ₁₉₁ | 17.0 | X | 202.07084 | 347.43890 | 27.85410 | 3.26120 | 0.0912316 | 0.22439990 | 2.6819723 | 20 | 4 14.9 | 21.0 |
| 374144 2004 TO ₂₀₄ | 16.3 | X | 98.27920 | 37.52133 | 39.54983 | 7.67747 | 0.1970572 | 0.21063831 | 2.7975497 | 20 | 3 26.7 | 20.2 |
| 374145 2004 TQ ₂₀₇ | 16.4 | X | 183.48657 | 335.57881 | 49.62823 | 7.90163 | 0.1094936 | 0.21863761 | 2.7288907 | 20 | 4 10.7 | 20.7 |
| 374146 2004 TV ₂₁₂ | 16.3 | X | 183.76091 | 169.43751 | 220.22704 | 17.57433 | 0.0758145 | 0.22040548 | 2.7142788 | 20 | 4 12.1 | 20.4 |
| 374147 2004 TY ₂₁₂ | 16.2 | X | 198.48868 | 130.53317 | 216.19526 | 18.22929 | 0.2572640 | 0.21882653 | 2.7273198 | 20 | 3 2.0 | 21.3 |
| 374148 2004 TW ₂₁₄ | 16.6 | X | 174.68434 | 312.97894 | 40.13793 | 16.95339 | 0.3029490 | 0.21590154 | 2.7518973 | 20 | 3 7.7 | 21.9 |
| 374149 2004 TL ₂₄₉ | 16.2 | X | 96.41878 | 259.28183 | 205.76498 | 13.84153 | 0.1865202 | 0.21632942 | 2.7482674 | 20 | 4 25.3 | 20.0 |
| 374150 2004 TL ₂₅₂ | 17.1 | X | 181.07827 | 163.50618 | 209.52256 | 4.48175 | 0.1269233 | 0.22069209 | 2.7119283 | 20 | 3 21.3 | 21.5 |
| 374151 2004 TH ₂₅₇ | 16.7 | X | 177.01188 | 14.40597 | 18.78826 | 9.06631 | 0.1703958 | 0.22136539 | 2.7064265 | 20 | 4 12.7 | 21.0 |
| 374152 2004 TA ₂₇₅ | 17.3 | X | 128.98692 | 59.55478 | 36.55058 | 15.20463 | 0.2288571 | 0.21815933 | 2.7328776 | 20 | 5 18.9 | 21.9 |
| 374153 2004 TO ₂₇₈ | 16.6 | X | 119.21141 | 36.6573 | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> | | |
|--------|----------|-------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----------|---------|------|
| 374161 | 2004 | VZ ₇ | 17.2 | X | 150.61549 | 258.41242 | 150.02520 | 2.38850 | 0.1916848 | 0.21700962 | 2.7425216 | 20 | 4 10.4 | 21.7 |
| 374162 | 2004 | VF ₁₆ | 15.8 | X | 119.87362 | 344.18882 | 92.40229 | 13.16939 | 0.2281188 | 0.21398966 | 2.7682641 | 20 | 4 24.9 | 20.4 |
| 374163 | 2004 | VY ₁₉ | 16.5 | X | 113.92791 | 32.81075 | 50.69523 | 9.63274 | 0.1721939 | 0.21561702 | 2.7543176 | 20 | 4 17.6 | 20.6 |
| 374164 | 2004 | VD ₂₉ | 16.2 | X | 107.81524 | 16.31194 | 59.08527 | 7.65609 | 0.0223252 | 0.21368411 | 2.7709024 | 20 | 3 12.4 | 20.1 |
| 374165 | 2004 | VG ₄₀ | 16.3 | X | 99.63096 | 8.91858 | 54.86685 | 15.26512 | 0.0695340 | 0.20969889 | 2.8058986 | 20 | 2 27.7 | 20.4 |
| 374166 | 2004 | VX ₄₆ | 15.8 | X | 231.32491 | 225.61750 | 77.51778 | 10.21877 | 0.1486033 | 0.21345888 | 2.7728512 | 20 | 2 18.0 | 20.4 |
| 374167 | 2004 | VT ₅₃ | 16.2 | X | 212.58256 | 283.21375 | 51.19986 | 13.44114 | 0.1461268 | 0.21709341 | 2.7418159 | 20 | 3 12.3 | 20.8 |
| 374168 | 2004 | VS ₅₆ | 16.3 | X | 134.39232 | 133.12461 | 260.18878 | 5.68156 | 0.1709752 | 0.21166223 | 2.7885202 | 20 | 3 2.8 | 20.6 |
| 374169 | 2004 | VE ₆₀ | 16.1 | X | 182.93107 | 344.91446 | 27.07533 | 5.83811 | 0.0899728 | 0.21571111 | 2.7535166 | 20 | 3 23.7 | 20.2 |
| 374170 | 2004 | VX ₆₅ | 17.2 | X | 128.03303 | 135.17264 | 281.92117 | 2.15491 | 0.0854616 | 0.21486268 | 2.7607604 | 20 | 3 17.3 | 21.1 |
| 374171 | 2004 | VC ₇₅ | 15.8 | X | 199.31070 | 131.04023 | 226.96777 | 13.04486 | 0.1666357 | 0.21889880 | 2.7267195 | 20 | 3 17.1 | 20.5 |
| 374172 | 2004 | VM ₈₂ | 16.3 | X | 141.79395 | 44.29364 | 32.69712 | 14.99627 | 0.1929800 | 0.21843064 | 2.7306142 | 20 | 5 4.8 | 20.7 |
| 374173 | 2004 | VH ₁₁₅ | 17.0 | X | 165.70641 | 163.48137 | 212.87406 | 3.80896 | 0.0917163 | 0.21570531 | 2.7535660 | 20 | 3 8.5 | 21.2 |
| 374174 | 2004 | WA ₈ | 16.1 | X | 146.22817 | 1.01383 | 63.89621 | 7.88589 | 0.0765437 | 0.21769103 | 2.7367956 | 20 | 4 19.6 | 20.1 |
| 374175 | 2004 | XM ₄ | 16.3 | X | 137.75840 | 276.43914 | 133.36491 | 14.00682 | 0.2082235 | 0.21291222 | 2.7775954 | 20 | 4 6.3 | 21.0 |
| 374176 | 2004 | XG ₁₂ | 16.0 | X | 127.57103 | 341.27168 | 74.33348 | 8.44121 | 0.1316775 | 0.21083096 | 2.7958452 | 20 | 3 26.3 | 20.2 |
| 374177 | 2004 | XA ₃₉ | 16.1 | X | 159.39036 | 292.11749 | 141.73001 | 11.06748 | 0.3124667 | 0.21895607 | 2.7262440 | 20 | 5 24.9 | 21.3 |
| 374178 | 2004 | XJ ₆₉ | 16.3 | X | 85.08997 | 40.85497 | 57.67379 | 13.34211 | 0.1362703 | 0.21069809 | 2.7970205 | 20 | 4 1.3 | 20.2 |
| 374179 | 2004 | XQ ₇₆ | 16.0 | X | 134.37661 | 175.03036 | 256.69468 | 6.27481 | 0.1868033 | 0.21586481 | 2.7522095 | 20 | 4 21.1 | 20.3 |
| 374180 | 2004 | XZ ₁₀₇ | 16.5 | X | 126.46605 | 30.37111 | 56.81938 | 8.63451 | 0.2029310 | 0.21331070 | 2.7741352 | 20 | 5 6.8 | 20.9 |
| 374181 | 2004 | XV ₁₁₁ | 16.3 | X | 133.52555 | 13.26135 | 56.66209 | 12.75092 | 0.0984843 | 0.21653327 | 2.7465423 | 20 | 4 15.6 | 20.4 |
| 374182 | 2004 | XX ₁₃₂ | 16.3 | X | 146.83054 | 105.34429 | 304.62458 | 7.69308 | 0.2356328 | 0.21515255 | 2.7582802 | 20 | 4 7.1 | 21.1 |
| 374183 | 2004 | XV ₁₅₉ | 13.4 | X | 178.13204 | 80.49860 | 307.31103 | 16.46224 | 0.0509244 | 0.08309838 | 5.2008503 | 20 | 4 3.9 | 20.7 |
| 374184 | 2004 | XJ ₁₈₆ | 16.1 | X | 134.61430 | 165.71552 | 270.61635 | 12.98348 | 0.1608265 | 0.21670956 | 2.7450526 | 20 | 4 22.5 | 20.6 |
| 374185 | 2004 | YZ ₂ | 15.9 | X | 150.11974 | 163.10851 | 224.55446 | 12.27477 | 0.1868086 | 0.21302134 | 2.7766468 | 20 | 3 10.9 | 20.6 |
| 374186 | 2004 | YF ₂₀ | 15.9 | X | 1.63998 | 186.33786 | 288.83916 | 10.41998 | 0.1003647 | 0.19205412 | 2.9752283 | 20 | — | — |
| 374187 | 2004 | YY ₃₂ | 16.7 | X | 148.77866 | 255.09951 | 151.78082 | 5.45208 | 0.2362098 | 0.21554132 | 2.7549625 | 20 | 4 10.7 | 21.4 |
| 374188 | 2005 | AD ₃ | 17.2 | X | 0.88357 | 277.85550 | 293.99937 | 14.56147 | 0.5038869 | 0.26465883 | 2.4025833 | 20 | 1 24.9 | 18.3 |
| 374189 | 2005 | AR ₄₉ | 16.0 | X | 34.84300 | 186.22618 | 279.06218 | 9.61770 | 0.0995657 | 0.19644883 | 2.9306891 | 20 | 1 15.4 | 19.5 |
| 374190 | 2005 | AN ₆₆ | 16.3 | X | 95.28238 | 107.68468 | 259.93139 | 2.74507 | 0.0171907 | 0.18966666 | 3.0001437 | 20 | — | — |
| 374191 | 2005 | AV ₆₈ | 16.6 | X | 28.46161 | 98.42722 | 12.87594 | 3.67406 | 0.1640709 | 0.19464981 | 2.9487190 | 20 | 1 15.7 | 19.7 |
| 374192 | 2005 | BF ₉ | 17.5 | X | 307.90094 | 113.72533 | 358.98598 | 3.98334 | 0.0693773 | 0.30940566 | 2.1649634 | 20 | — | — |
| 374193 | 2005 | CZ ₂₉ | 17.8 | X | 84.82048 | 245.99687 | 354.86568 | 4.80911 | 0.1723448 | 0.28635608 | 2.2796339 | 20 | 10 10.6 | 21.0 |
| 374194 | 2005 | CZ ₅₄ | 16.7 | X | 24.09093 | 126.26422 | 344.08176 | 6.95190 | 0.1496259 | 0.19303605 | 2.9651302 | 20 | 1 7.1 | 20.0 |
| 374195 | 2005 | CQ ₆₃ | 16.3 | X | 17.05691 | 329.74209 | 129.99204 | 5.56016 | 0.2127002 | 0.19088325 | 2.9873825 | 20 | — | — |
| 374196 | 2005 | EL ₂₆ | 15.6 | X | 354.43197 | 107.71365 | 350.60907 | 14.11456 | 0.0582130 | 0.18162709 | 3.0880356 | 20 | — | — |
| 374197 | 2005 | EQ ₂₇ | 16.0 | X | 303.94325 | 175.08239 | 346.27733 | 10.37538 | 0.0853573 | 0.18347684 | 3.0672456 | 20 | — | — |
| 374198 | 2005 | EU ₄₃ | 17.6 | X | 180.09667 | 264.35154 | 268.45095 | 3.03466 | 0.0869321 | 0.29164852 | 2.2519714 | 20 | 10 20.6 | 20.6 |
| 374199 | 2005 | EC ₅₀ | 15.6 | X | 279.50455 | 183.65711 | 353.87964 | 15.84531 | 0.1840018 | 0.18048912 | 3.1010019 | 20 | — | — |
| 374200 | 2005 | EP ₅₀ | 15.6 | X | 272.15565 | 169.38618 | 350.10441 | 17.10253 | 0.1568671 | 0.17649280 | 3.1476376 | 20 | 12 25.4 | 20.0 |
| 374201 | 2005 | EU ₅₁ | 15.7 | X | 333.77311 | 148.39842 | 8.91913 | 23.83692 | 0.1661072 | 0.18517943 | 3.0484159 | 20 | — | — |
| 374202 | 2005 | EQ ₇₄ | 15.9 | X | 309.62951 | 341.52789 | 165.52565 | 12.62680 | 0.1296213 | 0.18313962 | 3.0710096 | 20 | — | — |
| 374203 | 2005 | EE ₈₄ | 17.4 | X | 282.31353 | 107.57899 | 339.39768 | 7.97214 | 0.0636077 | 0.29583755 | 2.2306624 | 20 | 11 15.6 | 20.0 |
| 374204 | 2005 | EQ ₁₀₄ | 16.3 | X | 275.07700 | 211.53212 | 323.46740 | 4.73398 | 0.0853664 | 0.18406297 | 3.0607306 | 20 | — | — |
| 374205 | 2005 | EU ₁₂₀ | 16.2 | X | 8.95124 | 197.60950 | 292.82979 | 6.10587 | 0.1307261 | 0.19022239 | 2.9942975 | 20 | 1 7.6 | 19.7 |
| 374206 | 2005 | EK ₁₈₁ | 15.6 | X | 242.11302 | 190.14529 | 6.53794 | 17.59294 | 0.1626697 | 0.17595653 | 3.1539210 | 20 | 12 30.5 | 20.4 |
| 374207 | 2005 | EZ ₁₈₁ | 17.3 | X | 217.70738 | 6.79606 | 140.47794 | 6.10355 | 0.0749121 | 0.29471009 | 2.2363479 | 20 | 11 8.0 | 20.0 |
| 374208 | 2005 | EZ ₁₉₄ | 15.7 | X | 258.96930 | 172.93381 | 355.85651 | 11.11196 | 0.1283061 | 0.17434476 | 3.1734387 | 20 | 12 20.8 | 20.2 |
| 374209 | 2005 | EW ₁₉₇ | 16.2 | X | 333.90347 | 296.28206 | 197.57943 | 14.00833 | 0.1443266 | 0.18162915 | 3.0880123 | 20 | — | — |
| 374210 | 2005 | ED ₂₁₀ | 16.2 | X | 25.98403 | 94.14739 | 343.21894 | 4.43072 | 0.1240724 | 0.18365021 | 3.0653149 | 20 | — | — |
| 374211 | 2005 | EH ₂₁₂ | 15.5 | X | 63.90483 | 43.05774 | 15.13254 | 9.67125 | 0.0311773 | 0.18701095 | 3.0284798 | 20 | — | — |
| 374212 | 2005 | EK ₂₄₄ | 16.8 | X | 28.22974 | 215.89050 | 179.72533 | 7.91761 | 0.0612468 | 0.17518708 | 3.1632584 | 20 | — | — |
| 374213 | 2005 | ER ₂₇₂ | 13.7 | X | 138.45458 | 206.00709 | 244.51597 | 3.11846 | 0.0771570 | 0.08231507 | 5.2337924 | 20 | 5 13.6 | 20.8 |
| 374214 | 2005 | EK ₂₇₇ | 16.3 | X | 231.63292 | 11.66204 | 192.50390 | 11.16511 | 0.1647912 | 0.17215042 | 3.2003488 | 20 | 12 26.5 | 21.2 |
| 374215 | 2005 | EN ₂₈₂ | 15.9 | X | 123.73390 | 311.70511 | 9.72032 | 9.90264 | 0.0298382 | 0.17405371 | 3.1769755 | 20 | — | — |
| 374216 | 2005 | ER ₂₈₅ | 16.3 | X | 333.78684 | 307.41561 | 195.68568 | 22.43893 | 0.1018668 | 0.18236814 | 3.0796645 | 20 | — | — |
| 374217 | 2005 | EL ₂₉₂ | 15.3 | X | 258.40826 | 170.57019 | 54.53989 | 11.42655 | 0.1206837 | 0.18050056 | 3.1008709 | 20 | — | — |
| 374218 | 2005 | EJ ₃₀₆ | 15.8 | X | 94.40683 | 3.02364 | 5.39890 | 9.04585 | 0.1664305 | 0.18095337 | 3.0956958 | 20 | — | — |
| 374219 | 2005 | EZ ₃₁₂ | 17.9 | X | 14.99781 | 23.15173 | 4.19493 | 6.91071 | 0.1633246 | 0.30290605 | 2.1958234 | 20 | — | — |
| 374220 | 2005 | EP ₃₁₇ | 16.1 | X | 28.09938 | 95.84324 | 14.93195 | 11.23192 | 0.1567960 | 0.18929148 | 3.0041066 | 20 | 1 17.9 | 19.6 |
| 374221 | 2005 | ED ₃₂₄ | 17.7 | X | 351.49216 | 220.27936 | 11.83601 | 4.17405 | 0.1422629 | 0.26612383 | 2.3937578 | 20 | 4 13.2 | 19.7 |
| 374222 | 2005 | EK ₃₂₄ | 16.0 | X | 312.65199 | 305.39525 | 196.15551 | 11.03769 | 0.0542427 | 0.17687611 | 3.1430885 | 20 | — | — |
| 374223 | 2005 | FZ ₆ | 15.2 | X | 241.52520 | 7.45280 | 168.69945 | 21.16042 | 0.1006466 | 0.17069100 | 3.2185652 | 20 | 12 12.9 | 20.2 |
| 374224 | 2005 | FS ₁₄ | 17.4 | X | 140.37765 | 111.05302 | 66.34274 | 5.87945 | 0.1318852 | 0.28535056 | 2.2849861 | 20 | 9 15.7 | 20.8 |
| 374225 | 2005 | GK ₂ | 15.8 | X | 101.06082 | 343.35475 | 30.81107 | 10.21894 | 0.0790659 | 0.17994443 | 3.1072566 | 20 | — | — |
| 374226 | 2005 | GN ₂ | 16.0 | X | 11.51408 | 49.41561 | 35.40024 | 8.55053 | 0.1620306 | 0.17990372 | 3.1077252 | 20 | — | — |
| 374227 | 2005 | GM ₈ | 16.4 | X | 98.93701 | 283.82865 | 233.38116 | 23.01338 | 0.3949706 | 0.21141710 | 2.7906753 | 20 | 7 17.5 | 21.7 |
| 374228 | 2005 | GT ₁₅ | 16.1 | X | 105.74463 | 332.32122 | 9.86853 | 8.95718 | 0.0545356 | 0.17745904 | 3.1362016 | 20 | — | — |
| 374229 | 2005 | GR ₂₀ | 17.1 | X | 103.60760 | 224.35017 | 36.42391 | 6.77931 | 0.0922737 | 0.28592746 | 2.2819116 | 20 | 11 19.5 | 20.2 |
| 374230 | 2005 | GE ₂₁ | 16.0 | X | 209.51981 | 224.44272 | 9.21054 | 10.76176 | 0.0595255 | 0.17322917 | 3.1870487 | 20 | — | —</ |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 374241 2005 GC ₁₀₈ | 16.1 | X | 62.38615 | 235.47549 | 192.84926 | 10.16978 | 0.2166622 | 0.18634254 | 3.0357177 | 20 | 1 25.2 | 19.7 |
| 374242 2005 GN ₁₀₈ | 18.1 | X | 0.79354 | 118.13423 | 187.66674 | 5.55431 | 0.1292663 | 0.27624568 | 3.3349220 | 20 | 9 1.5 | 20.2 |
| 374243 2005 GL ₁₂₂ | 16.7 | X | 43.23164 | 85.40962 | 344.19762 | 3.32544 | 0.1634585 | 0.18640327 | 3.0350583 | 20 | — | — |
| 374244 2005 GQ ₁₂₅ | 16.2 | X | 127.44654 | 96.93881 | 216.07108 | 22.46603 | 0.1025017 | 0.16886937 | 3.2416700 | 20 | — | — |
| 374245 2005 GG ₁₄₀ | 15.4 | X | 0.71172 | 81.97606 | 23.89655 | 19.63501 | 0.0240820 | 0.17682843 | 3.1436534 | 20 | — | — |
| 374246 2005 GU ₁₅₁ | 17.9 | X | 62.43257 | 32.34954 | 197.33889 | 2.79113 | 0.1996016 | 0.27438806 | 2.3454486 | 20 | 9 2.0 | 20.9 |
| 374247 2005 GZ ₁₅₂ | 17.0 | X | 67.18242 | 51.33203 | 203.36302 | 22.49633 | 0.1732437 | 0.27838913 | 2.3229215 | 20 | 10 8.9 | 20.1 |
| 374248 2005 GM ₁₆₈ | 15.6 | X | 21.99011 | 41.99671 | 40.84553 | 10.78099 | 0.0703481 | 0.17873081 | 3.1213066 | 20 | — | — |
| 374249 2005 GZ ₁₇₇ | 18.0 | X | 349.03083 | 62.74083 | 233.71499 | 0.72547 | 0.1891048 | 0.27059899 | 2.3672926 | 20 | 7 24.8 | 19.5 |
| 374250 2005 GT ₁₈₂ | 16.2 | X | 218.83958 | 17.00219 | 193.63207 | 16.06858 | 0.0678843 | 0.17101341 | 3.2145186 | 20 | 12 28.8 | 21.1 |
| 374251 2005 GN ₂₀₀ | 15.5 | X | 101.67336 | 127.61158 | 232.12608 | 12.94360 | 0.0864616 | 0.16897438 | 3.2403267 | 20 | — | — |
| 374252 2005 GR ₂₀₁ | 17.9 | X | 306.65821 | 260.96167 | 195.05140 | 2.81901 | 0.1128005 | 0.29779413 | 2.2208810 | 20 | — | — |
| 374253 2005 GJ ₂₀₄ | 16.3 | X | 14.97094 | 238.60771 | 179.07126 | 9.03015 | 0.0658290 | 0.17476688 | 3.1683268 | 20 | — | — |
| 374254 2005 GH ₂₂₁ | 15.6 | X | 309.91034 | 156.72059 | 7.55865 | 10.41039 | 0.0431967 | 0.17917325 | 3.1161661 | 20 | — | — |
| 374255 2005 HK ₆ | 17.5 | X | 71.20678 | 143.94876 | 96.96090 | 7.19272 | 0.0950453 | 0.27553860 | 2.3389149 | 20 | 9 18.6 | 20.6 |
| 374256 2005 JL ₇ | 15.9 | X | 40.23059 | 30.13404 | 29.74839 | 11.89922 | 0.1092760 | 0.17766443 | 3.1337839 | 20 | — | — |
| 374257 2005 JW ₃₀ | 15.9 | X | 93.67165 | 307.35967 | 15.66511 | 11.65909 | 0.1000874 | 0.16859218 | 3.2452221 | 20 | — | — |
| 374258 2005 JX ₃₇ | 16.7 | X | 124.29302 | 40.95366 | 237.11426 | 6.34705 | 0.0862570 | 0.29387349 | 2.2405902 | 20 | — | — |
| 374259 2005 JK ₃₈ | 15.4 | X | 295.94542 | 153.64838 | 55.06087 | 29.14238 | 0.1401874 | 0.18181769 | 3.0858771 | 20 | — | — |
| 374260 2005 JX ₅₂ | 17.7 | X | 20.34445 | 168.59099 | 97.98656 | 6.60262 | 0.1987045 | 0.26983916 | 2.3717345 | 20 | 8 22.6 | 19.8 |
| 374261 2005 JX ₆₄ | 18.2 | X | 199.28454 | 20.09552 | 137.19229 | 3.06005 | 0.1232583 | 0.28804797 | 2.2706986 | 20 | 10 20.6 | 21.2 |
| 374262 2005 JP ₉₁ | 15.2 | X | 250.56156 | 307.03627 | 239.31015 | 10.23919 | 0.0025974 | 0.16818852 | 3.2504125 | 20 | — | — |
| 374263 2005 JO ₁₃₀ | 17.6 | X | 58.77355 | 350.49376 | 245.44403 | 2.44324 | 0.1866944 | 0.27392794 | 2.3480743 | 20 | 9 3.5 | 20.5 |
| 374264 2005 JC ₁₄₂ | 18.0 | X | 36.89756 | 157.08011 | 93.78064 | 3.33317 | 0.1781158 | 0.27038471 | 2.3685431 | 20 | 8 24.3 | 20.4 |
| 374265 2005 JW ₁₇₇ | 17.5 | X | 336.64704 | 152.58829 | 144.32730 | 3.01184 | 0.1940619 | 0.26623913 | 2.3930666 | 20 | 6 22.1 | 19.2 |
| 374266 2005 LF | 17.6 | X | 103.32933 | 266.83044 | 307.87694 | 6.19992 | 0.0790061 | 0.27924976 | 2.3181463 | 20 | 9 14.5 | 20.8 |
| 374267 2005 LW | 18.9 | X | 190.68294 | 354.72904 | 138.12229 | 3.13421 | 0.6407545 | 0.55466670 | 1.4670604 | 20 | 8 23.3 | 21.4 |
| 374268 2005 LQ ₃₀ | 17.8 | X | 286.66735 | 120.66078 | 239.37672 | 0.27673 | 0.2105786 | 0.26012199 | 2.4304387 | 20 | 6 18.5 | 20.7 |
| 374269 2005 LA ₄₃ | 17.7 | X | 52.49029 | 278.85140 | 254.73095 | 18.23795 | 0.1040833 | 0.39164222 | 1.8501618 | 20 | 5 1.6 | 19.0 |
| 374270 2005 MW ₁₄ | 17.3 | X | 315.19896 | 51.34094 | 275.52256 | 4.54372 | 0.2369920 | 0.25915427 | 2.4364853 | 20 | 6 14.3 | 19.4 |
| 374271 2005 MV ₁₈ | 16.7 | X | 261.17271 | 119.63636 | 244.58408 | 7.96268 | 0.2941440 | 0.25293689 | 2.4762506 | 20 | 5 11.8 | 20.4 |
| 374272 2005 NS ₆ | 17.2 | X | 276.28246 | 83.76780 | 280.33697 | 6.98960 | 0.2585850 | 0.25692625 | 2.4505509 | 20 | 6 1.6 | 20.4 |
| 374273 2005 NL ₂₂ | 16.9 | X | 145.55121 | 239.04158 | 271.30265 | 5.48376 | 0.0716662 | 0.26281464 | 2.4138096 | 20 | 8 6.9 | 20.4 |
| 374274 2005 NF ₃₁ | 17.2 | X | 285.89189 | 78.91955 | 264.40777 | 2.65442 | 0.2477355 | 0.25661190 | 2.4525518 | 20 | 5 17.9 | 20.4 |
| 374275 2005 NS ₅₅ | 17.2 | X | 285.61100 | 121.79520 | 227.42150 | 8.50573 | 0.2805736 | 0.25601175 | 2.4563832 | 20 | 5 21.3 | 20.2 |
| 374276 2005 NL ₆₂ | 16.9 | X | 327.41413 | 358.88878 | 302.75752 | 6.47309 | 0.1640608 | 0.25869823 | 2.4393479 | 20 | 6 11.5 | 19.1 |
| 374277 2005 NL ₈₁ | 17.5 | X | 54.28809 | 284.11574 | 305.15967 | 4.10501 | 0.1853932 | 0.26514772 | 2.3996291 | 20 | 8 18.0 | 20.4 |
| 374278 2005 NQ ₉₅ | 17.6 | X | 358.02222 | 312.92715 | 294.27838 | 1.33228 | 0.2047657 | 0.25873984 | 2.4390864 | 20 | 5 20.6 | 19.4 |
| 374279 2005 OO ₃₁ | 17.0 | X | 110.58464 | 6.89818 | 212.64785 | 6.21742 | 0.0661655 | 0.26893364 | 2.3770554 | 20 | 9 28.8 | 20.1 |
| 374280 2005 PP ₁₄ | 17.4 | X | 5.34774 | 275.08191 | 44.17964 | 2.50107 | 0.1462049 | 0.26613586 | 2.3936857 | 20 | 10 3.9 | 19.6 |
| 374281 2005 PE ₂₁ | 17.7 | X | 292.52795 | 146.31019 | 205.20550 | 3.67526 | 0.2385503 | 0.25680805 | 2.4513028 | 20 | 6 10.4 | 20.4 |
| 374282 2005 QK ₁₅ | 17.7 | X | 295.63103 | 14.60551 | 335.07116 | 3.22151 | 0.1868892 | 0.25648841 | 2.4533389 | 20 | 6 21.8 | 20.3 |
| 374283 2005 QF ₄₃ | 15.2 | X | 322.63958 | 15.27208 | 317.38213 | 11.56710 | 0.2166787 | 0.12487035 | 3.9642693 | 20 | 7 5.7 | 20.0 |
| 374284 2005 QT ₅₃ | 17.5 | X | 294.15114 | 349.41666 | 351.17576 | 1.70675 | 0.1828569 | 0.25539869 | 2.4603125 | 20 | 6 6.2 | 20.3 |
| 374285 2005 QW ₆₀ | 17.6 | X | 276.90365 | 121.43197 | 212.27337 | 4.98093 | 0.1386369 | 0.25116059 | 2.4879122 | 20 | 5 10.6 | 21.0 |
| 374286 2005 QB ₇₂ | 17.3 | X | 251.47536 | 210.31011 | 187.81693 | 3.86580 | 0.2490622 | 0.25307871 | 2.4753255 | 20 | 6 20.9 | 21.0 |
| 374287 2005 QT ₈₇ | 16.9 | X | 302.29839 | 57.20983 | 259.63930 | 6.50150 | 0.1244755 | 0.25235449 | 2.4800591 | 20 | 5 25.3 | 19.7 |
| 374288 2005 QE ₈₈ | 16.6 | X | 299.69534 | 39.99514 | 312.73832 | 1.16956 | 0.2890091 | 0.12261876 | 4.0126515 | 20 | 6 11.7 | 21.7 |
| 374289 2005 QU ₁₀₄ | 17.0 | X | 295.02103 | 9.39012 | 321.18882 | 5.79193 | 0.1268737 | 0.25317886 | 2.4746727 | 20 | 6 1.8 | 19.9 |
| 374290 2005 QQ ₁₂₂ | 17.9 | X | 232.70145 | 204.06720 | 210.44818 | 9.06060 | 0.1761048 | 0.25318253 | 2.4746487 | 20 | 6 30.9 | 21.4 |
| 374291 2005 QS ₁₄₈ | 17.3 | X | 261.66125 | 313.89741 | 45.99851 | 6.95035 | 0.2434652 | 0.25195562 | 2.4826758 | 20 | 5 12.6 | 20.8 |
| 374292 2005 RA ₁ | 17.4 | X | 215.55566 | 148.03176 | 216.74375 | 19.57488 | 0.0792708 | 0.37676812 | 1.8985409 | 20 | 4 5.2 | 19.7 |
| 374293 2005 SR ₁₅ | 15.3 | X | 342.37576 | 47.52804 | 269.33052 | 1.59314 | 0.2058869 | 0.12362126 | 3.9909285 | 20 | 7 22.0 | 19.7 |
| 374294 2005 SY ₃₂ | 16.7 | X | 328.35705 | 355.31433 | 40.82590 | 6.40326 | 0.0718476 | 0.26574321 | 2.3960429 | 20 | 11 12.2 | 19.2 |
| 374295 2005 SD ₃₈ | 17.5 | X | 288.14060 | 331.02689 | 39.04389 | 1.88802 | 0.2041772 | 0.25563069 | 2.4588237 | 20 | 7 6.9 | 20.3 |
| 374296 2005 SX ₄₁ | 16.9 | X | 337.04225 | 109.96317 | 267.83237 | 2.43834 | 0.2122430 | 0.26486210 | 2.4013539 | 20 | 11 11.5 | 18.6 |
| 374297 2005 SD ₄₉ | 17.7 | X | 257.17158 | 312.61932 | 39.59335 | 1.41298 | 0.1812207 | 0.24610554 | 2.5218647 | 20 | 5 5.4 | 21.3 |
| 374298 2005 SS ₆₁ | 17.9 | X | 240.04148 | 199.69060 | 176.50770 | 1.97130 | 0.1805490 | 0.24643855 | 2.5195924 | 20 | 5 19.2 | 21.8 |
| 374299 2005 SC ₇₉ | 17.8 | X | 270.27813 | 349.11203 | 40.52068 | 3.31486 | 0.2036348 | 0.25439876 | 2.4667552 | 20 | 7 8.7 | 21.1 |
| 374300 2005 SW ₉₈ | 17.6 | X | 155.99397 | 114.71798 | 338.64801 | 7.21509 | 0.1615342 | 0.24146009 | 2.5541073 | 20 | 6 6.8 | 21.8 |
| 374301 2005 SR ₁₃₉ | 17.0 | X | 114.46070 | 97.97433 | 47.48432 | 3.50350 | 0.0446850 | 0.24721215 | 2.5143332 | 20 | 6 20.4 | 20.2 |
| 374302 2005 SB ₁₅₀ | 16.8 | X | 234.03229 | 303.49057 | 29.12188 | 12.59410 | 0.0699672 | 0.23759112 | 2.5817603 | 20 | 3 30.2 | 20.5 |
| 374303 2005 SH ₁₅₀ | 17.8 | X | 248.45441 | 305.60680 | 59.11535 | 2.54736 | 0.1638180 | 0.24612570 | 2.5217270 | 20 | 5 14.4 | 21.4 |
| 374304 2005 SZ ₁₅₂ | 16.9 | X | 143.61586 | 231.16911 | 193.92254 | 11.18810 | 0.1734884 | 0.23389165 | 2.6089128 | 20 | 4 22.8 | 20.9 |
| 374305 2005 SE ₁₅₄ | 17.8 | X | 284.45227 | 103.47932 | 205.37800 | 5.60393 | 0.1787452 | 0.24683114 | 2.5169201 | 20 | 4 10.1 | 21.3 |
| 374306 2005 SL ₁₅₅ | 17.6 | X | 169.87208 | 222.54050 | 191.48270 | 21.63824 | 0.0821244 | 0.37729809 | 1.8967626 | 20 | 4 25.4 | 19.8 |
| 374307 2005 SB ₁₆₄ | 17.6 | X | 226.58065 | 260.71467 | 90.58520 | 4.74930 | 0.3151455 | 0.24166955 | 2.5526313 | 20 | 3 31.7 | 22.3 |
| 374308 2005 SX ₁₇₅ | 17.4 | X | 296.94953 | 117.21049 | 232.35518 | 5.36567 | 0.0943982 | 0.25308649 | 2.4752747 | 20 | 7 8.2 | 20.4 |
| 374309 2005 SC ₁₈₈ | 17.3 | X | 51.48932 | 342.31000 | 193.03063 | 8.39204 | 0.0996766 | 0.23950468 | 2.5679903 | 20 | 5 13.4 | 20.3 |
| 374310 2005 SG ₁₉₈ | 18.4 | X | 230.65311 | 112.20196 | 179.15319 | 21.61244 | 0.0537552 | 0.36776851 | 1.9293885 | 20 | 1 9.4 | 21.2 |
| 374311 2005 SP ₂₂₁ | 18.1 | X | 238.91446 | 313.73543 | 15.87224 | 4.75844 | 0.2786956 | 0.24067722 | 2.5596429 | 20 | 3 15.1 | 22.5 |
| 374312 2005 SV ₂₂₆ | 17.8 | X | 236.25329 | 10.09448 | 15.37821 | 3.10626 | 0.1044168 | 0.24748966 | 2.5124534 | 20 | 6 3.2 | 21.3 |
| 374313 2005 SL ₂₂₉ | 17.8 | X | 286.78068 | 285.08290 | 359.78788 | 4.85222 | 0.2110240 | 0.24433435 | 2.5340375 | 20 | 3 9.1 | 21.4 |
| 374314 2005 SC ₂₃₈ | 17.1 | X | | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 374321 2005 TW ₁₆ | 17.3 | X | 265.85215 | 340.14542 | 21.17434 | 5.40448 | 0.2541346 | 0.25154725 | 2.4853621 | 20 | 5 16.7 | 21.0 |
| 374322 2005 TQ ₁₇ | 17.7 | X | 268.38713 | 83.15532 | 182.12913 | 4.60506 | 0.2384656 | 0.23682068 | 2.5873567 | 20 | 1 23.7 | 21.9 |
| 374323 2005 TO ₃₈ | 17.8 | X | 196.79659 | 21.92087 | 43.81014 | 2.00740 | 0.0963498 | 0.24734003 | 2.5134666 | 20 | 6 13.1 | 21.4 |
| 374324 2005 TT ₅₄ | 17.2 | X | 193.43419 | 199.87245 | 193.25166 | 13.70191 | 0.1843870 | 0.23961096 | 2.5672309 | 20 | 4 28.5 | 21.5 |
| 374325 2005 TL ₆₂ | 17.5 | X | 162.20514 | 262.45352 | 184.76961 | 4.63694 | 0.1855265 | 0.24023021 | 2.5628172 | 20 | 6 6.8 | 21.8 |
| 374326 2005 TN ₆₄ | 17.9 | X | 263.81703 | 314.04010 | 35.95189 | 1.68378 | 0.1705000 | 0.24674818 | 2.5174841 | 20 | 5 11.2 | 21.2 |
| 374327 2005 TU ₆₉ | 17.5 | X | 304.58111 | 211.09121 | 62.35821 | 3.78061 | 0.1833233 | 0.24375921 | 2.5380219 | 20 | 3 21.9 | 20.8 |
| 374328 2005 TV ₈₀ | 18.1 | X | 258.93164 | 119.63685 | 218.95912 | 8.10183 | 0.2373177 | 0.24623733 | 2.5209648 | 20 | 4 12.8 | 21.9 |
| 374329 2005 TZ ₉₃ | 17.7 | X | 250.07246 | 39.01734 | 356.74895 | 6.27839 | 0.0886966 | 0.25074777 | 2.4906421 | 20 | 7 8.6 | 21.1 |
| 374330 2005 TO ₁₁₇ | 16.2 | X | 17.77624 | 196.31044 | 5.23494 | 7.10367 | 0.2588914 | 0.23999609 | 2.5644837 | 20 | 4 26.8 | 17.9 |
| 374331 2005 TH ₁₂₀ | 15.1 | X | 19.74238 | 259.25434 | 23.75853 | 3.09061 | 0.1741671 | 0.12342737 | 3.9951069 | 20 | 8 18.3 | 20.0 |
| 374332 2005 TF ₁₂₅ | 18.0 | X | 247.01871 | 175.99353 | 233.76248 | 1.47030 | 0.2208639 | 0.25088585 | 2.4897282 | 20 | 7 4.8 | 21.6 |
| 374333 2005 TJ ₁₂₈ | 16.8 | X | 38.70924 | 171.38105 | 19.60531 | 12.32399 | 0.0980369 | 0.24028527 | 2.5624257 | 20 | 5 9.4 | 19.9 |
| 374334 2005 TJ ₁₂₉ | 16.9 | X | 29.45033 | 321.61001 | 37.33906 | 2.85254 | 0.1076723 | 0.20313994 | 2.8659757 | 20 | 12 11.6 | 20.7 |
| 374335 2005 TT ₁₃₄ | 17.7 | X | 229.56784 | 328.40063 | 19.32178 | 8.22967 | 0.1714662 | 0.24158093 | 2.5532555 | 20 | 4 3.7 | 21.6 |
| 374336 2005 TG ₁₇₁ | 16.5 | X | 176.55731 | 155.57315 | 302.23682 | 9.25198 | 0.2257228 | 0.24420315 | 2.5349450 | 20 | 7 3.1 | 20.8 |
| 374337 2005 TV ₁₉₀ | 17.7 | X | 103.25825 | 76.17344 | 47.76242 | 25.49583 | 0.0655832 | 0.37307776 | 1.9110401 | 20 | 5 6.3 | 19.3 |
| 374338 2005 UZ ₄ | 17.1 | X | 336.27127 | 321.88160 | 308.96625 | 4.30501 | 0.0916755 | 0.24371147 | 2.5383533 | 20 | 5 18.8 | 20.0 |
| 374339 2005 UP ₆ | 17.5 | X | 241.34630 | 242.94662 | 31.47602 | 21.62110 | 0.0676418 | 0.36316673 | 1.9456528 | 20 | 1 1.9 | 20.4 |
| 374340 2005 US ₁₁ | 17.4 | X | 211.59663 | 165.14753 | 199.56819 | 8.72248 | 0.1976166 | 0.23761685 | 2.5881573 | 20 | 4 7.2 | 21.7 |
| 374341 2005 UW ₅₇ | 17.8 | X | 193.93101 | 55.07917 | 335.72262 | 1.90406 | 0.1263172 | 0.23735426 | 2.5834775 | 20 | 4 24.3 | 21.7 |
| 374342 2005 UY ₆₁ | 16.9 | X | 314.99547 | 60.30478 | 224.90636 | 13.00921 | 0.1357194 | 0.24081165 | 2.5586903 | 20 | 4 28.5 | 19.9 |
| 374343 2005 UO ₇₃ | 16.2 | X | 161.76663 | 237.76201 | 223.27181 | 21.65055 | 0.0646755 | 0.24196659 | 2.5505418 | 20 | 6 18.1 | 20.2 |
| 374344 2005 UN ₉₂ | 17.3 | X | 259.28116 | 357.89147 | 333.39212 | 3.36249 | 0.1409533 | 0.24076765 | 2.5590020 | 20 | 4 14.0 | 21.0 |
| 374345 2005 US ₉₃ | 17.9 | X | 180.74237 | 126.37490 | 274.65046 | 3.33305 | 0.1461991 | 0.23668448 | 2.5883492 | 20 | 4 23.9 | 22.0 |
| 374346 2005 UB ₁₀₄ | 17.9 | X | 176.01148 | 213.37225 | 189.03582 | 3.51358 | 0.1431536 | 0.23494941 | 2.6010766 | 20 | 4 23.1 | 21.9 |
| 374347 2005 UF ₁₂₆ | 17.0 | X | 83.06251 | 230.08731 | 129.74826 | 4.18666 | 0.0987815 | 0.22659951 | 2.6645880 | 20 | 3 15.4 | 20.4 |
| 374348 2005 US ₁₃₂ | 16.6 | X | 224.76521 | 252.09794 | 262.12097 | 13.60718 | 0.1814090 | 0.24507734 | 2.5289133 | 20 | 6 22.3 | 20.8 |
| 374349 2005 UN ₁₄₈ | 17.6 | X | 261.32702 | 78.56958 | 287.81927 | 1.06442 | 0.1635684 | 0.24687363 | 2.5166312 | 20 | 5 31.3 | 20.9 |
| 374350 2005 UH ₁₅₅ | 16.1 | X | 289.16528 | 240.39753 | 49.15231 | 11.86624 | 0.1467903 | 0.23730513 | 2.5838341 | 20 | 4 1.3 | 19.7 |
| 374351 2005 US ₁₅₅ | 17.5 | X | 224.23128 | 303.62530 | 81.35729 | 7.95549 | 0.2532343 | 0.24428715 | 2.5343639 | 20 | 5 11.7 | 21.8 |
| 374352 2005 UK ₁₅₆ | 17.6 | X | 223.60772 | 281.60161 | 41.01521 | 22.23262 | 0.1179529 | 0.36872327 | 1.9260565 | 20 | 3 1.7 | 20.7 |
| 374353 2005 UO ₁₅₆ | 16.6 | X | 4.61857 | 135.81838 | 36.47696 | 13.82108 | 0.1180705 | 0.22720591 | 2.6598449 | 20 | 2 25.9 | 19.8 |
| 374354 Pesquet | 17.6 | X | 168.88618 | 106.52029 | 287.41599 | 0.38492 | 0.2294136 | 0.23236661 | 2.6203154 | 20 | 4 8.3 | 22.1 |
| 374355 2005 UT ₁₆₃ | 17.5 | X | 252.94742 | 85.90180 | 227.82382 | 6.00445 | 0.2252604 | 0.23931634 | 2.5693375 | 20 | 3 7.5 | 21.8 |
| 374356 2005 UT ₁₇₆ | 16.7 | X | 161.91760 | 84.22469 | 42.01413 | 11.87115 | 0.2444992 | 0.24242637 | 2.5473159 | 20 | 7 29.9 | 21.4 |
| 374357 2005 UV ₁₈₁ | 17.1 | X | 59.60581 | 79.57904 | 75.78169 | 4.39557 | 0.0434945 | 0.23230177 | 2.6208030 | 20 | 4 20.8 | 20.5 |
| 374358 2005 UM ₁₉₈ | 17.3 | X | 188.65368 | 106.29666 | 320.38035 | 2.84806 | 0.1012011 | 0.24334766 | 2.5408826 | 20 | 6 7.2 | 20.7 |
| 374359 2005 UL ₂₀₀ | 17.0 | X | 211.05618 | 162.95631 | 212.46359 | 4.84220 | 0.1069904 | 0.23780441 | 2.5802163 | 20 | 4 23.4 | 20.7 |
| 374360 2005 UM ₂₁₂ | 16.1 | X | 310.63027 | 46.77015 | 227.52701 | 29.28594 | 0.0716073 | 0.23637797 | 2.5905862 | 20 | 4 14.8 | 19.6 |
| 374361 2005 US ₂₁₇ | 17.8 | X | 224.92004 | 209.15076 | 211.35181 | 11.32527 | 0.2196363 | 0.24624046 | 2.5209434 | 20 | 6 25.9 | 22.0 |
| 374362 2005 UR ₂₃₂ | 17.4 | X | 268.27821 | 247.80081 | 50.25169 | 14.94302 | 0.1952061 | 0.23675067 | 2.5878667 | 20 | 3 16.3 | 21.6 |
| 374363 2005 UR ₂₃₆ | 17.3 | X | 244.81634 | 247.11316 | 96.98420 | 4.16532 | 0.2528707 | 0.24145723 | 2.5541275 | 20 | 4 8.9 | 21.6 |
| 374364 2005 UB ₂₄₂ | 17.0 | X | 194.18747 | 6.40410 | 23.71490 | 5.48434 | 0.0655079 | 0.23495741 | 2.6010176 | 20 | 4 24.7 | 20.7 |
| 374365 2005 UN ₂₉₂ | 16.8 | X | 215.67455 | 348.58082 | 21.23307 | 6.27226 | 0.0818103 | 0.23756917 | 2.5819193 | 20 | 4 21.8 | 20.4 |
| 374366 2005 UO ₂₉₃ | 17.5 | X | 152.63185 | 42.62553 | 7.25880 | 3.44693 | 0.0961591 | 0.23208445 | 2.6224388 | 20 | 4 5.5 | 21.3 |
| 374367 2005 US ₂₉₅ | 18.0 | X | 178.55920 | 136.48183 | 278.25112 | 0.37184 | 0.1225319 | 0.23738946 | 2.5832222 | 20 | 5 10.1 | 22.1 |
| 374368 2005 UO ₃₀₂ | 16.9 | X | 163.46420 | 0.95091 | 76.75420 | 10.43777 | 0.2063240 | 0.23678217 | 2.5876372 | 20 | 5 27.6 | 21.2 |
| 374369 2005 UE ₃₁₂ | 17.2 | X | 49.24236 | 345.99400 | 181.06757 | 3.88136 | 0.1646824 | 0.23377863 | 2.6097536 | 20 | 5 6.9 | 20.0 |
| 374370 2005 UU ₃₂₂ | 17.5 | X | 225.65984 | 240.74112 | 159.32982 | 4.22270 | 0.2155496 | 0.24486397 | 2.5303822 | 20 | 6 2.4 | 21.6 |
| 374371 2005 UH ₃₃₁ | 17.6 | X | 227.97983 | 259.88549 | 112.05803 | 1.60888 | 0.1782067 | 0.24439193 | 2.5336394 | 20 | 5 2.2 | 21.4 |
| 374372 2005 UY ₃₄₃ | 17.1 | X | 134.18348 | 132.97016 | 331.48216 | 3.75213 | 0.0919397 | 0.23849611 | 2.5752250 | 20 | 5 24.6 | 20.8 |
| 374373 2005 UK ₃₆₁ | 17.7 | X | 196.35706 | 164.69470 | 205.01457 | 1.91695 | 0.0937775 | 0.23527258 | 2.5986942 | 20 | 3 31.9 | 21.7 |
| 374374 2005 UN ₃₆₂ | 16.9 | X | 102.58960 | 107.97417 | 34.87635 | 14.30603 | 0.0964040 | 0.23837330 | 2.5761094 | 20 | 6 5.7 | 20.6 |
| 374375 2005 UY ₃₆₇ | 17.6 | X | 170.19777 | 216.33807 | 200.30869 | 2.50346 | 0.0158561 | 0.23613185 | 2.5923860 | 20 | 4 30.6 | 21.2 |
| 374376 2005 UV ₃₈₂ | 16.6 | X | 352.27571 | 356.88058 | 193.13006 | 4.71093 | 0.2129246 | 0.22566925 | 2.6719057 | 20 | 2 8.5 | 19.4 |
| 374377 2005 UM ₃₈₇ | 17.4 | X | 212.89294 | 112.96154 | 241.55985 | 11.38066 | 0.2114152 | 0.23529877 | 2.5985014 | 20 | 3 22.4 | 22.0 |
| 374378 2005 UM ₄₀₀ | 17.0 | X | 307.01031 | 352.30574 | 267.84182 | 2.62656 | 0.0617850 | 0.23330007 | 2.6133213 | 20 | 3 23.8 | 20.3 |
| 374379 2005 UD ₄₀₅ | 17.4 | X | 214.43421 | 332.22637 | 69.48712 | 6.47124 | 0.1200185 | 0.24093356 | 2.5578271 | 20 | 5 30.4 | 21.3 |
| 374380 2005 UR ₄₂₅ | 18.4 | X | 229.97661 | 123.05867 | 247.48539 | 2.40402 | 0.2909256 | 0.24274336 | 2.5450978 | 20 | 4 24.2 | 22.8 |
| 374381 2005 UQ ₄₃₂ | 17.5 | X | 82.64860 | 320.40888 | 165.46903 | 1.64021 | 0.0342772 | 0.23116046 | 2.6294223 | 20 | 4 10.7 | 21.0 |
| 374382 2005 UA ₄₃₄ | 15.4 | X | 263.45858 | 69.19006 | 44.94424 | 9.70731 | 0.2056144 | 0.12604267 | 3.9396500 | 20 | 10 5.9 | 21.0 |
| 374383 2005 UC ₄₄₈ | 17.0 | X | 131.80562 | 121.95192 | 315.08037 | 4.59643 | 0.2309221 | 0.23236007 | 2.6203646 | 20 | 4 28.3 | 21.3 |
| 374384 2005 UG ₄₆₈ | 16.2 | X | 356.26877 | 29.17229 | 240.94764 | 14.57985 | 0.0956766 | 0.24511307 | 2.5286676 | 20 | 6 22.7 | 19.0 |
| 374385 2005 UO ₄₇₆ | 16.5 | X | 298.57831 | 247.99358 | 39.76622 | 14.88034 | 0.1255251 | 0.23917346 | 2.5703606 | 20 | 4 12.8 | 19.7 |
| 374386 2005 UN ₄₇₈ | 17.8 | X | 119.38329 | 187.97987 | 258.75446 | 1.34296 | 0.0428687 | 0.23295421 | 2.6159072 | 20 | 4 6.8 | 21.3 |
| 374387 2005 UG ₄₇₉ | 17.4 | X | 188.22084 | 46.86923 | 352.78447 | 9.27597 | 0.2064847 | 0.23836315 | 2.5761826 | 20 | 4 27.1 | 21.9 |
| 374388 2005 UW ₄₈₁ | 17.1 | X | 229.49332 | 277.17934 | 105.06831 | 13.81595 | 0.2502545 | 0.24429714 | 2.5342948 | 20 | 5 15.6 | 21.5 |
| 374389 2005 UV ₅₂₀ | 18.0 | X | 307.26725 | 127.81598 | 192.84159 | 5.88552 | 0.1163372 | 0.25211758 | 2.4816124 | 20 | 6 10.3 | 20.8 |
| 374390 2005 UQ ₅₂₇ | 16.8 | X | 241.52948 | 243.45135 | 124.87882 | 6.35562 | 0.1536075 | 0.24314202 | 2.5423150 | 20 | 5 14.9 | 20.6 |
| 374391 2005 UU ₅₂₉ | 17.2 | X | 226.82994 | 283.95713 | 92.59845 | 8.74592 | 0.1486187 | 0.24209972 | 2.5496067 | 20 | 5 11.1 | 21.1 |
| 374392 2005 VA ₃ | 17.5 | X | 206.62821 | 187.10259 | 240.11735 | 4.42611 | 0.1427349 | 0.24574802 | 2.5243100 | 20 | 6 23.1 | 21.3 |
| 374393 2005 WV ₁₃ | 17.4 | X | 175.67818 | 342.62289 | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> | | |
|--------|----------|-------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----------|--------|------|
| 374401 | 2005 | VW ₁₀₅ | 17.0 | X | 285.04328 | 299.84447 | 333.20570 | 4.07851 | 0.1732187 | 0.23613963 | 2.5923291 | 20 | 2 26.2 | 20.7 |
| 374402 | 2005 | VB ₁₂₆ | 18.1 | X | 232.47638 | 346.15837 | 24.75804 | 3.22094 | 0.1744881 | 0.24575316 | 2.5242748 | 20 | 5 4.4 | 22.0 |
| 374403 | 2005 | VK ₁₃₁ | 16.9 | X | 261.41904 | 190.52619 | 165.57736 | 8.78286 | 0.1303012 | 0.24683513 | 2.5168929 | 20 | 5 24.2 | 20.5 |
| 374404 | 2005 | WM | 17.4 | X | 193.18299 | 350.74725 | 65.87353 | 3.85431 | 0.2052025 | 0.23919080 | 2.5702364 | 20 | 5 25.7 | 21.7 |
| 374405 | 2005 | WL ₃ | 16.2 | X | 221.46832 | 20.69984 | 12.84128 | 19.62569 | 0.2488705 | 0.23999509 | 2.5644908 | 20 | 5 11.9 | 20.8 |
| 374406 | 2005 | WN ₂₅ | 16.1 | X | 271.66553 | 249.45299 | 56.31256 | 11.68260 | 0.1885347 | 0.23543343 | 2.5975104 | 20 | 3 27.9 | 20.1 |
| 374407 | 2005 | WO ₂₆ | 16.3 | X | 153.85528 | 164.69253 | 252.75182 | 14.16521 | 0.1364819 | 0.23123621 | 2.6288481 | 20 | 4 15.9 | 20.6 |
| 374408 | 2005 | WW ₂₉ | 17.2 | X | 242.12474 | 65.26993 | 296.01279 | 2.14047 | 0.2670182 | 0.24172670 | 2.5522289 | 20 | 4 23.6 | 21.4 |
| 374409 | 2005 | WK ₃₄ | 16.8 | X | 197.93459 | 141.36425 | 274.49334 | 5.16064 | 0.1919493 | 0.23941266 | 2.5686483 | 20 | 5 28.8 | 21.1 |
| 374410 | 2005 | WM ₃₉ | 16.7 | X | 125.59481 | 203.22548 | 245.56005 | 2.80482 | 0.0498147 | 0.23074458 | 2.6325808 | 20 | 4 18.9 | 20.4 |
| 374411 | 2005 | WJ ₄₅ | 17.4 | X | 251.34319 | 291.12990 | 64.05186 | 11.31664 | 0.3377974 | 0.24434432 | 2.5339685 | 20 | 4 22.5 | 21.8 |
| 374412 | 2005 | WY ₄₈ | 17.2 | X | 207.19536 | 309.22527 | 63.07317 | 4.71636 | 0.2416871 | 0.23562317 | 2.5961158 | 20 | 4 13.5 | 21.6 |
| 374413 | 2005 | WW ₄₉ | 17.5 | X | 220.32640 | 269.10510 | 70.52868 | 4.36710 | 0.2104861 | 0.23419039 | 2.6066937 | 20 | 3 17.2 | 21.9 |
| 374414 | 2005 | WL ₅₀ | 17.4 | X | 206.20104 | 32.26068 | 338.84647 | 0.47137 | 0.1427210 | 0.23527721 | 2.5986601 | 20 | 4 11.8 | 21.3 |
| 374415 | 2005 | WJ ₅₃ | 17.2 | X | 155.83354 | 356.35487 | 79.16028 | 3.02544 | 0.1439466 | 0.23503152 | 2.6004708 | 20 | 5 15.3 | 21.2 |
| 374416 | 2005 | WN ₆₂ | 17.1 | X | 196.76219 | 292.77253 | 157.25583 | 2.29221 | 0.1673457 | 0.24412456 | 2.5354890 | 20 | 7 11.6 | 21.0 |
| 374417 | 2005 | WR ₆₂ | 17.2 | X | 244.17548 | 262.85563 | 123.62882 | 5.22167 | 0.2201012 | 0.24521108 | 2.5279937 | 20 | 6 2.2 | 21.1 |
| 374418 | 2005 | WZ ₆₆ | 17.0 | X | 341.81563 | 184.93346 | 65.23888 | 2.76037 | 0.0890038 | 0.23507262 | 2.6001677 | 20 | 4 30.6 | 20.0 |
| 374419 | 2005 | WB ₆₉ | 15.9 | X | 160.68103 | 191.76440 | 251.78358 | 13.96331 | 0.2256641 | 0.23535434 | 2.5980923 | 20 | 6 1.5 | 20.2 |
| 374420 | 2005 | WS ₆₉ | 17.4 | X | 171.63278 | 187.09646 | 218.69652 | 1.61945 | 0.0608128 | 0.23169950 | 2.6253426 | 20 | 4 19.6 | 21.2 |
| 374421 | 2005 | WG ₇₄ | 16.8 | X | 189.57588 | 19.79379 | 83.62501 | 25.28687 | 0.1063750 | 0.37638972 | 1.8998131 | 20 | 8 8.3 | 19.6 |
| 374422 | 2005 | WB ₈₅ | 17.7 | X | 224.53739 | 335.68479 | 44.30878 | 8.02679 | 0.1520413 | 0.24393064 | 2.5368326 | 20 | 5 10.0 | 21.7 |
| 374423 | 2005 | WX ₁₀₉ | 17.4 | X | 269.32383 | 148.46071 | 222.38517 | 1.59329 | 0.1558122 | 0.24635872 | 2.5201367 | 20 | 6 17.9 | 20.8 |
| 374424 | 2005 | WA ₁₁₁ | 17.2 | X | 172.21197 | 312.62715 | 81.28417 | 4.74521 | 0.1636530 | 0.23174811 | 2.6249754 | 20 | 4 11.3 | 21.4 |
| 374425 | 2005 | WK ₁₁₃ | 17.5 | X | 136.75914 | 296.05194 | 184.59428 | 5.79310 | 0.1757605 | 0.23531153 | 2.5984074 | 20 | 6 30.3 | 22.1 |
| 374426 | 2005 | WK ₁₁₆ | 17.2 | X | 163.59957 | 304.02244 | 100.75852 | 7.19626 | 0.2292371 | 0.23159478 | 2.6261340 | 20 | 4 20.7 | 21.8 |
| 374427 | 2005 | WU ₁₁₆ | 17.1 | X | 162.93098 | 286.34804 | 91.27406 | 6.72039 | 0.0880789 | 0.22569002 | 2.6717418 | 20 | 3 10.7 | 21.1 |
| 374428 | 2005 | WX ₁₂₆ | 17.1 | X | 170.38083 | 314.21125 | 155.57930 | 5.10948 | 0.2371691 | 0.24085748 | 2.5583657 | 20 | 7 11.8 | 21.5 |
| 374429 | 2005 | WA ₁₃₈ | 17.4 | X | 278.82998 | 84.79263 | 263.18155 | 0.83414 | 0.1777645 | 0.24552475 | 2.5258402 | 20 | 5 26.3 | 20.7 |
| 374430 | 2005 | WK ₁₄₂ | 17.0 | X | 233.92819 | 314.46595 | 67.32958 | 6.00291 | 0.0302659 | 0.23834986 | 2.5762783 | 20 | 6 4.3 | 20.4 |
| 374431 | 2005 | WW ₁₅₀ | 17.0 | X | 232.97988 | 332.69446 | 46.45361 | 5.41764 | 0.2237973 | 0.24124915 | 2.5555959 | 20 | 5 11.9 | 21.0 |
| 374432 | 2005 | WC ₁₅₅ | 17.1 | X | 248.66772 | 16.35293 | 339.63473 | 0.83039 | 0.1510212 | 0.23875896 | 2.5733346 | 20 | 5 4.4 | 20.8 |
| 374433 | 2005 | WV ₁₅₈ | 16.9 | X | 124.24681 | 182.74206 | 261.60862 | 4.64740 | 0.2957745 | 0.22742221 | 2.6581580 | 20 | 5 7.4 | 21.4 |
| 374434 | 2005 | WZ ₁₅₈ | 16.6 | X | 219.69579 | 252.63658 | 142.35842 | 9.73826 | 0.1317495 | 0.24212200 | 2.5494503 | 20 | 5 28.7 | 20.6 |
| 374435 | 2005 | WM ₁₆₃ | 14.8 | X | 9.56286 | 272.59883 | 38.36412 | 12.61838 | 0.1171930 | 0.12461773 | 3.9696251 | 20 | 9 6.1 | 20.0 |
| 374436 | 2005 | WM ₁₆₅ | 16.7 | X | 46.62769 | 72.71491 | 93.42089 | 3.17763 | 0.1375643 | 0.22897225 | 2.6461481 | 20 | 4 27.5 | 19.6 |
| 374437 | 2005 | WA ₁₆₈ | 17.3 | X | 182.42200 | 306.99329 | 97.55030 | 1.65814 | 0.0812941 | 0.23360267 | 2.6110640 | 20 | 5 1.4 | 21.0 |
| 374438 | 2005 | WQ ₁₇₆ | 16.0 | X | 120.25158 | 216.58317 | 279.32267 | 11.67573 | 0.1139217 | 0.23353774 | 2.6115479 | 20 | 6 22.7 | 19.7 |
| 374439 | 2005 | WV ₁₇₆ | 17.5 | X | 169.77933 | 18.17684 | 71.92449 | 5.27261 | 0.2019256 | 0.23614002 | 2.5923262 | 20 | 6 16.7 | 21.9 |
| 374440 | 2005 | WP ₁₇₇ | 16.7 | X | 337.18593 | 124.74249 | 81.44158 | 6.14412 | 0.0496944 | 0.21996063 | 2.7179372 | 20 | 3 2.5 | 20.2 |
| 374441 | 2005 | WU ₁₈₅ | 17.6 | X | 115.24877 | 115.72720 | 264.48719 | 17.40889 | 0.1057780 | 0.35141231 | 1.9888013 | 20 | — | — |
| 374442 | 2005 | WT ₁₈₆ | 17.5 | X | 155.67120 | 99.32275 | 3.94876 | 2.87043 | 0.1414681 | 0.23963399 | 2.5670664 | 20 | 6 19.3 | 21.6 |
| 374443 | 2005 | WC ₁₈₈ | 17.1 | X | 186.53456 | 338.31485 | 61.64456 | 5.04124 | 0.2008293 | 0.23369507 | 2.6103757 | 20 | 4 30.4 | 21.6 |
| 374444 | 2005 | WY ₁₉₅ | 16.8 | X | 225.42066 | 333.53673 | 68.61144 | 7.65433 | 0.2653805 | 0.24179280 | 2.5517638 | 20 | 5 31.6 | 20.9 |
| 374445 | 2005 | WW ₁₉₅ | 16.6 | X | 139.87972 | 161.70319 | 299.11602 | 5.59044 | 0.1314435 | 0.22766546 | 2.6562643 | 20 | 5 29.7 | 20.8 |
| 374446 | 2005 | WP ₂₀₇ | 16.8 | X | 96.32858 | 195.50328 | 285.20743 | 6.57558 | 0.1615577 | 0.23055442 | 2.6340282 | 20 | 5 9.2 | 20.6 |
| 374447 | 2005 | WM ₂₀₈ | 17.1 | X | 230.39014 | 44.45753 | 348.01942 | 3.45331 | 0.2633686 | 0.24262194 | 2.5459468 | 20 | 5 22.9 | 21.3 |
| 374448 | 2005 | WP ₂₁₁ | 17.6 | X | 175.10983 | 175.77030 | 232.07786 | 1.88672 | 0.1869817 | 0.23333106 | 2.6130899 | 20 | 4 29.3 | 22.0 |
| 374449 | 2005 | XD ₁ | 19.4 | X | 349.64962 | 198.65903 | 287.37759 | 18.29074 | 0.3067718 | 0.47781255 | 1.6204328 | 20 | — | — |
| 374450 | 2005 | XD ₂ | 16.2 | X | 90.22212 | 242.02230 | 255.44616 | 13.35882 | 0.0594569 | 0.23221741 | 2.6214376 | 20 | 5 8.7 | 19.8 |
| 374451 | 2005 | XF ₄ | 17.3 | X | 185.64916 | 292.19939 | 89.98487 | 4.13678 | 0.1875516 | 0.23305470 | 2.6151553 | 20 | 4 9.0 | 21.7 |
| 374452 | 2005 | XP ₅ | 17.1 | X | 56.61141 | 200.91192 | 268.59455 | 17.25266 | 0.0944399 | 0.36052105 | 1.9551600 | 20 | 1 17.4 | 18.6 |
| 374453 | 2005 | XT ₈ | 15.6 | X | 268.10261 | 86.80060 | 11.76467 | 2.75614 | 0.2188359 | 0.12633701 | 3.9335287 | 20 | 9 18.6 | 21.0 |
| 374454 | 2005 | XK ₁₄ | 17.5 | X | 209.96956 | 247.98182 | 137.54742 | 4.09802 | 0.2096468 | 0.23692425 | 2.5866026 | 20 | 5 2.7 | 21.8 |
| 374455 | 2005 | XM ₁₆ | 16.1 | X | 147.66756 | 166.25014 | 267.33235 | 12.56036 | 0.1379578 | 0.22920815 | 2.6443322 | 20 | 5 1.2 | 20.3 |
| 374456 | 2005 | XN ₂₆ | 17.1 | X | 157.14516 | 314.34166 | 101.36304 | 2.80375 | 0.0878919 | 0.22771655 | 2.6558670 | 20 | 4 19.2 | 21.0 |
| 374457 | 2005 | XE ₂₈ | 17.0 | X | 176.34211 | 178.83513 | 270.17089 | 13.08683 | 0.2223186 | 0.23785986 | 2.5798153 | 20 | 6 21.1 | 21.2 |
| 374458 | 2005 | XF ₂₉ | 16.4 | X | 187.20556 | 64.63778 | 13.92236 | 11.69244 | 0.1659373 | 0.23714042 | 2.5850304 | 20 | 6 17.1 | 20.8 |
| 374459 | 2005 | XA ₄₂ | 16.8 | X | 253.71143 | 78.93824 | 253.67870 | 6.85112 | 0.1595414 | 0.24002152 | 2.5643025 | 20 | 4 6.3 | 20.8 |
| 374460 | 2005 | XU ₄₃ | 17.5 | X | 263.17605 | 256.97634 | 60.87807 | 4.78124 | 0.1846271 | 0.23573909 | 2.5952646 | 20 | 3 30.9 | 21.5 |
| 374461 | 2005 | XW ₄₉ | 17.3 | X | 104.24960 | 124.15997 | 336.38115 | 3.26425 | 0.1382433 | 0.22590779 | 2.6700245 | 20 | 4 19.7 | 21.1 |
| 374462 | 2005 | XJ ₅₃ | 17.0 | X | 312.84047 | 14.59660 | 306.33018 | 2.83817 | 0.0566483 | 0.24629559 | 2.5205673 | 20 | 6 27.8 | 20.0 |
| 374463 | 2005 | XO ₅₄ | 17.3 | X | 50.27176 | 152.34291 | 18.52567 | 2.15848 | 0.1281252 | 0.22954909 | 2.6417132 | 20 | 5 7.4 | 20.3 |
| 374464 | 2005 | XN ₅₉ | 17.2 | X | 202.86672 | 88.54243 | 328.04148 | 1.66402 | 0.1896194 | 0.23928775 | 2.5695421 | 20 | 6 3.3 | 21.3 |
| 374465 | 2005 | XZ ₆₃ | 16.8 | X | 170.22872 | 139.01574 | 265.73909 | 12.42465 | 0.2529070 | 0.23242889 | 2.6198473 | 20 | 4 19.5 | 21.7 |
| 374466 | 2005 | XD ₇₁ | 16.5 | X | 74.28109 | 69.01809 | 69.00029 | 13.92951 | 0.0895571 | 0.22680650 | 2.6629666 | 20 | 4 28.3 | 20.0 |
| 374467 | 2005 | XO ₈₂ | 17.3 | X | 247.50366 | 76.05519 | 272.03685 | 3.62811 | 0.2286764 | 0.24036534 | 2.5618566 | 20 | 4 14.4 | 21.4 |
| 374468 | 2005 | XJ ₈₃ | 17.2 | X | 190.00312 | 81.71738 | 328.03738 | 4.26432 | 0.2312071 | 0.23778760 | 2.5803379 | 20 | 5 12.8 | 21.7 |
| 374469 | 2005 | XV ₈₃ | 16.0 | X | 144.77820 | 340.02193 | 91.70736 | 12.93323 | 0.1601165 | 0.22732846 | 2.6588888 | 20 | 5 5.2 | 20 |

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| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|--------|----------|
| 374481 2005 YG ₅₁ | 16.2 | X | 206.21691 | 29.85059 | 293.80346 | 5.38281 | 0.0561949 | 0.21553178 | 2.7550437 | 20 | 2 15.0 | 20.2 |
| 374482 2005 YM ₅₅ | 16.5 | X | 157.41756 | 300.51942 | 160.45824 | 30.48097 | 0.3575363 | 0.23321601 | 2.6139492 | 20 | 6 26.1 | 22.0 |
| 374483 2005 YV ₅₇ | 17.3 | X | 180.35974 | 45.31460 | 298.28120 | 5.16885 | 0.0304907 | 0.21600042 | 2.7510574 | 20 | 2 10.2 | 21.3 |
| 374484 2005 YH ₅₉ | 16.1 | X | 198.04222 | 148.08513 | 257.13332 | 13.28864 | 0.0776540 | 0.23438432 | 2.6052556 | 20 | 5 18.5 | 20.0 |
| 374485 2005 YO ₇₄ | 18.2 | X | 212.17148 | 99.44642 | 284.53548 | 4.88408 | 0.3278480 | 0.23774294 | 2.5806610 | 20 | 4 25.3 | 23.0 |
| 374486 2005 YT ₇₉ | 17.4 | X | 211.62633 | 71.01280 | 322.65504 | 1.72464 | 0.1774512 | 0.23492613 | 2.6012484 | 20 | 5 13.5 | 21.5 |
| 374487 2005 YG ₉₀ | 16.6 | X | 118.83356 | 133.58465 | 277.38222 | 4.80057 | 0.0456281 | 0.21620925 | 2.7492856 | 20 | 2 21.2 | 20.3 |
| 374488 2005 YO ₉₀ | 16.4 | X | 171.89986 | 246.57070 | 132.09027 | 6.50367 | 0.0400848 | 0.21992045 | 2.7182682 | 20 | 3 18.4 | 20.3 |
| 374489 2005 YH ₉₃ | 17.0 | X | 175.79747 | 249.53684 | 139.58920 | 8.06141 | 0.1823649 | 0.22637877 | 2.6663199 | 20 | 4 10.3 | 21.5 |
| 374490 2005 YH ₉₅ | 17.1 | X | 181.99343 | 125.68341 | 240.64672 | 2.41655 | 0.1590239 | 0.22345567 | 2.6895222 | 20 | 3 14.5 | 21.4 |
| 374491 2005 YM ₉₅ | 17.6 | X | 206.78610 | 210.98035 | 166.44122 | 2.27458 | 0.1174720 | 0.22960059 | 2.6413181 | 20 | 4 22.2 | 21.5 |
| 374492 2005 YN ₉₇ | 16.5 | X | 289.24237 | 216.77895 | 75.91106 | 5.89269 | 0.0942964 | 0.22792019 | 2.6542848 | 20 | 4 11.7 | 20.0 |
| 374493 2005 YJ ₉₈ | 17.5 | X | 232.78748 | 125.04266 | 235.34641 | 3.39330 | 0.1687260 | 0.23840084 | 2.5759110 | 20 | 4 21.9 | 21.4 |
| 374494 2005 YP ₁₀₄ | 17.7 | X | 233.27451 | 249.15211 | 173.74015 | 0.43498 | 0.1490851 | 0.24052310 | 2.5607363 | 20 | 6 18.7 | 21.6 |
| 374495 2005 YY ₁₁₂ | 17.3 | X | 110.30118 | 4.63998 | 108.35911 | 7.41370 | 0.1625282 | 0.22743800 | 2.6580350 | 20 | 5 19.5 | 21.3 |
| 374496 2005 YG ₁₁₄ | 17.2 | X | 190.55779 | 18.65605 | 3.40621 | 2.53201 | 0.1214539 | 0.22668848 | 2.6638908 | 20 | 4 10.8 | 21.5 |
| 374497 2005 YG ₁₁₄ | 17.5 | X | 165.66767 | 132.92683 | 77.47795 | 3.68506 | 0.2174745 | 0.22866249 | 2.6485373 | 20 | 4 26.7 | 22.0 |
| 374498 2005 YF ₁₃₆ | 16.9 | X | 254.82837 | 227.07715 | 60.33223 | 3.97068 | 0.0400054 | 0.21905609 | 2.7254140 | 20 | 2 29.6 | 20.8 |
| 374499 2005 YW ₁₅₃ | 17.2 | X | 162.25284 | 342.11646 | 96.68569 | 8.04365 | 0.2905307 | 0.23210804 | 2.6222610 | 20 | 5 30.6 | 22.0 |
| 374500 2005 YH ₁₅₄ | 17.0 | X | 204.59486 | 59.87167 | 328.19354 | 2.58926 | 0.2372865 | 0.23436777 | 2.6053783 | 20 | 4 28.1 | 21.6 |
| 374501 2005 YN ₁₅₄ | 16.8 | X | 138.62465 | 75.27494 | 73.98926 | 4.55502 | 0.1602536 | 0.23526242 | 2.5987690 | 20 | 8 2.9 | 20.9 |
| 374502 2005 YS ₁₆₄ | 17.3 | X | 195.55349 | 66.08928 | 355.86741 | 4.23712 | 0.2196195 | 0.23782434 | 2.5800721 | 20 | 6 2.3 | 21.7 |
| 374503 2005 YY ₁₇₀ | 16.4 | X | 177.68947 | 137.77613 | 271.52400 | 13.98967 | 0.0886482 | 0.23489955 | 2.6014447 | 20 | 4 28.1 | 20.6 |
| 374504 2005 YU ₁₇₄ | 16.5 | X | 137.28158 | 132.29212 | 323.57111 | 13.48542 | 0.2523051 | 0.23004520 | 2.6379138 | 20 | 5 27.6 | 21.2 |
| 374505 2005 YJ ₁₈₈ | 16.9 | X | 169.13097 | 352.72065 | 94.59895 | 3.23781 | 0.1871435 | 0.23301058 | 2.6154854 | 20 | 6 12.7 | 21.1 |
| 374506 2005 YJ ₁₈₉ | 16.7 | X | 100.20312 | 298.73874 | 107.75689 | 7.09611 | 0.0515507 | 0.21392116 | 2.7688550 | 20 | 1 26.9 | 20.4 |
| 374507 2005 YY ₁₉₅ | 15.7 | X | 94.17499 | 197.14941 | 285.27231 | 20.97142 | 0.0505167 | 0.22339885 | 2.6899782 | 20 | 4 14.7 | 19.9 |
| 374508 2005 YD ₂₀₁ | 17.1 | X | 109.46977 | 143.40337 | 283.20765 | 2.20882 | 0.1748299 | 0.21934706 | 2.7230033 | 20 | 3 18.9 | 21.0 |
| 374509 2005 YP ₂₀₄ | 16.8 | X | 144.30000 | 99.05860 | 293.86112 | 4.98392 | 0.0376796 | 0.21693885 | 2.7431180 | 20 | 2 28.5 | 20.7 |
| 374510 2005 YF ₂₀₅ | 16.9 | X | 177.81608 | 342.88342 | 84.95454 | 2.25105 | 0.1160699 | 0.23248803 | 2.6194030 | 20 | 5 26.5 | 20.9 |
| 374511 2005 YG ₂₀₅ | 16.8 | X | 161.19386 | 303.94641 | 98.26190 | 7.04556 | 0.0719625 | 0.22401209 | 2.6850667 | 20 | 4 8.0 | 20.8 |
| 374512 2005 YU ₂₁₇ | 16.5 | X | 159.69543 | 119.06353 | 279.68770 | 9.81051 | 0.0927543 | 0.22681977 | 2.6628627 | 20 | 3 25.1 | 20.7 |
| 374513 2005 YX ₂₃₆ | 17.1 | X | 14.80965 | 5.59340 | 164.44001 | 1.97276 | 0.1320567 | 0.21639684 | 2.7476966 | 20 | 3 5.2 | 19.9 |
| 374514 2005 YH ₂₃₇ | 15.9 | X | 229.10144 | 42.65176 | 282.58706 | 12.93812 | 0.1198894 | 0.22209297 | 2.7005124 | 20 | 3 3.6 | 20.3 |
| 374515 2005 YM ₂₄₅ | 16.5 | X | 215.49206 | 346.54741 | 342.64806 | 5.98278 | 0.0818960 | 0.21933209 | 2.7231272 | 20 | 3 3.3 | 20.4 |
| 374516 2005 YH ₂₅₁ | 16.6 | X | 159.42367 | 121.64153 | 269.50128 | 5.53653 | 0.0456294 | 0.21975178 | 2.7196590 | 20 | 3 14.6 | 20.5 |
| 374517 2005 YC ₂₆₅ | 16.7 | X | 204.52312 | 281.31898 | 83.77225 | 3.26917 | 0.1033710 | 0.22539887 | 2.6740420 | 20 | 4 5.9 | 20.7 |
| 374518 2005 YG ₂₆₈ | 16.6 | X | 187.20683 | 249.70391 | 122.92531 | 13.73914 | 0.2037061 | 0.22457766 | 2.6805568 | 20 | 4 3.0 | 21.4 |
| 374519 2005 YO ₂₆₉ | 16.7 | X | 71.19178 | 351.40742 | 140.11883 | 9.48789 | 0.2015093 | 0.21718671 | 2.7410306 | 20 | 5 2.4 | 20.3 |
| 374520 2005 YC ₂₉₂ | 17.1 | X | 199.70372 | 114.98248 | 239.42565 | 1.79923 | 0.0875966 | 0.22232915 | 2.6985996 | 20 | 3 16.6 | 21.2 |
| 374521 2006 AE ₁₀ | 16.3 | X | 195.70932 | 97.23219 | 295.00559 | 10.63098 | 0.1325545 | 0.23025601 | 2.6363035 | 20 | 4 24.3 | 20.7 |
| 374522 2006 AV ₁₃ | 16.5 | X | 101.79015 | 119.58875 | 306.29720 | 2.95862 | 0.0592739 | 0.21456314 | 2.7633293 | 20 | 2 22.1 | 20.1 |
| 374523 2006 AN ₁₄ | 16.9 | X | 168.49661 | 121.26799 | 299.58457 | 6.20107 | 0.2067757 | 0.22934206 | 2.6433028 | 20 | 5 8.4 | 21.5 |
| 374524 2006 AM ₁₅ | 16.6 | X | 74.33609 | 4.87970 | 125.07487 | 10.16798 | 0.0911181 | 0.22084300 | 2.7106927 | 20 | 4 18.3 | 20.2 |
| 374525 2006 AM ₃₂ | 16.3 | X | 183.34534 | 52.44201 | 38.85154 | 11.64293 | 0.1718097 | 0.23573421 | 2.5953005 | 20 | 6 30.7 | 20.7 |
| 374526 2006 AY ₄₁ | 17.2 | X | 154.68475 | 242.33895 | 176.10374 | 2.49854 | 0.0574842 | 0.22418500 | 2.6836859 | 20 | 4 17.2 | 21.0 |
| 374527 2006 AJ ₄₇ | 16.6 | X | 211.70301 | 243.37468 | 96.81908 | 14.31216 | 0.1780277 | 0.22343768 | 2.6896666 | 20 | 3 16.8 | 21.3 |
| 374528 2006 AO ₅₃ | 16.6 | X | 184.30500 | 84.14996 | 278.48995 | 5.05691 | 0.0279690 | 0.21880251 | 2.7275194 | 20 | 3 7.5 | 20.5 |
| 374529 2006 AZ ₅₃ | 16.8 | X | 178.21255 | 85.33764 | 274.07428 | 4.94642 | 0.0253281 | 0.21666551 | 2.7454246 | 20 | 2 25.6 | 20.7 |
| 374530 2006 AV ₅₇ | 16.2 | X | 123.81128 | 151.00010 | 293.58453 | 12.89883 | 0.0523875 | 0.22273985 | 2.6952813 | 20 | 4 5.6 | 20.3 |
| 374531 2006 AS ₆₅ | 16.5 | X | 209.01342 | 22.30527 | 320.81923 | 5.26193 | 0.0710469 | 0.21938976 | 2.7226500 | 20 | 3 12.2 | 20.4 |
| 374532 2006 AF ₇₃ | 17.1 | X | 150.66084 | 291.12258 | 181.52499 | 5.25413 | 0.1512570 | 0.23329566 | 2.6133542 | 20 | 6 26.5 | 21.3 |
| 374533 2006 AB ₇₅ | 16.4 | X | 203.59009 | 219.93828 | 121.94890 | 16.25673 | 0.2174244 | 0.22273560 | 2.6953156 | 20 | 3 9.3 | 21.0 |
| 374534 2006 AR ₈₄ | 16.6 | X | 158.56858 | 91.47533 | 357.77371 | 7.14720 | 0.1741082 | 0.23018267 | 2.6368634 | 20 | 6 4.0 | 21.2 |
| 374535 2006 AL ₁₀₄ | 16.7 | X | 124.86531 | 269.22518 | 139.41619 | 5.97795 | 0.0486366 | 0.21314770 | 2.7755493 | 20 | 2 29.4 | 20.6 |
| 374536 2006 AW ₁₀₄ | 16.3 | X | 181.28754 | 25.13183 | 330.57346 | 8.24389 | 0.1404851 | 0.21337838 | 2.7735485 | 20 | 3 1.6 | 20.8 |
| 374537 2006 BM ₉ | 16.9 | X | 158.61179 | 278.52434 | 137.18572 | 7.01514 | 0.1561517 | 0.22752304 | 2.6573727 | 20 | 4 26.2 | 21.2 |
| 374538 2006 BG ₃₉ | 17.0 | X | 224.21271 | 308.62470 | 53.90805 | 2.68980 | 0.1183691 | 0.22917561 | 2.6445825 | 20 | 4 20.9 | 21.1 |
| 374539 2006 BS ₅₆ | 16.6 | X | 152.65051 | 255.72944 | 137.66799 | 5.99985 | 0.0774186 | 0.21852450 | 2.7298323 | 20 | 3 17.3 | 20.6 |
| 374540 2006 BZ ₆₁ | 17.3 | X | 169.40809 | 1.24513 | 81.95584 | 2.48560 | 0.2313004 | 0.23242245 | 2.6198957 | 20 | 6 8.3 | 21.9 |
| 374541 2006 BV ₆₆ | 16.4 | X | 92.80959 | 295.64215 | 114.97247 | 5.77818 | 0.0525907 | 0.20959352 | 2.8068389 | 20 | 1 23.0 | 19.9 |
| 374542 2006 BS ₆₉ | 16.8 | X | 247.95455 | 280.39016 | 18.67064 | 4.65755 | 0.0537813 | 0.21560889 | 2.7543869 | 20 | 3 5.5 | 20.6 |
| 374543 2006 BR ₈₁ | 16.9 | X | 121.08492 | 29.36137 | 50.30342 | 4.00667 | 0.1460256 | 0.21823528 | 2.7322435 | 20 | 4 15.9 | 20.9 |
| 374544 2006 BE ₈₂ | 16.3 | X | 174.33463 | 12.77679 | 68.32916 | 3.31409 | 0.1190902 | 0.22818837 | 2.6522047 | 20 | 6 8.8 | 20.5 |
| 374545 2006 BA ₈₃ | 16.8 | X | 98.93754 | 310.25835 | 150.79040 | 4.63300 | 0.1060955 | 0.22110078 | 2.7085854 | 20 | 4 12.4 | 20.4 |
| 374546 2006 BL ₉₀ | 16.6 | X | 131.39431 | 272.83420 | 135.92990 | 6.82313 | 0.0726316 | 0.21414681 | 2.7669096 | 20 | 3 12.2 | 20.5 |
| 374547 2006 BZ ₉₃ | 16.8 | X | 179.35812 | 55.62230 | 324.22232 | 5.67514 | 0.0871103 | 0.21708390 | 2.7418959 | 20 | 3 25.8 | 21.0 |
| 374548 2006 BQ ₉₆ | 16.6 | X | 81.73466 | 300.93615 | 168.29008 | 3.61875 | 0.0492295 | 0.21376148 | 2.7702338 | 20 | 3 22.1 | 20.1 |
| 374549 2006 BF ₁₀₉ | 16.8 | X | 183.86967 | 61.47859 | 332.78424 | 5.77468 | 0.0447268 | 0.22317210 | 2.6918000 | 20 | 4 16.6 | 20.7 |
| 374550 2006 BT ₁₁₀ | 17.0 | X | 119.07782 | 66.20066 | 6.79959 | 3.65975 | 0.0489593 | 0.21672050 | 2.7449602 | 20 | 3 15.5 | 20.7 |
| 374551 2006 BO ₁₂₁ | 16.4 | X | 175.97991 | 50.79530 | 324.67293 | 5.58152 | 0.0260438 | 0.21740792 | 2.7391710 | 20 | 3 14.7 | 20.2 |
| 374552 2006 BO ₁₂₆ | 16.7 | X | 197.40315 | 168.69029 | 162.62405 | 2.49586 | 0.0681937 | 0.20909466 | 2.8113015 | 20 | 2 16.7 | 20.9 |
| 374553 2006 BG ₁₂₇ | 16.7 | X | 180.60156 | 31.730 | | | | | | | | |

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| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> | | |
|--------|----------|-------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----------|---------|------|
| 374561 | 2006 | BJ ₁₉₂ | 17.1 | X | 154.41147 | 271.50546 | 153.54207 | 5.45546 | 0.2580629 | 0.22694768 | 2.6618621 | 20 | 5 7.8 | 21.8 |
| 374562 | 2006 | BH ₂₁₄ | 17.0 | X | 175.40818 | 180.31658 | 256.44183 | 3.68548 | 0.2581564 | 0.23206988 | 2.6225485 | 20 | 6 5.2 | 21.6 |
| 374563 | 2006 | BM ₂₂₂ | 16.9 | X | 119.51907 | 257.60952 | 150.83821 | 4.85420 | 0.0758516 | 0.21318372 | 2.7752367 | 20 | 2 25.6 | 20.7 |
| 374564 | 2006 | BD ₂₂₆ | 13.8 | X | 228.97168 | 58.95135 | 311.47400 | 4.06474 | 0.0352363 | 0.08554938 | 5.1010331 | 20 | 5 14.8 | 20.7 |
| 374565 | 2006 | BN ₂₂₆ | 16.9 | X | 74.81162 | 119.31627 | 322.51289 | 3.41128 | 0.0832422 | 0.20898731 | 2.8122641 | 20 | 2 11.3 | 20.2 |
| 374566 | 2006 | BG ₂₃₀ | 16.6 | X | 159.27281 | 22.20332 | 343.54195 | 6.14628 | 0.0738648 | 0.21385855 | 2.7693954 | 20 | 2 18.6 | 20.7 |
| 374567 | 2006 | BY ₂₃₁ | 16.7 | X | 195.56960 | 18.60425 | 355.70110 | 5.06248 | 0.0489768 | 0.22187261 | 2.7023001 | 20 | 4 6.2 | 20.6 |
| 374568 | 2006 | BU ₂₃₉ | 16.8 | X | 310.89613 | 110.22572 | 98.14645 | 3.19011 | 0.0139675 | 0.20981385 | 2.8048735 | 20 | 2 3.2 | 20.5 |
| 374569 | 2006 | BH ₂₅₀ | 16.3 | X | 206.35101 | 349.94201 | 330.56684 | 3.67705 | 0.0630153 | 0.20969801 | 2.8059064 | 20 | 2 13.6 | 20.3 |
| 374570 | 2006 | BN ₂₅₄ | 17.8 | X | 130.18686 | 269.88358 | 179.44283 | 1.88926 | 0.1728813 | 0.22394721 | 2.6855853 | 20 | 5 9.8 | 22.0 |
| 374571 | 2006 | BC ₂₇₇ | 16.2 | X | 181.42616 | 7.10581 | 335.29585 | 8.64475 | 0.1490265 | 0.21251863 | 2.7810238 | 20 | 2 16.9 | 20.7 |
| 374572 | 2006 | BD ₂₇₈ | 16.7 | X | 330.10247 | 264.65752 | 310.02144 | 3.35653 | 0.0093930 | 0.21242619 | 2.7818306 | 20 | 3 5.0 | 20.4 |
| 374573 | 2006 | BR ₂₈₀ | 17.0 | X | 116.57068 | 251.09592 | 155.56290 | 9.20838 | 0.2841561 | 0.21482513 | 2.7610821 | 20 | 3 17.6 | 21.3 |
| 374574 | 2006 | BT ₂₈₀ | 17.4 | X | 122.07718 | 60.77236 | 345.39248 | 4.19798 | 0.0984329 | 0.21567954 | 2.7537853 | 20 | 2 28.6 | 21.3 |
| 374575 | 2006 | CE ₁₀ | 17.7 | X | 104.24207 | 85.31879 | 5.08923 | 18.50721 | 0.1170922 | 0.35644039 | 1.9700539 | 20 | 3 24.8 | 19.3 |
| 374576 | 2006 | CD ₂₅ | 16.1 | X | 138.07691 | 317.43863 | 128.04979 | 15.25995 | 0.0475805 | 0.22441982 | 2.6818135 | 20 | 5 7.2 | 20.2 |
| 374577 | 2006 | CM ₂₆ | 16.7 | X | 146.27901 | 179.46654 | 305.43213 | 4.99811 | 0.0867885 | 0.23912051 | 2.5707401 | 20 | 7 5.7 | 20.4 |
| 374578 | 2006 | CF ₄₀ | 17.1 | X | 62.13467 | 117.53716 | 0.95710 | 7.57853 | 0.1794584 | 0.21331761 | 2.7740753 | 20 | 3 23.9 | 20.1 |
| 374579 | 2006 | CM ₄₁ | 17.2 | X | 148.46132 | 264.72046 | 182.25261 | 6.29222 | 0.1288448 | 0.22402078 | 2.6849973 | 20 | 5 22.6 | 21.3 |
| 374580 | 2006 | CJ ₅₂ | 13.6 | X | 332.72661 | 105.01885 | 140.37215 | 17.04994 | 0.0406896 | 0.08374186 | 5.1741733 | 20 | 4 27.9 | 20.5 |
| 374581 | 2006 | CP ₆₁ | 15.5 | X | 257.36108 | 330.28502 | 295.49045 | 9.03747 | 0.0722403 | 0.21001602 | 2.8030732 | 20 | 1 31.5 | 19.7 |
| 374582 | 2006 | DK ₁₁ | 16.0 | X | 104.44797 | 124.58155 | 351.03826 | 14.32901 | 0.1538647 | 0.22039063 | 2.7144007 | 20 | 5 7.4 | 20.2 |
| 374583 | 2006 | DH ₂₃ | 16.9 | X | 329.12608 | 210.90079 | 357.38065 | 4.09215 | 0.0121751 | 0.20994139 | 2.8037374 | 20 | 2 26.5 | 20.7 |
| 374584 | 2006 | DQ ₂₃ | 16.7 | X | 99.71524 | 79.50960 | 7.83081 | 4.45634 | 0.0848347 | 0.21389704 | 2.7690632 | 20 | 3 22.6 | 20.2 |
| 374585 | 2006 | DY ₂₇ | 16.3 | X | 10.94296 | 134.57961 | 353.13642 | 17.17597 | 0.1047659 | 0.20270151 | 2.8701069 | 20 | 1 9.9 | 20.1 |
| 374586 | 2006 | DK ₄₇ | 18.0 | X | 145.16950 | 126.65324 | 328.72864 | 2.82291 | 0.3128952 | 0.22891321 | 2.6466030 | 20 | 6 7.1 | 22.8 |
| 374587 | 2006 | DW ₅₀ | 17.0 | X | 155.70951 | 184.03279 | 245.71877 | 2.02600 | 0.1026360 | 0.22676174 | 2.6633170 | 20 | 5 4.9 | 20.9 |
| 374588 | 2006 | DY ₅₄ | 16.4 | X | 109.74701 | 38.33818 | 357.86540 | 8.87900 | 0.0691483 | 0.20343180 | 2.8632339 | 20 | 2 1.5 | 20.4 |
| 374589 | 2006 | DM ₅₇ | 16.8 | X | 141.15068 | 98.05336 | 339.34316 | 4.96701 | 0.1495116 | 0.21981821 | 2.7191110 | 20 | 5 1.4 | 21.0 |
| 374590 | 2006 | DX ₇₆ | 16.5 | X | 155.41465 | 219.86422 | 127.18998 | 3.00185 | 0.0761947 | 0.20309600 | 2.8663891 | 20 | 1 23.5 | 20.6 |
| 374591 | 2006 | DE ₇₇ | 17.1 | X | 181.33353 | 268.49287 | 153.80493 | 11.82155 | 0.2931745 | 0.22927114 | 2.6438479 | 20 | 5 25.6 | 22.1 |
| 374592 | 2006 | DD ₈₀ | 16.2 | X | 174.80581 | 287.65367 | 341.97137 | 11.94240 | 0.1225076 | 0.18841396 | 3.0134269 | 20 | — | — |
| 374593 | 2006 | DS ₈₄ | 17.0 | X | 206.99637 | 58.50480 | 176.93479 | 10.35908 | 0.1114011 | 0.18849660 | 3.0125461 | 20 | — | — |
| 374594 | 2006 | DZ ₈₆ | 16.6 | X | 69.61094 | 277.01887 | 133.94025 | 2.83877 | 0.0504291 | 0.19808353 | 2.9145430 | 20 | — | — |
| 374595 | 2006 | DO ₉₀ | 15.7 | X | 77.29429 | 332.90925 | 4.02587 | 15.90434 | 0.2633487 | 0.18005738 | 3.1059569 | 20 | — | — |
| 374596 | 2006 | DY ₉₄ | 16.4 | X | 156.50955 | 100.07024 | 177.48513 | 11.49240 | 0.0776280 | 0.18421006 | 3.0591010 | 20 | — | — |
| 374597 | 2006 | DL ₉₅ | 16.4 | X | 74.40298 | 109.74471 | 8.77653 | 3.18509 | 0.0478395 | 0.20997024 | 2.8034806 | 20 | 3 24.2 | 19.9 |
| 374598 | 2006 | DN ₁₀₅ | 15.9 | X | 212.36677 | 210.30736 | 350.21106 | 16.57167 | 0.2047346 | 0.18298784 | 3.0727076 | 20 | 11 24.9 | 21.1 |
| 374599 | 2006 | DR ₁₀₆ | 16.9 | X | 222.94511 | 265.40573 | 27.99393 | 2.27338 | 0.0309126 | 0.20371724 | 2.8605587 | 20 | 2 1.2 | 20.9 |
| 374600 | 2006 | DK ₁₁₀ | 16.7 | X | 37.11103 | 325.55646 | 181.15048 | 7.81311 | 0.1620391 | 0.21009215 | 2.8023959 | 20 | 3 16.3 | 19.6 |
| 374601 | 2006 | DH ₁₁₅ | 16.9 | X | 218.32078 | 113.46331 | 144.52941 | 2.62546 | 0.0546033 | 0.19449632 | 2.9502702 | 20 | — | — |
| 374602 | 2006 | DW ₁₂₄ | 16.0 | X | 142.47345 | 216.79656 | 32.90165 | 6.39138 | 0.4528528 | 0.16965540 | 3.2316496 | 20 | 11 28.1 | 22.4 |
| 374603 | 2006 | DN ₁₂₆ | 16.6 | X | 192.39342 | 70.03425 | 283.49779 | 3.21973 | 0.0842022 | 0.21405457 | 2.7677044 | 20 | 3 7.9 | 20.8 |
| 374604 | 2006 | DP ₁₃₁ | 15.8 | X | 274.19021 | 113.15709 | 116.39871 | 7.37393 | 0.0130725 | 0.20295508 | 2.8677157 | 20 | 1 15.7 | 19.7 |
| 374605 | 2006 | DK ₁₃₃ | 13.7 | X | 288.43553 | 314.58799 | 358.41191 | 18.44427 | 0.0358776 | 0.08330494 | 5.1922493 | 20 | 5 10.4 | 20.8 |
| 374606 | 2006 | DS ₁₃₆ | 16.5 | X | 97.33874 | 72.05097 | 6.47404 | 9.13177 | 0.1335174 | 0.21268455 | 2.7795773 | 20 | 3 16.5 | 20.2 |
| 374607 | 2006 | DS ₁₄₄ | 16.1 | X | 124.81280 | 57.24667 | 351.00553 | 11.92304 | 0.0627927 | 0.21022589 | 2.8012073 | 20 | 3 2.5 | 19.9 |
| 374608 | 2006 | DT ₁₄₉ | 16.5 | X | 138.77258 | 32.25263 | 344.41731 | 10.22719 | 0.1271382 | 0.20501561 | 2.8484685 | 20 | 2 17.0 | 20.8 |
| 374609 | 2006 | DH ₁₅₀ | 16.6 | X | 66.46020 | 101.58797 | 320.42840 | 4.66398 | 0.0503838 | 0.19993844 | 2.8964888 | 20 | 1 4.1 | 20.3 |
| 374610 | 2006 | DD ₁₆₄ | 16.6 | X | 104.65832 | 112.84879 | 307.35334 | 2.90884 | 0.0924834 | 0.20921779 | 2.8101983 | 20 | 2 24.1 | 20.4 |
| 374611 | 2006 | DB ₁₆₉ | 16.4 | X | 225.91956 | 205.30937 | 24.64571 | 6.33682 | 0.1959174 | 0.18905323 | 3.0066300 | 20 | — | — |
| 374612 | 2006 | DU ₂₁₂ | 16.7 | X | 233.71846 | 297.13944 | 21.25330 | 3.60570 | 0.0895386 | 0.21482928 | 2.7610466 | 20 | 3 10.3 | 20.9 |
| 374613 | 2006 | DQ ₂₁₆ | 13.3 | X | 130.15438 | 112.44357 | 348.37997 | 33.83977 | 0.0755684 | 0.08289671 | 5.2092817 | 20 | 4 29.3 | 20.9 |
| 374614 | 2006 | EN ₂₂ | 17.1 | X | 207.52358 | 255.94464 | 69.59868 | 1.55516 | 0.0673508 | 0.20949444 | 2.8077238 | 20 | 2 21.4 | 21.1 |
| 374615 | 2006 | ED ₂₃ | 16.6 | X | 229.27056 | 208.04229 | 38.69509 | 2.33794 | 0.0582125 | 0.19745385 | 2.9207361 | 20 | — | — |
| 374616 | 2006 | EB ₃₂ | 16.0 | X | 89.16830 | 84.89978 | 10.98509 | 13.99060 | 0.0760945 | 0.21162919 | 2.7888105 | 20 | 3 20.6 | 19.8 |
| 374617 | 2006 | EK ₃₅ | 16.8 | X | 204.19607 | 264.83293 | 41.35153 | 2.52008 | 0.0746391 | 0.20114051 | 2.8849372 | 20 | 1 26.7 | 21.1 |
| 374618 | 2006 | EG ₄₅ | 17.0 | X | 68.72799 | 317.69704 | 354.48191 | 26.68589 | 0.2205667 | 0.31502197 | 2.1391545 | 20 | — | — |
| 374619 | 2006 | EG ₅₃ | 16.2 | X | 154.19729 | 100.01505 | 28.61347 | 29.08806 | 0.3291788 | 0.23255934 | 2.6188675 | 20 | 8 5.5 | 21.7 |
| 374620 | 2006 | EO ₅₆ | 16.0 | X | 110.39054 | 279.15409 | 180.16952 | 11.83116 | 0.1403918 | 0.21853936 | 2.7297085 | 20 | 4 29.7 | 20.0 |
| 374621 | 2006 | FB ₄ | 16.3 | X | 174.33919 | 232.62848 | 18.75512 | 11.05242 | 0.0303237 | 0.18267451 | 3.0762202 | 20 | — | — |
| 374622 | 2006 | FK ₆ | 16.0 | X | 58.13296 | 115.14845 | 55.32050 | 9.84696 | 0.1767671 | 0.21696872 | 2.7428662 | 20 | 5 27.4 | 19.3 |
| 374623 | 2006 | FR ₁₀ | 16.9 | X | 218.63341 | 135.28822 | 97.11459 | 1.14852 | 0.0975319 | 0.18905852 | 3.0065739 | 20 | — | — |
| 374624 | 2006 | FG ₁₀ | 16.0 | X | 165.57101 | 284.40679 | 7.40280 | 12.96166 | 0.1736833 | 0.18711182 | 3.0273914 | 20 | — | — |
| 374625 | 2006 | FS ₂₁ | 15.7 | X | 148.37706 | 260.81085 | 4.98198 | 16.21780 | 0.0964565 | 0.18115139 | 3.0934393 | 20 | 12 21.9 | 20.8 |
| 374626 | 2006 | GL ₁₂ | 16.2 | X | 146.02523 | 292.26824 | 36.45052 | 12.56083 | 0.1240810 | 0.18982951 | 2.9984275 | 20 | — | — |
| 374627 | 2006 | GF ₄₅ | 16.7 | X | 260.35570 | 264.58492 | 337.64453 | 1.21547 | 0.0542626 | 0.19921827 | 2.9034651 | 20 | 1 11.9 | 21.0 |
| 374628 | 2006 | HU ₃ | 16.2 | X | 204.45022 | 100.88505 | 132.48523 | 4.23687 | 0.1551616 | 0.18182240 | 3.0858238 | 20 | — | — |
| 374629 | 2006 | HV ₁₅ | 15.6 | X | 149.59567 | 242.85819 | 39.79802 | 27.10310 | 0.1612592 | 0.17888684 | 3.1194914 | 20 | — | — |
| 374630 | 2006 | HH ₂₆ | 16.0 | X | 125.97008 | 112.32401 | 209.71623 | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 374641 2006 HZ ₈₅ | 15.8 | X | 111.93700 | 293.65810 | 61.10394 | 10.43202 | 0.0750423 | 0.18774071 | 3.0206268 | 20 | — | — |
| 374642 2006 HX ₉₃ | 15.7 | X | 249.30972 | 37.10935 | 124.56856 | 11.56417 | 0.1019684 | 0.17700607 | 3.1415497 | 20 | 12 6.5 | 20.3 |
| 374643 2006 HP ₁₀₇ | 15.5 | X | 140.52905 | 245.41737 | 67.27084 | 12.62430 | 0.0908751 | 0.18267607 | 3.0762026 | 20 | — | — |
| 374644 2006 HC ₁₂₁ | 16.0 | X | 150.09894 | 90.07968 | 217.76842 | 13.08595 | 0.1194046 | 0.18078543 | 3.0976125 | 20 | — | — |
| 374645 2006 HL ₁₃₆ | 16.9 | X | 288.48548 | 120.98066 | 77.74448 | 3.37584 | 0.0095410 | 0.19331241 | 2.9623036 | 20 | — | — |
| 374646 2006 HR ₁₅₃ | 15.9 | X | 81.60444 | 197.44563 | 155.03451 | 12.84366 | 0.1253624 | 0.17652742 | 3.1472260 | 20 | — | — |
| 374647 2006 JU ₁₁ | 15.5 | X | 124.97542 | 233.53811 | 84.17462 | 11.85582 | 0.0712123 | 0.17932344 | 3.1144259 | 20 | — | — |
| 374648 2006 JA ₂₂ | 16.0 | X | 161.48243 | 157.39004 | 121.89186 | 7.94316 | 0.0994897 | 0.17893144 | 3.1189730 | 20 | — | — |
| 374649 2006 JS ₂₆ | 15.5 | X | 136.56096 | 302.92972 | 318.79796 | 4.58497 | 0.1654137 | 0.17142720 | 3.2093437 | 20 | 12 5.1 | 20.9 |
| 374650 2006 JO ₂₉ | 16.3 | X | 246.92208 | 82.94538 | 117.70219 | 2.66978 | 0.1131920 | 0.18420862 | 3.0591170 | 20 | — | — |
| 374651 2006 JC ₃₄ | 16.6 | X | 144.89558 | 84.04140 | 197.69190 | 1.85544 | 0.1792126 | 0.17498040 | 3.1657487 | 20 | — | — |
| 374652 2006 JZ ₄₈ | 15.5 | X | 185.30955 | 52.44556 | 193.93469 | 28.20035 | 0.1166629 | 0.17934704 | 3.1141528 | 20 | 12 30.8 | 20.9 |
| 374653 2006 JR ₆₂ | 16.7 | X | 246.00574 | 290.89193 | 2.01828 | 5.47549 | 0.0156346 | 0.21033637 | 2.8002263 | 20 | 2 28.6 | 20.6 |
| 374654 2006 JD ₇₂ | 16.9 | X | 85.98165 | 292.93782 | 34.02089 | 1.83714 | 0.2161248 | 0.17357916 | 3.1827632 | 20 | — | — |
| 374655 2006 JZ ₈₀ | 18.1 | X | 99.26919 | 221.35689 | 85.11237 | 5.64319 | 0.1385788 | 0.31064029 | 2.1592231 | 20 | — | — |
| 374656 2006 KH ₉ | 15.6 | X | 162.83656 | 215.08416 | 60.86493 | 10.26678 | 0.0567640 | 0.17854459 | 3.1234765 | 20 | — | — |
| 374657 2006 KR ₁₇ | 16.0 | X | 186.45846 | 137.06596 | 136.65583 | 10.12960 | 0.0453922 | 0.18592377 | 3.0402744 | 20 | — | — |
| 374658 2006 KM ₁₈ | 16.6 | X | 87.78795 | 99.62604 | 173.67120 | 11.48042 | 0.3082154 | 0.16231393 | 3.3283745 | 20 | 11 19.4 | 22.3 |
| 374659 2006 KW ₂₁ | 16.4 | X | 93.99179 | 166.20489 | 236.17994 | 7.40711 | 0.1074623 | 0.19004453 | 2.9961656 | 20 | 1 22.9 | 20.5 |
| 374660 2006 KT ₃₆ | 15.8 | X | 86.24701 | 221.03410 | 115.16957 | 12.30294 | 0.0197876 | 0.17908424 | 3.1171986 | 20 | — | — |
| 374661 2006 KK ₃₇ | 16.1 | X | 99.53791 | 153.74196 | 173.76253 | 17.55202 | 0.2109289 | 0.17443603 | 3.1723316 | 20 | — | — |
| 374662 2006 KN ₅₁ | 18.6 | X | 81.01058 | 92.00791 | 196.97529 | 4.21961 | 0.1851916 | 0.30381533 | 2.1914401 | 20 | 12 12.9 | 21.9 |
| 374663 2006 KX ₅₁ | 15.5 | X | 100.04059 | 125.05843 | 216.11693 | 10.63957 | 0.1021036 | 0.17764734 | 3.1339850 | 20 | — | — |
| 374664 2006 KP ₅₈ | 16.4 | X | 353.70109 | 283.58516 | 202.66190 | 8.21502 | 0.0769270 | 0.18916966 | 3.0053961 | 20 | — | — |
| 374665 2006 KN ₆₀ | 15.9 | X | 65.93990 | 166.94659 | 190.17701 | 9.10652 | 0.0723476 | 0.17405063 | 3.1770129 | 20 | — | — |
| 374666 2006 KH ₆₆ | 16.6 | X | 135.54288 | 181.18690 | 163.73300 | 3.62333 | 0.1353540 | 0.18766064 | 3.0214860 | 20 | 1 8.1 | 21.1 |
| 374667 2006 KX ₇₁ | 15.9 | X | 77.52059 | 195.96388 | 209.44232 | 14.05593 | 0.0794324 | 0.18642669 | 3.0348041 | 20 | 1 1.9 | 20.2 |
| 374668 2006 KV ₈₈ | 15.8 | X | 36.77426 | 265.72478 | 149.58569 | 12.00715 | 0.1615503 | 0.18555929 | 3.0442542 | 20 | — | — |
| 374669 2006 KD ₁₁₂ | 15.9 | X | 150.75819 | 237.68805 | 50.54330 | 10.17378 | 0.0486119 | 0.17856049 | 3.1232912 | 20 | — | — |
| 374670 2006 KF ₁₁₂ | 15.6 | X | 93.51762 | 81.06272 | 249.13571 | 12.29683 | 0.1433168 | 0.17317009 | 3.1877735 | 20 | — | — |
| 374671 2006 KC ₁₁₄ | 15.3 | X | 127.51595 | 177.35776 | 97.32390 | 16.76948 | 0.2372434 | 0.17405630 | 3.1769439 | 20 | 12 15.9 | 20.9 |
| 374672 2006 KO ₁₁₈ | 15.7 | X | 108.44440 | 289.91412 | 51.47483 | 12.37126 | 0.0758470 | 0.18087948 | 3.0965388 | 20 | — | — |
| 374673 2006 MV ₁₁ | 15.8 | X | 215.82953 | 163.05873 | 94.96568 | 11.01211 | 0.0600508 | 0.18682111 | 3.0305311 | 20 | — | — |
| 374674 2006 PA ₁₅ | 17.6 | X | 39.36429 | 336.07464 | 337.81090 | 7.19376 | 0.1192953 | 0.29227803 | 2.2487367 | 20 | 11 16.8 | 20.5 |
| 374675 2006 PB ₁₇ | 17.8 | X | 352.80727 | 356.61972 | 331.52434 | 1.51225 | 0.2424948 | 0.28350011 | 2.2949183 | 20 | 10 9.3 | 19.0 |
| 374676 2006 QD | 17.9 | X | 4.68150 | 331.99361 | 355.52712 | 4.25989 | 0.2569887 | 0.28604861 | 2.2812672 | 20 | 11 6.2 | 20.0 |
| 374677 2006 QE ₁₈ | 17.8 | X | 33.38249 | 259.87010 | 78.15840 | 4.91724 | 0.2077766 | 0.29380276 | 2.2409499 | 20 | 12 27.4 | 20.6 |
| 374678 2006 QC ₂₇ | 18.0 | X | 5.63627 | 147.09338 | 167.87362 | 2.49969 | 0.2367169 | 0.28451106 | 2.2894787 | 20 | 10 17.7 | 19.9 |
| 374679 2006 QF ₄₃ | 17.4 | X | 339.17827 | 246.96625 | 147.09710 | 6.22295 | 0.1601335 | 0.29022561 | 2.2593259 | 20 | 12 16.3 | 19.5 |
| 374680 2006 QL ₄₄ | 17.7 | X | 77.49945 | 86.13434 | 211.13882 | 3.32156 | 0.1864653 | 0.29747857 | 2.2224513 | 20 | 12 18.8 | 21.0 |
| 374681 2006 QC ₅₀ | 18.1 | X | 342.45832 | 233.95052 | 136.28783 | 4.36965 | 0.2039519 | 0.28726791 | 2.2748074 | 20 | 11 21.9 | 19.8 |
| 374682 2006 QR ₅₀ | 17.6 | X | 352.93655 | 172.62202 | 143.66220 | 3.52117 | 0.2273952 | 0.28152438 | 2.3056429 | 20 | 9 17.5 | 19.0 |
| 374683 2006 QM ₅₇ | 17.6 | X | 359.85632 | 164.68635 | 219.83388 | 1.85702 | 0.2049000 | 0.29008311 | 2.2600658 | 20 | — | — |
| 374684 2006 QD ₆₄ | 17.7 | X | 42.20426 | 142.72689 | 168.34027 | 8.64281 | 0.2677542 | 0.29162827 | 2.2520756 | 20 | 12 10.0 | 21.0 |
| 374685 2006 QK ₇₀ | 17.9 | X | 125.96647 | 258.88871 | 345.80597 | 3.64332 | 0.1400187 | 0.29593710 | 2.2301622 | 20 | 11 25.1 | 21.3 |
| 374686 2006 QY ₁₁₁ | 17.7 | X | 1.57500 | 138.34877 | 214.89493 | 4.20476 | 0.1606887 | 0.28935546 | 2.2638532 | 20 | 11 25.4 | 19.9 |
| 374687 2006 QN ₁₁₆ | 18.1 | X | 337.86603 | 81.13195 | 291.49386 | 4.19827 | 0.2066732 | 0.28591399 | 2.2819832 | 20 | 11 11.7 | 19.7 |
| 374688 2006 QX ₁₂₁ | 17.2 | X | 358.55496 | 231.94056 | 103.15138 | 4.80744 | 0.1903769 | 0.28574084 | 2.2829050 | 20 | 10 29.1 | 19.1 |
| 374689 2006 QP ₁₂₁ | 17.8 | X | 25.78279 | 133.67723 | 185.71166 | 9.02429 | 0.2148744 | 0.28904503 | 2.2654738 | 20 | 11 24.5 | 20.6 |
| 374690 2006 QM ₁₃₈ | 17.8 | X | 329.05566 | 322.90303 | 37.84059 | 5.00686 | 0.1528479 | 0.28369076 | 2.2938900 | 20 | 9 30.0 | 19.4 |
| 374691 2006 QM ₁₈₄ | 17.3 | X | 24.63014 | 152.10127 | 138.75056 | 5.81394 | 0.1243878 | 0.28200275 | 2.3030347 | 20 | 9 26.4 | 19.7 |
| 374692 2006 QK ₁₈₅ | 17.6 | X | 286.56779 | 269.71503 | 171.87765 | 5.79500 | 0.2080344 | 0.28547294 | 2.2843330 | 20 | 10 31.5 | 19.2 |
| 374693 2006 RB ₄ | 16.9 | X | 298.12441 | 83.93612 | 352.48989 | 8.45376 | 0.1312280 | 0.28895559 | 2.2659413 | 20 | 11 21.7 | 19.0 |
| 374694 2006 RL ₅ | 17.0 | X | 116.66833 | 62.61905 | 226.00515 | 8.67619 | 0.0969823 | 0.30049894 | 2.2075341 | 20 | — | — |
| 374695 2006 RK ₁₇ | 17.6 | X | 313.79956 | 18.74797 | 349.73966 | 4.84611 | 0.1748708 | 0.27990462 | 2.3145292 | 20 | 9 3.2 | 19.2 |
| 374696 2006 RZ ₂₀ | 17.9 | X | 176.95925 | 223.92887 | 351.38989 | 7.23963 | 0.0225488 | 0.29447592 | 2.2375334 | 20 | 12 22.4 | 20.7 |
| 374697 2006 RP ₃₇ | 17.5 | X | 338.65788 | 229.64901 | 101.74688 | 3.45104 | 0.2225793 | 0.27966846 | 2.3158320 | 20 | 9 3.6 | 18.7 |
| 374698 2006 RT ₄₇ | 17.5 | X | 33.84389 | 294.22281 | 15.60348 | 6.24539 | 0.1625963 | 0.28626177 | 2.2801346 | 20 | 11 10.1 | 20.2 |
| 374699 2006 RL ₄₈ | 17.5 | X | 346.90809 | 322.39921 | 41.17472 | 5.71586 | 0.2339693 | 0.28473667 | 2.2882692 | 20 | 11 22.6 | 19.1 |
| 374700 2006 RM ₄₉ | 18.0 | X | 305.18577 | 17.98463 | 353.61946 | 1.49329 | 0.2163442 | 0.27698071 | 2.3307894 | 20 | 8 12.1 | 19.6 |
| 374701 2006 RR ₅₉ | 17.3 | X | 210.63113 | 138.87367 | 11.17108 | 3.71101 | 0.0727141 | 0.28446058 | 2.2897496 | 20 | 10 28.3 | 20.0 |
| 374702 2006 RJ ₆₂ | 18.0 | X | 342.86320 | 308.59818 | 44.79935 | 3.26726 | 0.2560533 | 0.28398359 | 2.2923128 | 20 | 10 30.9 | 19.1 |
| 374703 2006 RD ₆₆ | 17.2 | X | 355.65865 | 228.11731 | 109.01616 | 6.30083 | 0.1548656 | 0.28403681 | 2.2920265 | 20 | 10 21.6 | 19.3 |
| 374704 2006 RF ₆₈ | 17.6 | X | 315.63405 | 242.04729 | 175.19420 | 2.71846 | 0.1309502 | 0.28909046 | 2.2652365 | 20 | 12 1.4 | 19.4 |
| 374705 2006 RZ ₈₄ | 17.7 | X | 50.07186 | 55.66610 | 202.58281 | 2.44909 | 0.1877681 | 0.28024193 | 2.3126716 | 20 | 9 25.2 | 20.5 |
| 374706 2006 RK ₉₂ | 17.8 | X | 278.99660 | 261.55539 | 173.89883 | 0.07671 | 0.2265349 | 0.28065971 | 2.3103760 | 20 | 9 28.3 | 19.5 |
| 374707 2006 RQ ₉₂ | 18.2 | X | 47.76627 | 94.31225 | 194.65591 | 6.88608 | 0.1620683 | 0.28527111 | 2.2854103 | 20 | 11 2.2 | 21.0 |
| 374708 2006 RU ₁₀₀ | 16.9 | X | 322.33083 | 328.35118 | 51.40352 | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-------------|------------|-----------|----|---------|----------|
| 374721 2006 SQ ₂₇ | 17.7 | X | 350.09328 | 3.93114 | 356.47191 | 4.43510 | 0.1657351 | 0.28543607 | 2.2845297 | 20 | 11 12.5 | 19.7 |
| 374722 2006 SY ₃₅ | 17.5 | X | 50.83889 | 207.53315 | 106.22451 | 5.34539 | 0.1962768 | 0.29196154 | 2.2503615 | 20 | 12 13.5 | 20.6 |
| 374723 2006 SJ ₄₃ | 18.1 | X | 7.43338 | 101.12695 | 196.29171 | 5.20658 | 0.1741934 | 0.28022528 | 2.3127632 | 20 | 9 8.5 | 19.9 |
| 374724 2006 SX ₄₉ | 18.1 | X | 338.43607 | 4.95179 | 24.25251 | 0.49766 | 0.2239416 | 0.28653318 | 2.2786945 | 20 | 12 14.9 | 19.7 |
| 374725 2006 SV ₅₂ | 17.4 | X | 272.69979 | 41.88461 | 330.26809 | 6.73840 | 0.1323896 | 0.27186302 | 2.3599490 | 20 | 6 29.9 | 20.4 |
| 374726 2006 SU ₆₁ | 17.7 | X | 343.96120 | 159.21597 | 166.48033 | 6.82531 | 0.1363898 | 0.27746381 | 2.3280832 | 20 | 8 31.3 | 19.5 |
| 374727 2006 SO ₆₅ | 18.3 | X | 337.08289 | 316.51398 | 40.89176 | 1.54603 | 0.2214691 | 0.28285168 | 2.2984243 | 20 | 10 16.7 | 19.6 |
| 374728 2006 SN ₆₉ | 18.2 | X | 314.83228 | 221.31475 | 168.02982 | 2.77908 | 0.1703984 | 0.28270502 | 2.2992192 | 20 | 10 13.1 | 19.7 |
| 374729 2006 SE ₇₁ | 17.9 | X | 311.85256 | 251.89106 | 155.47480 | 2.13324 | 0.2056155 | 0.28260230 | 2.2997763 | 20 | 11 4.7 | 19.3 |
| 374730 2006 SO ₇₃ | 17.7 | X | 295.94923 | 12.98747 | 39.21201 | 6.82558 | 0.1029949 | 0.28062931 | 2.3105429 | 20 | 10 15.0 | 19.9 |
| 374731 2006 SG ₈₀ | 17.7 | X | 340.31187 | 179.74298 | 199.51762 | 8.36321 | 0.1463453 | 0.28637946 | 2.2795099 | 20 | 11 23.1 | 19.7 |
| 374732 2006 SW ₈₇ | 17.9 | X | 350.83863 | 174.03658 | 186.69641 | 4.01478 | 0.1688094 | 0.28439916 | 2.2900792 | 20 | 11 17.3 | 19.8 |
| 374733 2006 SD ₈₈ | 17.9 | X | 207.43868 | 3.93857 | 93.57560 | 1.84859 | 0.1763783 | 0.26982564 | 2.3718137 | 20 | 8 2.3 | 21.4 |
| 374734 2006 SF ₉₀ | 19.1 | X | 307.76786 | 91.45141 | 179.16710 | 0.38960 | 0.2087671 | 0.27686546 | 2.3314362 | 20 | 8 17.2 | 20.9 |
| 374735 2006 SM ₉₆ | 17.3 | X | 207.08300 | 313.56875 | 291.15590 | 6.24376 | 0.0621862 | 0.28169805 | 2.3046952 | 20 | 10 23.0 | 20.1 |
| 374736 2006 SW ₁₀₂ | 17.3 | X | 206.93476 | 152.55869 | 7.54072 | 6.48475 | 0.1010561 | 0.28669271 | 2.2778491 | 20 | 11 1.8 | 20.3 |
| 374737 2006 SC ₁₀₆ | 18.3 | X | 246.52239 | 261.19547 | 184.25148 | 6.47505 | 0.1920573 | 0.27601423 | 2.3362271 | 20 | 8 26.6 | 21.4 |
| 374738 2006 SQ ₁₁₁ | 18.0 | X | 9.31557 | 113.01337 | 203.67358 | 6.22679 | 0.1338668 | 0.28354379 | 2.2946826 | 20 | 10 8.1 | 20.0 |
| 374739 2006 SX ₁₁₆ | 18.2 | X | 281.15455 | 352.22851 | 26.99310 | 2.17064 | 0.1479828 | 0.27226759 | 2.3576106 | 20 | 7 20.8 | 20.7 |
| 374740 2006 SH ₁₂₉ | 17.7 | X | 333.11402 | 0.00833 | 3.76550 | 7.93788 | 0.1777298 | 0.28209982 | 2.3025064 | 20 | 10 11.5 | 19.2 |
| 374741 2006 SH ₁₃₀ | 18.0 | X | 335.34327 | 102.50736 | 254.01455 | 3.33225 | 0.1709781 | 0.28273667 | 2.2990476 | 20 | 10 4.1 | 19.7 |
| 374742 2006 ST ₁₄₅ | 17.4 | X | 157.55270 | 302.51765 | 2.53384 | 0.98669 | 0.0843803 | 0.23591925 | 2.5939432 | 20 | — | — |
| 374743 2006 SJ ₁₄₉ | 17.9 | X | 13.83476 | 58.09055 | 219.97612 | 3.47392 | 0.0715759 | 0.27277429 | 2.3546901 | 20 | 8 6.2 | 20.5 |
| 374744 2006 SP ₁₅₉ | 18.2 | X | 290.45134 | 350.26601 | 50.55354 | 1.91640 | 0.2304016 | 0.27718371 | 2.3296512 | 20 | 8 26.5 | 20.2 |
| 374745 2006 SH ₁₆₇ | 18.1 | X | 304.33562 | 206.14198 | 204.88755 | 5.86389 | 0.2283891 | 0.28288255 | 2.2982571 | 20 | 10 18.6 | 19.0 |
| 374746 2006 SV ₁₇₆ | 17.5 | X | 225.15231 | 297.12589 | 184.22650 | 5.35667 | 0.1064587 | 0.28128791 | 2.3069349 | 20 | 10 3.3 | 20.4 |
| 374747 2006 SR ₁₇₉ | 18.0 | X | 66.52502 | 238.58881 | 22.96004 | 5.39041 | 0.1393779 | 0.28323000 | 2.2963771 | 20 | 10 14.6 | 21.0 |
| 374748 2006 SA ₁₈₁ | 18.5 | X | 13.25916 | 93.68389 | 195.44388 | 1.20812 | 0.2188721 | 0.28015674 | 2.3131404 | 20 | 9 16.2 | 20.4 |
| 374749 2006 SJ ₁₈₇ | 18.1 | X | 316.91197 | 28.09388 | 23.59425 | 5.40598 | 0.0943245 | 0.28726396 | 2.2748283 | 20 | 11 21.6 | 20.2 |
| 374750 2006 SP ₁₉₆ | 17.3 | X | 266.43232 | 16.16877 | 359.45472 | 12.22474 | 0.0799472 | 0.26849374 | 2.3796510 | 20 | 7 6.0 | 20.5 |
| 374751 2006 SQ ₂₀₄ | 17.4 | X | 291.07655 | 8.08472 | 18.09372 | 5.87766 | 0.1693160 | 0.27677044 | 2.3319697 | 20 | 8 17.0 | 19.7 |
| 374752 2006 SZ ₂₀₇ | 17.4 | X | 324.61865 | 93.97906 | 318.33966 | 7.10138 | 0.0882511 | 0.29379304 | 2.2409993 | 20 | 12 8.8 | 19.6 |
| 374753 2006 SW ₂₂₆ | 17.6 | X | 252.56219 | 231.48086 | 236.45707 | 4.63755 | 0.0984022 | 0.28499570 | 2.2868825 | 20 | 10 23.9 | 20.2 |
| 374754 2006 SG ₂₃₃ | 17.2 | X | 175.43715 | 320.08839 | 193.51560 | 21.93870 | 0.1236314 | 0.27900987 | 2.3194749 | 20 | 9 14.2 | 20.8 |
| 374755 2006 ST ₂₃₃ | 17.8 | X | 241.89472 | 221.59686 | 216.02219 | 6.39730 | 0.0692054 | 0.27746821 | 2.3280585 | 20 | 8 27.2 | 20.9 |
| 374756 2006 SK ₂₃₇ | 17.9 | X | 252.70720 | 120.28506 | 4.21951 | 5.42554 | 0.1536144 | 0.28985178 | 2.2612682 | 20 | 11 8.3 | 20.2 |
| 374757 2006 SS ₂₄₁ | 18.4 | X | 264.38622 | 69.32779 | 18.95428 | 3.68082 | 0.2232287 | 0.28183244 | 2.3039621 | 20 | 9 23.4 | 20.8 |
| 374758 2006 SW ₂₅₁ | 18.4 | X | 303.00500 | 34.54705 | 359.81748 | 2.87484 | 0.1551613 | 0.28031184 | 2.3122871 | 20 | 9 23.7 | 20.3 |
| 374759 2006 SK ₂₅₇ | 17.5 | X | 74.87110 | 272.11416 | 7.57892 | 7.07230 | 0.1074101 | 0.28622240 | 2.2803437 | 20 | 11 12.1 | 20.6 |
| 374760 2006 SZ ₂₅₉ | 17.5 | X | 112.83333 | 342.61091 | 218.94267 | 2.44792 | 0.0652353 | 0.27618323 | 2.3352740 | 20 | 9 9.2 | 20.5 |
| 374761 2006 SV ₂₆₀ | 17.5 | X | 358.35656 | 79.93479 | 214.08905 | 5.46467 | 0.1618593 | 0.27539345 | 2.3397366 | 20 | 8 9.6 | 19.4 |
| 374762 2006 SH ₂₇₅ | 17.6 | X | 340.64895 | 350.07577 | 1.16220 | 2.56435 | 0.2275616 | 0.27890930 | 2.3200324 | 20 | 10 13.8 | 18.9 |
| 374763 2006 SW ₂₇₈ | 17.7 | X | 26.34185 | 177.78945 | 143.57960 | 2.85082 | 0.2131534 | 0.28729367 | 2.2746714 | 20 | 11 26.4 | 20.4 |
| 374764 2006 SH ₂₈₂ | 17.4 | X | 317.01795 | 359.17601 | 48.77392 | 3.19183 | 0.1469440 | 0.28693688 | 2.2765567 | 20 | 11 18.5 | 18.9 |
| 374765 2006 SA ₂₈₃ | 17.9 | X | 357.74988 | 0.68145 | 33.84504 | 4.48240 | 0.1651513 | 0.29259160 | 2.2471297 | 20 | — | — |
| 374766 2006 SB ₂₈₃ | 17.4 | X | 328.46688 | 349.10886 | 35.39456 | 6.41661 | 0.1426784 | 0.28564650 | 2.2834076 | 20 | 11 4.5 | 19.2 |
| 374767 2006 SP ₂₈₅ | 17.8 | X | 333.11857 | 318.23224 | 22.49024 | 2.36725 | 0.1990073 | 0.27664420 | 2.3326791 | 20 | 9 2.6 | 19.1 |
| 374768 2006 ST ₂₉₂ | 17.2 | X | 279.48462 | 110.38855 | 343.35478 | 5.90654 | 0.0951488 | 0.28791830 | 2.2713804 | 20 | 11 16.3 | 19.7 |
| 374769 2006 SJ ₃₂₁ | 17.9 | X | 141.47135 | 199.14199 | 151.73885 | 3.08966 | 0.2068870 | 0.24166988 | 2.5526290 | 20 | 1 21.4 | 21.8 |
| 374770 2006 SL ₃₃₆ | 18.3 | X | 290.25262 | 346.18188 | 103.45554 | 3.57791 | 0.1959503 | 0.28559804 | 2.2836659 | 20 | 11 23.3 | 19.8 |
| 374771 2006 SO ₃₄₇ | 17.3 | X | 172.75806 | 289.06318 | 211.88390 | 5.99490 | 0.1903163 | 0.27094601 | 2.3652709 | 20 | 8 22.8 | 21.2 |
| 374772 2006 SA ₃₅₀ | 17.4 | X | 77.64436 | 263.66055 | 337.43690 | 7.67640 | 0.1217527 | 0.28121647 | 2.3073256 | 20 | 9 25.2 | 20.5 |
| 374773 2006 SM ₃₅₂ | 17.3 | X | 1.94363 | 326.57200 | 336.30861 | 6.26264 | 0.1194566 | 0.27681998 | 2.3316915 | 20 | 8 30.5 | 19.2 |
| 374774 2006 SF ₃₅₆ | 17.6 | X | 349.51160 | 186.94076 | 144.05662 | 2.36861 | 0.2579103 | 0.28026258 | 2.3125580 | 20 | 10 9.1 | 18.7 |
| 374775 2006 SB ₃₆₅ | 17.2 | X | 20.84373 | 350.78875 | 322.97488 | 5.69393 | 0.1506830 | 0.28344083 | 2.2952383 | 20 | 10 23.5 | 19.8 |
| 374776 2006 SA ₄₀₃ | 18.0 | X | 354.15706 | 255.89309 | 42.70126 | 4.93060 | 0.2454861 | 0.27344602 | 2.3508323 | 20 | 8 21.2 | 19.3 |
| 374777 2006 TZ ₁ | 18.0 | X | 265.29173 | 90.99568 | 13.00567 | 7.99531 | 0.2878575 | 0.28022405 | 2.3127700 | 20 | 10 5.4 | 20.4 |
| 374778 2006 TC ₂ | 17.5 | X | 306.48150 | 310.04605 | 51.96554 | 2.20188 | 0.2057384 | 0.27536714 | 2.3398857 | 20 | 7 31.8 | 19.2 |
| 374779 2006 TC ₁₀ | 17.1 | X | 342.73442 | 297.75145 | 52.80759 | 6.16436 | 0.1901196 | 0.28028077 | 2.3124580 | 20 | 10 17.1 | 18.8 |
| 374780 2006 TY ₁₀ | 16.6 | X | 18.16053 | 108.51908 | 217.06047 | 22.37079 | 0.1842146 | 0.28496180 | 2.2870638 | 20 | 11 15.0 | 19.1 |
| 374781 2006 TJ ₁₃ | 17.7 | X | 318.53399 | 289.36806 | 101.46109 | 2.71724 | 0.1796881 | 0.28249820 | 2.3003412 | 20 | 10 25.2 | 19.2 |
| 374782 2006 TS ₁₅ | 18.1 | X | 245.59951 | 76.79825 | 354.18311 | 2.10548 | 0.1974455 | 0.27282535 | 2.3543963 | 20 | 8 6.2 | 21.3 |
| 374783 2006 TM ₂₆ | 17.5 | X | 349.35605 | 0.99043 | 28.27419 | 6.06034 | 0.1786580 | 0.28702093 | 2.2761122 | 20 | 12 29.4 | 19.7 |
| 374784 2006 TN ₂₈ | 17.9 | X | 29.57799 | 265.10298 | 42.40696 | 6.19126 | 0.1879861 | 0.28236642 | 2.3010569 | 20 | 11 5.7 | 20.6 |
| 374785 2006 TS ₂₈ | 17.4 | X | 198.79995 | 312.20572 | 206.02693 | 6.65095 | 0.0501824 | 0.28145656 | 2.3060133 | 20 | 10 27.9 | 20.4 |
| 374786 2006 TT ₃₄ | 17.9 | X | 184.17095 | 90.36598 | 25.04499 | 5.85232 | 0.2480875 | 0.26458659 | 2.4030206 | 20 | 8 2.3 | 22.0 |
| 374787 2006 TJ ₃₈ | 17.5 | X | 81.72918 | 213.41475 | 38.81681 | 6.02534 | 0.1235078 | 0.27821246 | 2.3239048 | 20 | 10 18.0 | 20.5 |
| 374788 2006 TA ₄₀ | 17.9 | X | 336.46010 | 119.23737 | 217.40997 | 7.66904 | 0.1324308 | 0.27514690 | 2.3411342 | 20 | 8 29.0 | 20.0 |
| 374789 2006 TD ₅₃ | 18.1 | X | 312.18764 | 166.44520 | 202.28044 | 4.58417 | 0.2065211 | 0.27533923 | 2.3400438 | 20 | 8 22.9 | 19.8 |
| 374790 2006 TC ₅₈ | 17.7 | X | 302.87172 | 343.21824 | 33.88908 | 5.77667 | 0.1829364 | 0.27694552 | 2.3309868 | 20 | 8 24.8 | 19.7 |
| 374791 2006 TC ₆₃ | 18.2 | X | 306.19762 | 98.73516 | 284.87930 | 1.76955 | 0.2078850 | 0.27881995 | 2.3205280 | 20 | 9 4.7 | 19.9 |
| 374792 2006 TE ₆₆ | 17.5 | X | 260.91845 | 30.45817 | 23.34711 | 8.57287 | 0.1113406 | 0.27548357 | 2.3392264 | 20 | 8 20.2 | 20.4 |
| 374793 2006 TM ₇₃ | 18.4 | X | 298.64521 | 326.56117 | 63.37560 | 3.38407 | 0.2380196</ | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> | | |
|--------|----------|-------------------|----------|----------|-----------|-----------|-----------|----------|------------|------------|-----------|----------|---------|------|
| 374801 | 2006 | UP ₇ | 17.3 | X | 292.94374 | 325.61774 | 56.23635 | 6.42802 | 0.2256842 | 0.27397397 | 2.3478112 | 20 | 8 2.6 | 19.6 |
| 374802 | 2006 | UP ₁₁ | 17.7 | X | 1.25951 | 141.05954 | 196.96028 | 4.58598 | 0.2092699 | 0.28252431 | 2.3001995 | 20 | 11 8.6 | 19.6 |
| 374803 | 2006 | UL ₁₇ | 17.5 | X | 237.21746 | 112.00723 | 353.16510 | 7.33404 | 0.0370971 | 0.28088512 | 2.3091398 | 20 | 10 5.9 | 20.4 |
| 374804 | 2006 | UT ₂₈ | 17.5 | X | 263.82191 | 165.56413 | 210.44748 | 6.30345 | 0.1693255 | 0.26830136 | 2.3807884 | 20 | 6 16.3 | 20.7 |
| 374805 | 2006 | UF ₃₃ | 17.7 | X | 13.70762 | 220.25699 | 58.06041 | 3.11057 | 0.1913873 | 0.27296369 | 2.3536007 | 20 | 8 26.4 | 19.7 |
| 374806 | 2006 | UP ₃₅ | 17.7 | X | 5.29392 | 20.13177 | 236.10654 | 5.53179 | 0.0639295 | 0.26325041 | 2.4111451 | 20 | 6 18.9 | 20.4 |
| 374807 | 2006 | UB ₃₉ | 17.4 | X | 31.30381 | 221.25416 | 32.72654 | 7.11577 | 0.1006219 | 0.26861637 | 2.3789267 | 20 | 8 7.9 | 20.1 |
| 374808 | 2006 | UW ₄₂ | 16.9 | X | 314.86688 | 76.94745 | 216.28503 | 11.68097 | 0.1159122 | 0.26118007 | 2.4238702 | 20 | 5 13.6 | 19.5 |
| 374809 | 2006 | UU ₄₃ | 17.4 | X | 158.30926 | 149.75875 | 43.14400 | 7.60993 | 0.0531228 | 0.27904370 | 2.3192874 | 20 | 10 24.1 | 20.4 |
| 374810 | 2006 | UY ₆₅ | 17.5 | X | 299.74544 | 334.03839 | 69.54656 | 7.54493 | 0.2306549 | 0.28003199 | 2.3138273 | 20 | 9 26.9 | 19.2 |
| 374811 | 2006 | UM ₆₇ | 16.8 | X | 191.79908 | 345.80366 | 179.82387 | 5.82997 | 0.0514104 | 0.28250979 | 2.3002783 | 20 | 10 30.1 | 19.6 |
| 374812 | 2006 | UK ₆₈ | 16.9 | X | 304.91995 | 12.41378 | 55.39557 | 7.47386 | 0.0664290 | 0.28486249 | 2.2875954 | 20 | 11 24.5 | 19.3 |
| 374813 | 2006 | UA ₇₈ | 17.7 | X | 339.95275 | 309.24889 | 6.93255 | 4.39095 | 0.2516517 | 0.27571863 | 2.3378967 | 20 | 8 7.9 | 18.8 |
| 374814 | 2006 | UP ₈₁ | 17.6 | X | 292.83947 | 231.15423 | 191.30078 | 3.61159 | 0.1071683 | 0.27971226 | 2.3155903 | 20 | 10 23.4 | 19.7 |
| 374815 | 2006 | US ₈₈ | 18.2 | X | 311.03032 | 140.83310 | 254.81566 | 1.45027 | 0.1703673 | 0.27899022 | 2.3195838 | 20 | 10 11.7 | 19.8 |
| 374816 | 2006 | UW ₁₀₉ | 17.3 | X | 30.39092 | 40.21264 | 249.71591 | 6.93743 | 0.1236522 | 0.28270526 | 2.2992178 | 20 | 9 28.4 | 19.9 |
| 374817 | 2006 | UT ₁₁₉ | 18.0 | X | 256.57220 | 16.62287 | 38.95182 | 3.20383 | 0.1719718 | 0.27212402 | 2.3584398 | 20 | 8 3.1 | 20.9 |
| 374818 | 2006 | UL ₁₂₀ | 17.4 | X | 221.62496 | 305.07170 | 194.81019 | 6.46844 | 0.0900323 | 0.28180913 | 2.3040895 | 20 | 10 27.4 | 20.3 |
| 374819 | 2006 | UT ₁₂₄ | 17.4 | X | 200.52282 | 189.57908 | 304.06896 | 1.83552 | 0.1329301 | 0.27852796 | 2.3221495 | 20 | 9 15.7 | 20.8 |
| 374820 | 2006 | US ₁₃₀ | 17.6 | X | 127.03184 | 156.00593 | 18.64090 | 6.37511 | 0.1014202 | 0.26960325 | 2.3731178 | 20 | 8 25.1 | 21.0 |
| 374821 | 2006 | UJ ₁₆₈ | 17.9 | X | 171.21571 | 324.85484 | 185.69698 | 7.06910 | 0.0587899 | 0.27494897 | 2.3422576 | 20 | 9 9.3 | 20.9 |
| 374822 | 2006 | UR ₁₇₀ | 17.0 | X | 302.91727 | 250.98074 | 114.97664 | 3.13968 | 0.0808415 | 0.20066579 | 2.8894853 | 20 | 8 8.8 | 20.7 |
| 374823 | 2006 | UJ ₁₇₃ | 17.7 | X | 309.70662 | 299.85180 | 60.25303 | 3.16918 | 0.2249505 | 0.26796741 | 2.3827660 | 20 | 8 1.1 | 19.5 |
| 374824 | 2006 | UK ₁₇₅ | 18.0 | X | 324.71621 | 317.42696 | 97.42632 | 3.48626 | 0.1262574 | 0.28717070 | 2.2753207 | 20 | 12 23.9 | 19.4 |
| 374825 | 2006 | UT ₁₇₉ | 17.1 | X | 280.73008 | 342.41221 | 86.10581 | 7.07859 | 0.0971004 | 0.27917315 | 2.3185704 | 20 | 10 15.7 | 19.6 |
| 374826 | 2006 | UV ₁₉₃ | 17.6 | X | 334.41820 | 300.91579 | 33.69455 | 3.39648 | 0.2197983 | 0.27666464 | 2.3325642 | 20 | 8 26.8 | 18.9 |
| 374827 | 2006 | UW ₂₁₃ | 18.1 | X | 228.19287 | 97.74465 | 354.23111 | 1.98044 | 0.1887123 | 0.26947498 | 2.3738708 | 20 | 8 15.6 | 21.5 |
| 374828 | 2006 | UK ₂₁₉ | 17.4 | X | 328.66087 | 354.67985 | 23.75741 | 7.89239 | 0.1236511 | 0.28124673 | 2.3071601 | 20 | 10 23.7 | 19.4 |
| 374829 | 2006 | UA ₂₂₂ | 17.5 | X | 359.21445 | 37.75121 | 286.84085 | 3.87108 | 0.1785350 | 0.28167238 | 2.3048328 | 20 | 10 5.3 | 19.5 |
| 374830 | 2006 | UF ₂₂₂ | 17.5 | X | 17.54243 | 90.18823 | 215.17131 | 10.51830 | 0.2011384 | 0.28212652 | 2.3021595 | 20 | 10 16.2 | 19.8 |
| 374831 | 2006 | UG ₂₃₃ | 17.7 | X | 344.67741 | 280.59531 | 76.93927 | 4.55204 | 0.2513717 | 0.28254459 | 2.3000894 | 20 | 11 11.4 | 19.1 |
| 374832 | 2006 | UH ₂₃₃ | 18.1 | X | 294.35135 | 348.59208 | 22.46357 | 2.33578 | 0.2351334 | 0.27362158 | 2.3498266 | 20 | 7 15.2 | 20.3 |
| 374833 | 2006 | UT ₂₄₀ | 17.2 | X | 298.30912 | 308.40523 | 84.73291 | 6.04904 | 0.2223287 | 0.27519435 | 2.3408650 | 20 | 9 3.9 | 19.1 |
| 374834 | 2006 | UU ₂₄₂ | 17.9 | X | 229.12070 | 92.75223 | 25.76492 | 6.86506 | 0.1061508 | 0.27926219 | 2.3180775 | 20 | 10 5.2 | 20.8 |
| 374835 | 2006 | UJ ₂₄₃ | 18.9 | X | 292.32556 | 10.90410 | 37.33007 | 1.63120 | 0.1957881 | 0.27926331 | 2.3180713 | 20 | 9 18.0 | 20.6 |
| 374836 | 2006 | UA ₂₄₉ | 18.9 | X | 302.14747 | 194.59886 | 217.59938 | 1.36379 | 0.2098031 | 0.28062873 | 2.3105461 | 20 | 10 15.6 | 20.4 |
| 374837 | 2006 | UJ ₂₅₆ | 18.3 | X | 229.36475 | 118.89773 | 355.07717 | 4.56484 | 0.1796822 | 0.27668703 | 2.3324384 | 20 | 9 17.2 | 21.6 |
| 374838 | 2006 | UZ ₂₆₄ | 17.3 | X | 201.98135 | 315.54986 | 210.01047 | 22.84339 | 0.1868277 | 0.28241742 | 2.3007798 | 20 | 10 25.4 | 20.7 |
| 374839 | 2006 | UH ₂₆₅ | 16.8 | X | 233.41101 | 180.00195 | 272.95013 | 6.26880 | 0.0670638 | 0.27437715 | 2.3455107 | 20 | 9 5.5 | 19.9 |
| 374840 | 2006 | US ₂₆₇ | 18.1 | X | 131.63801 | 158.65742 | 40.74945 | 1.97436 | 0.10359785 | 0.27605369 | 2.3360045 | 20 | 9 28.9 | 20.9 |
| 374841 | 2006 | UJ ₂₆₈ | 17.2 | X | 275.85481 | 140.15471 | 293.36391 | 4.28686 | 0.1801304 | 0.27703390 | 2.3304911 | 20 | 9 24.1 | 19.6 |
| 374842 | 2006 | UC ₂₇₂ | 18.2 | X | 262.30564 | 207.77871 | 191.01241 | 0.72128 | 0.1905552 | 0.26849109 | 2.3796667 | 20 | 7 13.2 | 21.1 |
| 374843 | 2006 | UW ₂₇₃ | 17.8 | X | 241.08114 | 145.43748 | 330.59780 | 1.64201 | 0.1394392 | 0.27681379 | 2.3317263 | 20 | 10 10.4 | 20.5 |
| 374844 | 2006 | UK ₂₈₁ | 18.4 | X | 238.79415 | 247.17250 | 210.04959 | 2.35926 | 0.1821784 | 0.27325703 | 2.3519161 | 20 | 9 3.9 | 21.6 |
| 374845 | 2006 | UB ₃₀₁ | 17.4 | X | 258.93158 | 119.32990 | 14.27033 | 5.91907 | 0.0939996 | 0.29461526 | 2.2368279 | 20 | 12 13.9 | 19.8 |
| 374846 | 2006 | UP ₃₂₅ | 17.3 | X | 150.93114 | 264.99427 | 251.26966 | 4.11719 | 0.1092141 | 0.26836242 | 2.3804273 | 20 | 8 22.2 | 20.8 |
| 374847 | 2006 | UK ₃₃₆ | 18.3 | X | 338.89223 | 330.00018 | 12.59729 | 1.75377 | 0.1954505 | 0.27544836 | 2.3394257 | 20 | 9 20.5 | 19.6 |
| 374848 | 2006 | VK | 17.6 | X | 232.82961 | 74.26927 | 27.15752 | 3.44401 | 0.1571131 | 0.27330364 | 2.3516487 | 20 | 9 8.2 | 20.6 |
| 374849 | 2006 | VO ₁ | 17.8 | X | 295.21809 | 213.23757 | 199.35668 | 4.18029 | 0.3105353 | 0.27697871 | 2.3308006 | 20 | 9 7.4 | 19.5 |
| 374850 | 2006 | VL ₂ | 17.8 | X | 356.06180 | 69.48327 | 277.30743 | 4.58013 | 0.1767988 | 0.28186143 | 2.3038045 | 20 | 11 3.6 | 19.9 |
| 374851 | 2006 | VJ ₂ | 16.8 | X | 212.23809 | 145.08930 | 9.81887 | 23.72620 | 0.6054416 | 0.26741535 | 2.3860443 | 20 | 9 21.9 | 21.8 |
| 374852 | 2006 | VF ₄ | 17.4 | X | 254.32870 | 352.24316 | 37.95247 | 6.25036 | 0.1223133 | 0.26609126 | 2.3939531 | 20 | 7 1.2 | 20.5 |
| 374853 | 2006 | VJ ₄ | 17.4 | X | 245.27860 | 189.27823 | 250.45954 | 3.25402 | 0.1625171 | 0.27201580 | 2.3590653 | 20 | 8 20.8 | 20.4 |
| 374854 | 2006 | VV ₅ | 18.1 | X | 301.67332 | 314.87261 | 69.90400 | 2.33005 | 0.1999377 | 0.27523628 | 2.3406273 | 20 | 8 29.9 | 19.8 |
| 374855 | 2006 | VQ ₁₃ | 20.0 | X | 323.26763 | 73.80674 | 233.70664 | 16.69719 | 0.4458562 | 0.85467400 | 1.0996869 | 20 | 2 14.7 | 21.2 |
| 374856 | 2006 | VJ ₁₈ | 17.4 | X | 255.75698 | 184.70941 | 262.68211 | 3.62675 | 0.0788474 | 0.27666713 | 2.3325502 | 20 | 9 29.5 | 20.1 |
| 374857 | 2006 | VM ₂₃ | 17.9 | X | 208.30807 | 43.98200 | 65.59176 | 3.70327 | 0.1384634 | 0.26888378 | 2.3773492 | 20 | 8 24.0 | 21.3 |
| 374858 | 2006 | VG ₂₆ | 17.4 | X | 332.65644 | 306.59138 | 47.86113 | 3.28149 | 0.2298094 | 0.27719657 | 2.3295792 | 20 | 9 28.2 | 18.5 |
| 374859 | 2006 | VD ₂₇ | 18.2 | X | 258.88423 | 27.34569 | 64.17515 | 2.15154 | 0.1503394 | 0.27585669 | 2.3371165 | 20 | 10 1.4 | 20.7 |
| 374860 | 2006 | VD ₃₀ | 17.6 | X | 318.25931 | 31.32406 | 300.42516 | 1.97506 | 0.1849173 | 0.26853974 | 2.3793793 | 20 | 7 9.0 | 19.7 |
| 374861 | 2006 | VM ₃₂ | 17.9 | X | 252.31564 | 59.76800 | 36.53032 | 3.00047 | 0.1568650 | 0.27750465 | 2.3278547 | 20 | 9 27.5 | 20.7 |
| 374862 | 2006 | VV ₃₅ | 17.8 | X | 138.38395 | 48.96143 | 124.01601 | 0.25263 | 0.1340739 | 0.26761050 | 2.3848841 | 20 | 9 2.8 | 21.3 |
| 374863 | 2006 | VQ ₄₂ | 17.2 | X | 287.05683 | 334.63143 | 74.45233 | 7.29454 | 0.2208150 | 0.27468741 | 2.3437442 | 20 | 9 6.9 | 19.5 |
| 374864 | 2006 | VD ₄₈ | 18.3 | X | 287.34247 | 204.37977 | 159.54141 | 1.75243 | 0.1915664 | 0.26925058 | 2.3751896 | 20 | 6 28.9 | 21.0 |
| 374865 | 2006 | VO ₅₀ | 17.5 | X | 182.34234 | 150.31540 | 308.93451 | 1.35144 | 0.1674527 | 0.25967168 | 2.4332477 | 20 | 7 10.8 | 21.1 |
| 374866 | 2006 | VP ₆₄ | 18.0 | X | 256.02619 | 187.77108 | 192.31403 | 0.95280 | 0.1914226 | 0.26415055 | 2.4056644 | 20 | 6 9.2 | 21.5 |
| 374867 | 2006 | VG ₆₇ | 17.4 | X | 325.30312 | 309.56449 | 65.16330 | 3.64808 | 0.2056679 | 0.27761413 | 2.3272427 | 20 | 10 13.6 | 18.8 |
| 374868 | 2006 | VP ₇₀ | 17.6 | X | 211.70532 | 30.45648 | 73.94349 | 2.30010 | 0.1442487 | 0.26737923 | 2.3862591 | 20 | 8 19.3 | 20.9 |
| 374869 | 2006 | VQ ₈₁ | 17.5 | X | 303.70270 | 172.03358 | 232.10136 | 5.79572 | 0.0910820 | 0.28140820 | 2.3062774 | 20</ | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 374881 2006 WU ₇ | 18.0 | X | 220.04409 | 314.11841 | 141.60332 | 3.34690 | 0.1542338 | 0.26849081 | 2.3796684 | 20 | 8 14.9 | 21.4 |
| 374882 2006 WX ₇ | 17.8 | X | 314.17483 | 280.66595 | 75.70064 | 3.12375 | 0.2370916 | 0.27580694 | 2.3373976 | 20 | 8 4.9 | 19.3 |
| 374883 2006 WN ₈ | 18.0 | X | 202.19635 | 337.50803 | 130.43408 | 2.95586 | 0.1618975 | 0.26588954 | 2.3951638 | 20 | 8 11.4 | 21.5 |
| 374884 2006 WV ₈ | 17.8 | X | 236.93301 | 294.93561 | 151.89548 | 2.63236 | 0.2009338 | 0.26945413 | 2.3739933 | 20 | 8 16.3 | 21.2 |
| 374885 2006 WO ₁₁ | 16.9 | X | 298.58532 | 341.73581 | 55.52741 | 8.03686 | 0.2197356 | 0.27474394 | 2.3434227 | 20 | 9 13.7 | 18.9 |
| 374886 2006 WH ₂₇ | 18.0 | X | 254.92972 | 199.07769 | 224.03976 | 1.64002 | 0.1730422 | 0.27001474 | 2.3707062 | 20 | 8 9.2 | 20.8 |
| 374887 2006 WR ₃₄ | 17.4 | X | 316.47774 | 227.65635 | 97.33676 | 5.05955 | 0.2174588 | 0.26819115 | 2.3814406 | 20 | 6 18.1 | 19.5 |
| 374888 2006 WV ₃₈ | 17.0 | X | 146.80809 | 340.04665 | 128.57095 | 2.14780 | 0.1399406 | 0.18158788 | 3.0884801 | 20 | 6 16.4 | 21.9 |
| 374889 2006 WM ₅₆ | 17.1 | X | 200.60282 | 78.12966 | 43.72678 | 3.12394 | 0.1373983 | 0.26668263 | 2.3904128 | 20 | 8 31.7 | 20.5 |
| 374890 2006 WU ₇₀ | 18.0 | X | 195.61582 | 170.32733 | 297.04296 | 1.33152 | 0.1234909 | 0.26624946 | 2.3930047 | 20 | 8 6.1 | 21.5 |
| 374891 2006 WH ₇₁ | 18.1 | X | 261.07226 | 164.54361 | 258.25516 | 2.78934 | 0.0597839 | 0.27243087 | 2.3566686 | 20 | 9 4.8 | 21.0 |
| 374892 2006 WU ₈₅ | 17.5 | X | 244.77435 | 205.78887 | 223.09712 | 3.99984 | 0.1763272 | 0.26771044 | 2.3842905 | 20 | 8 2.7 | 20.8 |
| 374893 2006 WT ₈₈ | 18.0 | X | 301.07899 | 2.17292 | 21.77517 | 4.21755 | 0.2626957 | 0.27324612 | 2.3519787 | 20 | 8 16.0 | 19.8 |
| 374894 2006 WF ₉₆ | 17.8 | X | 294.37887 | 237.42136 | 180.08133 | 5.59903 | 0.2177859 | 0.27949541 | 2.3167878 | 20 | 10 4.6 | 19.4 |
| 374895 2006 WJ ₁₀₀ | 17.7 | X | 299.23188 | 305.68604 | 80.45314 | 8.27567 | 0.2588617 | 0.27603985 | 2.3360826 | 20 | 8 18.5 | 19.7 |
| 374896 2006 WU ₁₀₀ | 18.1 | X | 322.10755 | 348.41099 | 34.45032 | 5.76121 | 0.1722522 | 0.27872487 | 2.3210557 | 20 | 10 18.2 | 19.5 |
| 374897 2006 WK ₁₀₈ | 17.3 | X | 282.19240 | 170.59468 | 237.29079 | 1.93033 | 0.1762089 | 0.27268004 | 2.3552327 | 20 | 8 30.2 | 19.5 |
| 374898 2006 WC ₁₁₀ | 17.2 | X | 258.35853 | 284.07113 | 83.26165 | 7.78081 | 0.1184024 | 0.26002525 | 2.4310415 | 20 | 6 4.7 | 20.4 |
| 374899 2006 WO ₁₁₇ | 18.1 | X | 299.86421 | 55.22819 | 348.07967 | 5.12668 | 0.2268245 | 0.27741374 | 2.3283633 | 20 | 9 20.2 | 19.5 |
| 374900 2006 WJ ₁₅₈ | 17.6 | X | 291.19361 | 46.28114 | 23.85524 | 4.70353 | 0.1580466 | 0.27829985 | 2.3234183 | 20 | 10 25.0 | 19.6 |
| 374901 2006 WZ ₁₅₉ | 17.4 | X | 231.31479 | 59.46246 | 16.35749 | 1.56181 | 0.1145015 | 0.26015343 | 2.4302429 | 20 | 8 5.6 | 20.7 |
| 374902 2006 WK ₁₆₃ | 17.5 | X | 347.41917 | 219.25003 | 76.46108 | 7.81258 | 0.1325621 | 0.26603994 | 2.3942610 | 20 | 7 19.9 | 19.7 |
| 374903 2006 WG ₁₈₁ | 17.7 | X | 235.85820 | 32.44245 | 91.29982 | 3.06513 | 0.1696942 | 0.27495943 | 2.3421982 | 20 | 10 11.4 | 20.6 |
| 374904 2006 WV ₁₉₈ | 17.9 | X | 224.30430 | 44.49855 | 72.92325 | 3.14030 | 0.1711715 | 0.26762042 | 2.3848252 | 20 | 9 17.7 | 21.3 |
| 374905 2006 WD ₂₀₄ | 17.2 | X | 139.57808 | 113.46821 | 56.28402 | 2.73037 | 0.1166963 | 0.25896915 | 2.4376463 | 20 | 8 30.8 | 20.7 |
| 374906 2006 WG ₂₀₄ | 17.9 | X | 266.68871 | 140.06091 | 277.22241 | 2.72392 | 0.1944842 | 0.26640998 | 2.3920434 | 20 | 8 13.3 | 20.7 |
| 374907 2006 XE ₁ | 17.5 | X | 292.28019 | 336.26674 | 58.53391 | 21.15773 | 0.1446080 | 0.41660702 | 1.7754904 | 20 | 10 25.5 | 18.3 |
| 374908 2006 XR ₁₀ | 17.7 | X | 271.24752 | 45.23102 | 50.47316 | 3.06577 | 0.1734404 | 0.27520565 | 2.3408009 | 20 | 10 23.5 | 19.9 |
| 374909 2006 XV ₁₁ | 17.4 | X | 252.58003 | 43.80054 | 20.50118 | 1.87397 | 0.1713579 | 0.26828589 | 2.3808799 | 20 | 8 9.4 | 20.3 |
| 374910 2006 XT ₁₂ | 16.8 | X | 118.25795 | 250.04382 | 263.75419 | 5.52120 | 0.0586027 | 0.25702402 | 2.4499294 | 20 | 7 8.7 | 20.1 |
| 374911 2006 XM ₁₈ | 16.9 | X | 179.85939 | 36.86530 | 82.03842 | 6.92109 | 0.1315244 | 0.25893468 | 2.4378627 | 20 | 8 5.9 | 20.7 |
| 374912 2006 XV ₁₉ | 17.8 | X | 219.55810 | 301.49533 | 145.53364 | 1.56256 | 0.1512810 | 0.26291420 | 2.4132002 | 20 | 8 2.3 | 21.2 |
| 374913 2006 XT ₂₃ | 17.2 | X | 212.26177 | 278.98795 | 222.70439 | 9.58422 | 0.1565140 | 0.27337108 | 2.3512619 | 20 | 10 4.9 | 20.7 |
| 374914 2006 XF ₃₉ | 17.6 | X | 240.10097 | 351.66487 | 97.73006 | 2.62211 | 0.1337325 | 0.26670332 | 2.3902891 | 20 | 9 3.2 | 20.7 |
| 374915 2006 XL ₅₃ | 16.7 | X | 168.02489 | 52.43058 | 98.96899 | 3.29919 | 0.1326877 | 0.26095456 | 2.4252664 | 20 | 9 5.4 | 20.4 |
| 374916 2006 XP ₅₄ | 17.4 | X | 263.09671 | 93.54957 | 336.08723 | 2.10255 | 0.1737032 | 0.27107196 | 2.3645381 | 20 | 8 30.9 | 20.0 |
| 374917 2006 XG ₆₀ | 17.5 | X | 295.90272 | 353.90708 | 359.95302 | 2.35611 | 0.2297248 | 0.26289163 | 2.4133683 | 20 | 6 20.9 | 19.9 |
| 374918 2006 XT ₆₂ | 18.1 | X | 237.79596 | 323.89324 | 83.48402 | 3.57354 | 0.2045425 | 0.26050289 | 2.4280690 | 20 | 6 24.2 | 21.7 |
| 374919 2006 XB ₆₈ | 17.1 | X | 194.01635 | 2.87278 | 109.10663 | 3.25491 | 0.1657475 | 0.25864043 | 2.4397113 | 20 | 8 8.2 | 21.0 |
| 374920 2006 XT ₇₀ | 17.6 | X | 307.77107 | 232.48820 | 161.21700 | 1.43918 | 0.1880036 | 0.27206879 | 2.3587590 | 20 | 9 28.2 | 19.1 |
| 374921 2006 XE ₇₁ | 17.6 | X | 135.75933 | 104.11942 | 42.97019 | 2.13436 | 0.1259042 | 0.25436309 | 2.4669858 | 20 | 7 26.9 | 21.3 |
| 374922 2006 YY ₁ | 17.8 | X | 262.28171 | 17.83454 | 55.75297 | 2.17331 | 0.1566417 | 0.27153439 | 2.3618528 | 20 | 9 8.8 | 20.4 |
| 374923 2006 YP ₄ | 17.8 | X | 219.22358 | 355.56778 | 118.48747 | 2.02670 | 0.1420978 | 0.26609463 | 2.3939329 | 20 | 9 9.7 | 21.0 |
| 374924 2006 YD ₉ | 17.5 | X | 279.26060 | 344.98169 | 48.51993 | 1.88905 | 0.1929816 | 0.26437864 | 2.4042805 | 20 | 7 30.5 | 20.0 |
| 374925 2006 YQ ₁₁ | 17.1 | X | 12.27241 | 50.74915 | 232.74048 | 5.86848 | 0.1180325 | 0.26594038 | 2.3948585 | 20 | 8 14.8 | 19.6 |
| 374926 2006 YT ₁₂ | 17.3 | X | 244.90710 | 300.57586 | 114.85755 | 2.39111 | 0.1743381 | 0.26076129 | 2.4264647 | 20 | 7 16.6 | 20.7 |
| 374927 2006 YA ₁₇ | 17.4 | X | 271.21655 | 290.92928 | 99.60821 | 3.30493 | 0.2235032 | 0.26346071 | 2.4098618 | 20 | 7 8.2 | 20.5 |
| 374928 2006 YB ₂₅ | 16.4 | X | 7.88966 | 106.34703 | 82.36214 | 7.77482 | 0.0600915 | 0.23828023 | 2.5767802 | 20 | 3 22.9 | 19.6 |
| 374929 2006 YW ₄₇ | 17.2 | X | 266.74528 | 348.86333 | 92.19669 | 5.81993 | 0.1774489 | 0.27402451 | 2.3475226 | 20 | 9 26.1 | 19.8 |
| 374930 2007 AU ₁₂ | 17.7 | X | 235.91370 | 5.46815 | 79.76196 | 2.06983 | 0.1487811 | 0.26412280 | 2.4058329 | 20 | 8 20.4 | 20.8 |
| 374931 2007 AJ ₁₅ | 17.3 | X | 218.35873 | 181.73995 | 298.15390 | 3.90423 | 0.1384312 | 0.26721253 | 2.3872515 | 20 | 9 14.4 | 20.7 |
| 374932 2007 AM ₁₇ | 16.8 | X | 194.55277 | 357.71513 | 107.01420 | 3.21480 | 0.1708181 | 0.25805958 | 2.4433709 | 20 | 7 29.7 | 20.7 |
| 374933 2007 AT ₂₃ | 16.9 | X | 178.86927 | 213.77569 | 269.77311 | 5.75751 | 0.0601554 | 0.25870607 | 2.4392986 | 20 | 8 9.7 | 20.3 |
| 374934 2007 AY ₂₇ | 17.6 | X | 272.56848 | 232.37323 | 156.24794 | 2.67256 | 0.2197550 | 0.26283777 | 2.4136680 | 20 | 7 7.5 | 20.7 |
| 374935 2007 BL | 17.0 | X | 125.23167 | 204.49039 | 300.82656 | 2.86787 | 0.1645264 | 0.25148157 | 2.4857948 | 20 | 7 15.6 | 20.8 |
| 374936 2007 BE ₃ | 17.7 | X | 198.92905 | 172.51371 | 302.17059 | 1.07973 | 0.1601160 | 0.26182919 | 2.4198624 | 20 | 8 16.5 | 21.4 |
| 374937 2007 BC ₄ | 17.3 | X | 222.95587 | 336.10777 | 116.30189 | 1.69856 | 0.1463198 | 0.26184188 | 2.4197843 | 20 | 8 14.3 | 20.7 |
| 374938 2007 BU ₁₉ | 17.2 | X | 204.46580 | 111.21363 | 350.47740 | 11.63378 | 0.2186810 | 0.26145144 | 2.4221927 | 20 | 8 4.7 | 21.2 |
| 374939 2007 BL ₂₃ | 18.0 | X | 258.53665 | 118.15027 | 309.15195 | 1.77551 | 0.1795472 | 0.26614422 | 2.3936355 | 20 | 8 19.2 | 20.7 |
| 374940 2007 BU ₃₅ | 17.3 | X | 63.34256 | 219.03836 | 321.34579 | 2.03255 | 0.1039463 | 0.24469328 | 2.5315588 | 20 | 6 7.3 | 20.4 |
| 374941 2007 BE ₃₈ | 17.5 | X | 198.15071 | 328.52943 | 129.00742 | 9.96536 | 0.1329469 | 0.25836380 | 2.4414525 | 20 | 7 25.5 | 21.1 |
| 374942 2007 BN ₄₁ | 18.3 | X | 260.04011 | 196.08788 | 227.86306 | 0.51787 | 0.1717820 | 0.26547986 | 2.3976272 | 20 | 8 17.7 | 21.3 |
| 374943 2007 BX ₄₉ | 17.2 | X | 173.46116 | 286.71349 | 145.07380 | 13.04337 | 0.0992425 | 0.24628912 | 2.5206114 | 20 | 5 29.7 | 21.2 |
| 374944 2007 BV ₅₄ | 17.3 | X | 99.07413 | 352.59041 | 138.79999 | 7.27819 | 0.1152957 | 0.24362372 | 2.5389628 | 20 | 5 24.0 | 20.8 |
| 374945 2007 BH ₅₇ | 17.0 | X | 271.41252 | 6.10898 | 66.68238 | 4.70118 | 0.1013109 | 0.26709775 | 2.3879354 | 20 | 10 1.9 | 19.6 |
| 374946 2007 BU ₆₁ | 17.6 | X | 293.30212 | 3.95250 | 22.79572 | 1.63671 | 0.1887932 | 0.26791015 | 2.3831055 | 20 | 8 15.3 | 19.8 |
| 374947 2007 BA ₆₅ | 17.1 | X | 12.47478 | 53.24937 | 148.35565 | 6.25472 | 0.1797126 | 0.23283394 | 2.6168080 | 20 | 4 16.3 | 19.5 |
| 374948 2007 BE ₇₄ | 16.8 | X | 37.88312 | 248.81800 | 312.28303 | 4.77597 | 0.0218891 | 0.24449822 | 2.5329051 | 20 | 5 16.5 | 20.0 |
| 374949 2007 CR ₂ | 17.7 | X | 159.55430 | 171.39659 | 312.51482 | 4.84146 | 0.1475951 | 0.25228646 | 2.4805049 | 20 | 7 21.1 | 21.4 |
| 374950 2007 CG ₆ | 17.1 | X | 240.81177 | 0.85004 | 24.96876 | 2.69719 | 0.2140341 | 0.25680451 | 2.4513253 | 20 | 5 28.3 | 20.9 |
| 374951 2007 CN ₇ | 17.2 | X | 279.12034 | 292.76722 | 79.76946 | 3.15173 | 0.1959657 | 0.26096575 | 2.4251971 | 20 | 6 27.9 | 20.2 |
| 374952 2007 CZ ₁₄ | 16.5 | X | 346.61744 | 67.52750 | 149.12066 | 11.71333 | 0.1245168 | 0.23162746 | 2.6258869 | 20 | 3 21.1 | 19.5 |
| 374953 2007 CW ₃₄ | 17.7 | X | 225.72216 | 279.85002 | 192.86076 | 4.74457 | 0.1916751 | 0.26513390 | 2.3997125 | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|--------|----------|
| 374961 2007 CK ₅₆ | 16.2 | X | 9.06635 | 261.84005 | 300.04228 | 7.92822 | 0.0694820 | 0.23462803 | 2.6034513 | 20 | 4 2.7 | 19.4 |
| 374962 2007 CB ₆₁ | 17.1 | X | 155.33046 | 184.27777 | 322.83786 | 5.62786 | 0.0837614 | 0.25372832 | 2.4710987 | 20 | 8 15.3 | 20.6 |
| 374963 2007 DS ₂ | 16.7 | X | 219.98781 | 249.33655 | 133.86034 | 10.05651 | 0.0097811 | 0.24227084 | 2.5484060 | 20 | 5 23.9 | 20.2 |
| 374964 2007 DG ₅ | 17.4 | X | 271.22433 | 310.68034 | 100.97629 | 5.26409 | 0.1906960 | 0.26633039 | 2.3925199 | 20 | 8 15.1 | 20.2 |
| 374965 2007 DC ₁₁ | 16.8 | X | 259.48088 | 288.51359 | 344.53298 | 8.24996 | 0.1364011 | 0.22082606 | 2.7108313 | 20 | 2 7.0 | 20.9 |
| 374966 2007 DE ₂₃ | 17.3 | X | 160.56101 | 265.26592 | 159.67250 | 14.74623 | 0.1537455 | 0.24048952 | 2.5609746 | 20 | 5 10.4 | 21.6 |
| 374967 2007 DL ₂₅ | 17.1 | X | 244.54490 | 151.39487 | 184.66519 | 2.05049 | 0.1470752 | 0.23556057 | 2.5965757 | 20 | 4 5.6 | 21.0 |
| 374968 2007 DP ₂₉ | 17.4 | X | 155.14366 | 111.10906 | 347.52417 | 11.59972 | 0.1321937 | 0.24439992 | 2.5335842 | 20 | 6 11.5 | 21.5 |
| 374969 2007 DJ ₃₇ | 16.6 | X | 349.73699 | 230.78162 | 337.43079 | 4.03947 | 0.0310016 | 0.22813005 | 2.6526567 | 20 | 3 19.5 | 20.0 |
| 374970 2007 DD ₄₁ | 17.8 | X | 262.58386 | 280.58970 | 356.95430 | 19.31863 | 0.0765711 | 0.37519197 | 1.9038542 | 20 | 2 8.2 | 20.3 |
| 374971 2007 DV ₄₃ | 17.8 | X | 105.34713 | 316.62265 | 172.90505 | 10.52127 | 0.0986971 | 0.24002947 | 2.5642459 | 20 | 5 27.1 | 21.5 |
| 374972 2007 DA ₅₀ | 16.8 | X | 22.03943 | 220.25286 | 330.05862 | 3.65453 | 0.1353944 | 0.23399184 | 2.6081681 | 20 | 4 13.2 | 19.4 |
| 374973 2007 DA ₅₂ | 16.8 | X | 337.63082 | 65.28692 | 176.63122 | 6.88652 | 0.0533815 | 0.23261426 | 2.6184553 | 20 | 4 16.7 | 20.0 |
| 374974 2007 DF ₇₅ | 17.6 | X | 259.53247 | 338.73777 | 82.52617 | 0.56955 | 0.1999580 | 0.25979030 | 2.4325070 | 20 | 8 8.5 | 20.8 |
| 374975 2007 DW ₉₀ | 16.6 | X | 199.73079 | 283.49295 | 353.07468 | 8.54944 | 0.1960844 | 0.20938890 | 2.8086672 | 20 | — | — |
| 374976 2007 DN ₉₇ | 17.2 | X | 50.36548 | 173.72215 | 354.76884 | 3.65453 | 0.1522052 | 0.23251911 | 2.6191696 | 20 | 5 6.7 | 20.1 |
| 374977 2007 DA ₁₀₅ | 16.9 | X | 206.54054 | 80.29948 | 321.42802 | 3.82864 | 0.0330729 | 0.24019105 | 2.5630958 | 20 | 5 25.9 | 20.4 |
| 374978 2007 ES ₇ | 16.1 | X | 336.22905 | 218.47700 | 20.58521 | 13.96356 | 0.119218 | 0.23168169 | 2.6254771 | 20 | 4 3.9 | 19.0 |
| 374979 2007 EM ₉ | 16.8 | X | 107.40758 | 69.24750 | 6.65650 | 22.14812 | 0.0584818 | 0.22510193 | 2.6763931 | 20 | 3 16.6 | 20.4 |
| 374980 2007 EJ ₂₃ | 16.4 | X | 276.33099 | 269.13340 | 25.83384 | 9.95983 | 0.1397159 | 0.22590275 | 2.6700642 | 20 | 3 23.2 | 20.2 |
| 374981 2007 EG ₃₀ | 16.8 | X | 21.55814 | 347.21968 | 162.76713 | 14.76743 | 0.1233392 | 0.22432225 | 2.6825911 | 20 | 2 16.0 | 19.8 |
| 374982 2007 ER ₃₆ | 16.2 | X | 348.09275 | 106.02100 | 103.23087 | 8.19333 | 0.1490721 | 0.22540045 | 2.6740295 | 20 | 3 12.9 | 19.2 |
| 374983 2007 EZ ₃₆ | 17.4 | X | 263.86520 | 56.56289 | 183.84049 | 10.37821 | 0.2417179 | 0.21182920 | 2.7870548 | 20 | — | — |
| 374984 2007 ED ₃₈ | 16.7 | X | 263.16421 | 137.15493 | 190.81492 | 4.56121 | 0.0981176 | 0.23284461 | 2.6167280 | 20 | 4 22.2 | 20.2 |
| 374985 2007 EO ₇₁ | 18.0 | X | 138.68728 | 75.49139 | 4.04777 | 20.23326 | 0.1107585 | 0.38323706 | 1.8771157 | 20 | 4 15.8 | 20.2 |
| 374986 2007 EV ₇₉ | 16.8 | X | 219.00301 | 211.82257 | 194.37030 | 6.66028 | 0.2159034 | 0.24151073 | 2.5537503 | 20 | 6 4.1 | 21.0 |
| 374987 2007 EX ₈₁ | 16.6 | X | 247.88079 | 273.24488 | 47.40686 | 4.16445 | 0.0918733 | 0.22773455 | 2.6557270 | 20 | 3 27.8 | 20.4 |
| 374988 2007 EB ₈₃ | 16.7 | X | 335.47332 | 69.77146 | 175.25651 | 4.35964 | 0.1615681 | 0.23415059 | 2.6069891 | 20 | 4 3.8 | 19.3 |
| 374989 2007 EF ₈₇ | 17.4 | X | 180.67711 | 248.93149 | 194.60183 | 7.10545 | 0.0971924 | 0.24158847 | 2.5532024 | 20 | 6 18.9 | 21.4 |
| 374990 2007 EV ₁₂₄ | 16.7 | X | 219.77764 | 342.42451 | 42.02374 | 9.27698 | 0.0452411 | 0.23454990 | 2.6040294 | 20 | 5 18.2 | 20.4 |
| 374991 2007 EZ ₁₃₆ | 18.1 | X | 168.45705 | 25.90655 | 77.49343 | 1.52195 | 0.1600681 | 0.25067882 | 2.4910988 | 20 | 7 2.7 | 21.9 |
| 374992 2007 EY ₁₈₀ | 17.1 | X | 111.56815 | 287.04017 | 204.15192 | 11.62491 | 0.1340777 | 0.23609880 | 2.5926279 | 20 | 6 8.8 | 21.0 |
| 374993 2007 ED ₁₉₁ | 16.6 | X | 166.17023 | 5.12373 | 17.80659 | 6.23491 | 0.0745278 | 0.22332220 | 2.6905937 | 20 | 3 18.1 | 20.5 |
| 374994 2007 EX ₁₉₆ | 17.4 | X | 55.58365 | 320.08390 | 195.92437 | 11.58997 | 0.1426107 | 0.22921599 | 2.6442719 | 20 | 4 29.2 | 20.5 |
| 374995 2007 EM ₂₁₀ | 17.6 | X | 316.24180 | 21.23632 | 74.49864 | 3.41166 | 0.1946814 | 0.27961537 | 2.3161251 | 20 | — | — |
| 374996 2007 ET ₂₁₄ | 16.6 | X | 211.84963 | 328.16981 | 17.87818 | 6.70575 | 0.1872180 | 0.22657488 | 2.6647811 | 20 | 3 18.2 | 21.0 |
| 374997 2007 ES ₂₁₇ | 17.4 | X | 87.64648 | 134.40039 | 8.77337 | 2.75753 | 0.0922439 | 0.23370858 | 2.6102751 | 20 | 5 18.8 | 21.3 |
| 374998 2007 EB ₂₂₂ | 16.8 | X | 325.81973 | 3.79161 | 165.70996 | 13.18938 | 0.1166012 | 0.21412425 | 2.7671040 | 20 | — | — |
| 374999 2007 EN ₂₂₂ | 17.8 | X | 49.26412 | 163.82832 | 27.18124 | 21.59788 | 0.0580175 | 0.38474318 | 1.8722137 | 20 | 5 14.7 | 19.5 |
| 375000 2007 EN ₂₂₃ | 16.6 | X | 47.84646 | 149.71702 | 46.00174 | 9.58713 | 0.1268779 | 0.23127156 | 2.6285802 | 20 | 6 7.2 | 19.7 |
| 375001 2007 FX ₁₃ | 16.8 | X | 95.05586 | 42.27861 | 100.41993 | 6.33832 | 0.1412425 | 0.23688609 | 2.5868803 | 20 | 6 5.6 | 20.3 |
| 375002 2007 FK ₁₆ | 16.2 | X | 200.62291 | 350.14364 | 334.04022 | 15.38314 | 0.0439649 | 0.22549037 | 2.6733186 | 20 | 2 11.7 | 20.0 |
| 375003 2007 FZ ₂₇ | 17.1 | X | 238.14143 | 88.60741 | 179.70229 | 9.34517 | 0.1775929 | 0.21402403 | 2.7679677 | 20 | 1 8.1 | 21.8 |
| 375004 2007 FP ₃₇ | 16.5 | X | 121.85795 | 278.71415 | 200.17380 | 21.38957 | 0.1387104 | 0.23495025 | 2.6010704 | 20 | 6 4.5 | 20.7 |
| 375005 Newsome | 18.4 | X | 311.75991 | 47.97420 | 189.37179 | 23.24370 | 0.0750465 | 0.37409846 | 1.9075625 | 20 | 2 2.7 | 20.9 |
| 375006 2007 GU | 16.3 | X | 241.24384 | 261.43824 | 27.73689 | 8.85974 | 0.2395934 | 0.21205121 | 2.7851091 | 20 | 2 5.3 | 21.2 |
| 375007 Buxy | 16.9 | X | 250.53888 | 153.63903 | 83.81379 | 10.30523 | 0.1163095 | 0.21047250 | 2.7990188 | 20 | — | — |
| 375008 2007 GO ₉ | 15.9 | X | 284.92016 | 208.07597 | 66.69612 | 12.27600 | 0.0460782 | 0.22464503 | 2.6800209 | 20 | 3 25.3 | 19.7 |
| 375009 2007 GN ₁₅ | 17.0 | X | 199.34412 | 309.23859 | 0.20522 | 9.06219 | 0.0878272 | 0.21583844 | 2.7524336 | 20 | 1 25.8 | 21.3 |
| 375010 2007 GW ₁₉ | 15.9 | X | 27.43364 | 298.43769 | 224.01033 | 13.05347 | 0.0566511 | 0.22020747 | 2.7159057 | 20 | 3 9.6 | 19.6 |
| 375011 2007 GD ₂₁ | 16.7 | X | 168.76877 | 300.69874 | 50.18717 | 5.01767 | 0.0833386 | 0.21099926 | 2.7943583 | 20 | 2 13.1 | 20.9 |
| 375012 2007 GD ₂₂ | 17.0 | X | 294.99788 | 148.54926 | 83.87576 | 1.80572 | 0.0117861 | 0.21390982 | 2.7689529 | 20 | 2 13.0 | 20.6 |
| 375013 2007 GE ₂₂ | 15.7 | X | 220.12307 | 315.28494 | 46.54703 | 12.28039 | 0.0924830 | 0.22393384 | 2.6856922 | 20 | 4 19.5 | 19.8 |
| 375014 2007 GD ₂₈ | 16.6 | X | 307.82449 | 218.50610 | 55.28458 | 9.26237 | 0.0906867 | 0.22625130 | 2.6673212 | 20 | 4 13.3 | 20.0 |
| 375015 2007 GA ₃₄ | 16.2 | X | 85.49091 | 176.39640 | 338.32924 | 12.59870 | 0.2059388 | 0.23650708 | 2.5896433 | 20 | 6 19.0 | 20.1 |
| 375016 2007 GQ ₃₆ | 16.5 | X | 205.10476 | 200.88686 | 126.99677 | 3.01263 | 0.1124506 | 0.21486288 | 2.7607588 | 20 | 2 20.6 | 20.9 |
| 375017 2007 GO ₃₉ | 17.1 | X | 211.14275 | 158.84014 | 208.03147 | 5.60462 | 0.0416317 | 0.22538922 | 2.6741184 | 20 | 4 15.9 | 20.8 |
| 375018 2007 GN ₄₀ | 16.0 | X | 246.28836 | 257.53280 | 46.99481 | 12.00719 | 0.0587181 | 0.21832247 | 2.7315161 | 20 | 3 14.4 | 20.1 |
| 375019 2007 GA ₄₁ | 16.4 | X | 27.82440 | 149.27016 | 35.92730 | 12.80827 | 0.0152221 | 0.22485603 | 2.6783440 | 20 | 4 14.2 | 19.8 |
| 375020 2007 GP ₄₉ | 16.4 | X | 128.31901 | 103.43226 | 38.60198 | 28.89144 | 0.0690648 | 0.23933055 | 2.5692358 | 20 | 7 5.8 | 20.7 |
| 375021 2007 GY ₅₁ | 16.8 | X | 101.55310 | 262.92474 | 145.22621 | 5.39117 | 0.0199409 | 0.21287170 | 2.7779479 | 20 | 1 25.4 | 20.5 |
| 375022 2007 GJ ₅₆ | 17.0 | X | 21.55200 | 94.23584 | 78.72936 | 6.68388 | 0.0325334 | 0.22258097 | 2.6965638 | 20 | 3 22.9 | 20.5 |
| 375023 2007 GJ ₆₃ | 16.8 | X | 194.59540 | 288.92206 | 29.81196 | 4.41775 | 0.0974756 | 0.20955470 | 2.8071855 | 20 | 1 31.9 | 21.2 |
| 375024 2007 GE ₆₆ | 16.8 | X | 273.27177 | 55.58000 | 219.96142 | 11.24784 | 0.1621685 | 0.21568018 | 2.7537799 | 20 | 2 15.9 | 21.2 |
| 375025 2007 GR ₇₂ | 17.7 | X | 14.15516 | 194.86003 | 22.97390 | 21.92543 | 0.0559003 | 0.38363253 | 1.8758255 | 20 | 4 25.3 | 19.0 |
| 375026 2007 GU ₇₄ | 15.9 | X | 247.28007 | 281.20507 | 34.99572 | 15.16728 | 0.1730660 | 0.21928818 | 2.7234907 | 20 | 3 19.9 | 20.4 |
| 375027 2007 GD ₇₆ | 16.4 | X | 109.11408 | 47.62476 | 49.02099 | 13.76254 | 0.0834267 | 0.22323531 | 2.6912918 | 20 | 4 17.9 | 20.2 |
| 375028 2007 GK ₇₆ | 16.4 | X | 206.61626 | 318.68360 | 18.75055 | 9.55224 | 0.1048804 | 0.21696321 | 2.7429127 | 20 | 3 7.2 | 20.7 |
| 375029 2007 HP ₆ | 17.1 | X | 99.85286 | 216.45377 | 190.53475 | 6.04358 | 0.0480092 | 0.21464891 | 2.7625931 | 20 | 1 24.4 | 20.8 |
| 375030 2007 HH ₁₄ | 16.9 | X | 206.82546 | 226.88764 | 170.57492 | 3.63922 | 0.1234160 | 0.23360640 | 2.6110362 | 20 | 5 17.7 | 20.9 |
| 375031 2007 HM ₁₇ | 16.0 | X | 294.37238 | 203.42773 | 51.75840 | 6.03923 | 0.0704374 | 0.21931494 | 2.7232692 | 20 | 3 5.4 | 19.7 |
| 375032 2007 HC ₁₈ | 16.2 | X | 276.24752 | 236.93204 | 46.20452 | 11.27288 | 0.1495602 | 0.21918264 | 2.7243649 | 20 | 3 10.7 | 20.3 |
| 375033 2007 HS ₁₈ | 16.6 | X | 356.42365 | 343.82199 | 196.45662 | 12.96966 | 0.1707480 | 0.21911554 | 2.7249211 | 20 | 2 7.2 | 19.8 |
| 375034 2007 HH< | | | | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 375041 2007 HL ₈₇ | 16.5 | X | 268.49122 | 112.10944 | 150.40837 | 3.03814 | 0.1252600 | 0.21210009 | 2.7846812 | 20 | 2 3.6 | 20.5 |
| 375042 2007 JC ₅ | 17.6 | X | 332.35225 | 182.18617 | 38.66780 | 22.03972 | 0.0357941 | 0.37086914 | 1.9186198 | 20 | 3 9.9 | 20.0 |
| 375043 2007 Zengweizhou | 16.4 | X | 336.02272 | 146.48029 | 49.44080 | 13.00985 | 0.1558106 | 0.21532318 | 2.7568228 | 20 | 2 5.3 | 20.0 |
| 375044 2007 JZ ₂₃ | 16.9 | X | 51.20838 | 254.87921 | 224.58991 | 5.80183 | 0.0233645 | 0.21610778 | 2.7501462 | 20 | 2 17.0 | 20.7 |
| 375045 2007 JV ₂₇ | 16.5 | X | 266.87476 | 59.66302 | 213.87261 | 4.53137 | 0.0885303 | 0.21446776 | 2.7641485 | 20 | 2 17.6 | 20.6 |
| 375046 2007 JJ ₃₁ | 16.8 | X | 166.30498 | 248.20725 | 223.05811 | 12.42409 | 0.1249538 | 0.24128913 | 2.5553137 | 20 | 7 7.8 | 21.0 |
| 375047 2007 JN ₄₀ | 17.8 | X | 133.59952 | 190.82537 | 225.22801 | 22.61358 | 0.1222260 | 0.36875450 | 1.9259477 | 20 | 3 5.7 | 20.5 |
| 375048 2007 LY ₁₀ | 16.7 | X | 103.11774 | 66.49549 | 231.20963 | 14.28870 | 0.2733245 | 0.17969789 | 3.1100979 | 20 | 12 24.2 | 22.3 |
| 375049 2007 LS ₁₁ | 16.9 | X | 34.12734 | 306.91919 | 186.14461 | 3.81622 | 0.0482994 | 0.21262783 | 2.7800716 | 20 | 2 14.4 | 20.4 |
| 375050 2007 LJ ₂₂ | 15.7 | X | 126.38015 | 254.58286 | 128.77171 | 15.63173 | 0.1623656 | 0.20500675 | 2.8485507 | 20 | 2 15.5 | 19.9 |
| 375051 2007 LL ₂₄ | 16.1 | X | 221.47056 | 183.85978 | 78.36815 | 7.31859 | 0.0545928 | 0.20158476 | 2.8806971 | 20 | — | — |
| 375052 2007 LW ₂₇ | 16.7 | X | 326.84336 | 12.97461 | 175.43617 | 15.64666 | 0.1382687 | 0.21084967 | 2.7956798 | 20 | 1 10.1 | 20.7 |
| 375053 2007 NW ₄ | 16.3 | X | 157.53988 | 240.13407 | 69.00490 | 4.05061 | 0.2135585 | 0.18811950 | 3.0165707 | 20 | — | — |
| 375054 2007 PF ₆ | 20.7 | X | 293.81983 | 251.21671 | 316.37175 | 25.60236 | 0.4163268 | 0.66610012 | 1.2985033 | 20 | — | — |
| 375055 2007 PB ₁₀ | 16.0 | X | 85.67880 | 243.03999 | 114.07822 | 5.35348 | 0.2306491 | 0.17724511 | 3.1387246 | 20 | — | — |
| 375056 2007 PY ₂₆ | 16.3 | X | 39.38671 | 82.42169 | 324.20305 | 4.11466 | 0.1854255 | 0.17238905 | 3.1973948 | 20 | — | — |
| 375057 2007 PS ₂₉ | 16.0 | X | 87.16922 | 257.11015 | 98.73634 | 3.85899 | 0.3058574 | 0.17639015 | 3.1488587 | 20 | — | — |
| 375058 2007 PU ₃₅ | 16.0 | X | 240.67262 | 264.31903 | 96.92341 | 8.24195 | 0.1424074 | 0.21248302 | 2.7813346 | 20 | 5 7.3 | 20.3 |
| 375059 2007 PM ₄₆ | 15.5 | X | 120.06923 | 161.42467 | 162.16441 | 17.45671 | 0.0102324 | 0.17661495 | 3.1461861 | 20 | — | — |
| 375060 2007 PA ₄₉ | 15.9 | X | 106.95610 | 221.45354 | 143.15669 | 20.05295 | 0.1477418 | 0.18453169 | 3.0555455 | 20 | 1 2.8 | 20.4 |
| 375061 2007 PM ₅₀ | 15.9 | X | 63.19175 | 269.26880 | 152.73068 | 10.52203 | 0.1362575 | 0.18591895 | 3.0403269 | 20 | 1 10.1 | 19.8 |
| 375062 2007 PQ ₅₀ | 16.0 | X | 343.81992 | 123.43442 | 311.97631 | 1.35398 | 0.1679340 | 0.16643519 | 3.2732005 | 20 | — | — |
| 375063 2007 PV ₅₀ | 16.0 | X | 81.72300 | 185.91870 | 165.41625 | 9.77997 | 0.0704337 | 0.17486505 | 3.1671408 | 20 | — | — |
| 375064 2007 QH | 15.3 | X | 131.34815 | 0.52734 | 318.81567 | 16.77216 | 0.1592092 | 0.18044064 | 3.1015573 | 20 | — | — |
| 375065 2007 QS ₁₇ | 15.6 | X | 20.35589 | 72.69766 | 337.03693 | 7.89217 | 0.1995362 | 0.17107687 | 3.2137236 | 20 | — | — |
| 375066 2007 RZ ₄ | 16.8 | X | 78.03201 | 162.45320 | 242.89870 | 1.22243 | 0.0903257 | 0.19065071 | 2.9898112 | 20 | 1 4.9 | 20.6 |
| 375067 2007 RJ ₆ | 15.8 | X | 76.41260 | 78.79504 | 277.61822 | 3.39578 | 0.1624949 | 0.17195150 | 3.2028165 | 20 | — | — |
| 375068 2007 RU ₁₄ | 15.4 | X | 154.90095 | 299.83420 | 337.12009 | 15.51175 | 0.1669974 | 0.17624669 | 3.1505672 | 20 | — | — |
| 375069 2007 RE ₂₀ | 16.1 | X | 53.68805 | 299.50985 | 106.21955 | 11.53322 | 0.1097044 | 0.17756597 | 3.1349423 | 20 | — | — |
| 375070 2007 RF ₃₁ | 15.7 | X | 82.29903 | 87.67115 | 278.71530 | 8.30862 | 0.2319445 | 0.17644472 | 3.1482094 | 20 | — | — |
| 375071 2007 RM ₄₀ | 16.0 | X | 47.20461 | 274.77559 | 107.72898 | 2.91313 | 0.1569405 | 0.16940332 | 3.2348547 | 20 | — | — |
| 375072 2007 RR ₄₀ | 16.1 | X | 99.05633 | 246.30418 | 101.89537 | 3.02927 | 0.2135340 | 0.17542976 | 3.1603405 | 20 | — | — |
| 375073 2007 RC ₄₈ | 16.4 | X | 51.91770 | 196.43907 | 182.75784 | 4.32113 | 0.1513984 | 0.16845028 | 3.2470444 | 20 | — | — |
| 375074 2007 RK ₅₉ | 16.1 | X | 104.93431 | 186.53300 | 188.71419 | 6.02529 | 0.1078577 | 0.18197096 | 3.0841441 | 20 | 1 6.6 | 20.4 |
| 375075 2007 RR ₅₉ | 15.8 | X | 73.36081 | 25.97192 | 325.41880 | 16.22847 | 0.1437704 | 0.17469384 | 3.1692098 | 20 | — | — |
| 375076 2007 RQ ₆₀ | 15.5 | X | 98.37987 | 14.89559 | 313.46834 | 5.01216 | 0.1494895 | 0.17265220 | 3.1941450 | 20 | — | — |
| 375077 2007 RW ₆₀ | 15.5 | X | 62.85842 | 55.74261 | 347.63232 | 26.33042 | 0.2460464 | 0.17565307 | 3.1576613 | 20 | 1 11.1 | 19.6 |
| 375078 2007 RQ ₆₁ | 15.8 | X | 87.00789 | 25.76097 | 343.38506 | 9.99483 | 0.1077222 | 0.17858909 | 3.1229577 | 20 | — | — |
| 375079 2007 RD ₆₉ | 15.5 | X | 72.94770 | 8.34838 | 359.97033 | 11.37293 | 0.0398047 | 0.17468667 | 3.1692965 | 20 | — | — |
| 375080 2007 RD ₇₃ | 15.7 | X | 67.00809 | 37.65510 | 347.65588 | 10.04096 | 0.0742363 | 0.17721750 | 3.1390506 | 20 | — | — |
| 375081 2007 RY ₈₂ | 15.5 | X | 243.87794 | 193.55194 | 353.42155 | 11.20832 | 0.0474714 | 0.17295463 | 3.1904204 | 20 | — | — |
| 375082 2007 RP ₁₁₁ | 15.9 | X | 347.59577 | 121.88628 | 17.19872 | 6.74040 | 0.1122232 | 0.17919666 | 3.1158947 | 20 | — | — |
| 375083 2007 RQ ₁₃₅ | 16.4 | X | 58.70685 | 162.03298 | 209.38729 | 5.08134 | 0.0629603 | 0.16868624 | 3.2440157 | 20 | — | — |
| 375084 2007 RJ ₁₇₂ | 15.6 | X | 354.56002 | 89.88061 | 24.24565 | 10.19131 | 0.0572116 | 0.17526774 | 3.1567788 | 20 | — | — |
| 375085 2007 RR ₁₈₉ | 18.3 | X | 96.26648 | 296.28935 | 136.46998 | 1.85702 | 0.1661476 | 0.26503439 | 2.4003131 | 20 | 3 6.0 | 21.0 |
| 375086 2007 RW ₁₉₁ | 16.7 | X | 45.65109 | 274.82065 | 141.54111 | 1.77895 | 0.1677101 | 0.17326797 | 3.1865730 | 20 | — | — |
| 375087 2007 RC ₂₀₈ | 15.8 | X | 345.23462 | 115.53820 | 15.60025 | 11.10200 | 0.0959453 | 0.17766791 | 3.1337430 | 20 | — | — |
| 375088 2007 RR ₂₁₂ | 15.4 | X | 13.57617 | 66.10318 | 15.30168 | 12.83993 | 0.0552606 | 0.17393735 | 3.1783921 | 20 | — | — |
| 375089 2007 RA ₂₁₉ | 16.3 | X | 134.41112 | 261.44750 | 59.66409 | 1.89879 | 0.1646821 | 0.17755374 | 3.1350863 | 20 | — | — |
| 375090 2007 RJ ₂₄₂ | 15.3 | X | 37.77906 | 52.51895 | 355.76211 | 17.50065 | 0.1790090 | 0.17305042 | 3.1892430 | 20 | — | — |
| 375091 2007 RP ₂₉₁ | 16.3 | X | 25.61161 | 134.27308 | 296.54615 | 0.49322 | 0.1682884 | 0.17335196 | 3.1855436 | 20 | — | — |
| 375092 2007 RC ₂₉₈ | 15.5 | X | 51.86152 | 58.48071 | 8.04948 | 13.89319 | 0.0912780 | 0.17919739 | 3.1158863 | 20 | — | — |
| 375093 2007 RC ₃₁₀ | 15.4 | X | 105.88953 | 305.93421 | 4.07633 | 25.05018 | 0.1701075 | 0.17275126 | 3.1929239 | 20 | — | — |
| 375094 2007 RD ₃₁₃ | 15.8 | X | 86.60238 | 1.03798 | 356.84800 | 18.02576 | 0.2066059 | 0.17707410 | 3.1470450 | 20 | — | — |
| 375095 2007 RL ₃₁₇ | 18.3 | X | 156.04457 | 27.32278 | 15.05463 | 1.31972 | 0.1901169 | 0.27238932 | 2.3569082 | 20 | 4 4.1 | 21.9 |
| 375096 2007 RM ₃₂₀ | 16.1 | X | 51.13515 | 31.13080 | 45.94100 | 5.75203 | 0.1189257 | 0.17823495 | 3.1270930 | 20 | 1 11.9 | 20.1 |
| 375097 2007 RU ₃₂₁ | 15.4 | X | 1.66015 | 137.68729 | 324.65720 | 8.14736 | 0.0507806 | 0.17642792 | 3.1484093 | 20 | — | — |
| 375098 2007 SL ₁₀ | 16.1 | X | 40.37607 | 179.10535 | 242.10996 | 3.57470 | 0.1616909 | 0.17301155 | 3.1897207 | 20 | — | — |
| 375099 2007 TM ₁ | 16.3 | X | 93.85782 | 169.80771 | 166.27190 | 1.55272 | 0.2657564 | 0.17583247 | 3.1555131 | 20 | — | — |
| 375100 2007 TU ₉ | 15.7 | X | 76.79428 | 348.50790 | 22.99943 | 11.62593 | 0.1750402 | 0.17250237 | 3.1959943 | 20 | — | — |
| 375101 2007 TB ₄₄ | 15.5 | X | 35.71955 | 339.73973 | 350.45001 | 7.53274 | 0.1397459 | 0.15359323 | 3.4531968 | 20 | 11 5.3 | 20.3 |
| 375102 2007 TT ₅₂ | 18.7 | X | 69.53541 | 328.65344 | 26.80499 | 1.50292 | 0.1176200 | 0.32141534 | 2.1106926 | 20 | — | — |
| 375103 2007 TD ₇₁ | 18.4 | X | 307.08655 | 220.74958 | 49.58583 | 49.75386 | 0.2797894 | 0.67568316 | 1.2861965 | 20 | — | — |
| 375104 2007 TL ₇₅ | 15.8 | X | 96.42028 | 341.03276 | 17.20058 | 16.85592 | 0.0763810 | 0.17596958 | 3.1538738 | 20 | — | — |
| 375105 2007 TS ₇₉ | 16.4 | X | 17.44054 | 7.11482 | 56.55118 | 2.78772 | 0.2114809 | 0.16532251 | 3.2878707 | 20 | — | — |
| 375106 2007 TT ₁₂₈ | 15.7 | X | 24.83882 | 160.98674 | 221.26877 | 9.29463 | 0.0951957 | 0.15853789 | 3.3811018 | 20 | 12 20.5 | 20.3 |
| 375107 2007 TN ₁₃₀ | 15.3 | X | 17.69763 | 192.28136 | 242.33217 | 18.91103 | 0.0914020 | 0.17041880 | 3.2219914 | 20 | — | — |
| 375108 2007 TE ₁₄₄ | 16.3 | X | 113.38050 | 124.71193 | 233.10774 | 0.65868 | 0.2062237 | 0.17833977 | 3.1258676 | 20 | 1 10.1 | 20.9 |
| 375109 2007 TX ₁₇₀ | 15.8 | X | 59.64819 | 141.60374 | 263.67778 | 7.98012 | 0.0881912 | 0.17420275 | 3.1751631 | 20 | — | — |
| 375110 2007 TX ₂₁₉ | 16.1 | X | 74.65768 | 249.50386 | 148.25877 | 1.44540 | 0.1527822 | 0.17787500 | 3.1313103 | 20 | 1 1.6 | 20.1 |
| 375111 2007 TG ₂₅₅ | 16.1 | X | 138.98187 | 52.86053 | 263.01147 | 4.87817 | 0.0750142 | 0.17245972 | 3.1965213 | 20 | — | — |
| 375112 2007 TD ₂₈₀ | 15.9 | X | 79.69871 | 150.99729 | 171.20475 | 27.78537 | 0.1773212 | 0.16962741 | 3.2320050 | 20 | 12 26.2 | 21.5 |
| 375113 2007 TF ₂₈₄ | 15.8 | X | 85.33946 | 149.14863 | 227.33388 | 9.54485 | 0.2294229 | 0.17612154 | 3.1520594 | 20 | 1 1.0 | 20.0 |
| 375114 2007 TP ₂₈₆ | 16.6 | X | 69.24638 | 44.38982 | 308.27731 | 6.15535 | 0.0895048 | 0.17177622 | 3.2049950 | 20 | — | — |
| 375115 2007 TK ₂₉₄ | 16.1 | X | 281.67648 | 322.72112 | 208.06443 | 5.94094 | 0.0586697 | 0.17379958 | 3.1800717 | 20 | — | — |
| 375116 200 | | | | | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|--------------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 375121 2007 <i>TB</i> ₄₅₁ | 15.7 | X | 80.16841 | 142.48065 | 227.01073 | 18.04060 | 0.1336598 | 0.17209293 | 3.2010616 | 20 | — | — |
| 375122 2007 <i>UR</i> ₂₅ | 17.7 | X | 323.91111 | 169.72796 | 127.86135 | 1.07612 | 0.2265138 | 0.28703875 | 2.2760180 | 20 | 5 18.1 | 19.4 |
| 375123 2007 <i>UX</i> ₇₇ | 16.2 | X | 359.83863 | 284.86178 | 221.82609 | 8.98692 | 0.1805596 | 0.17821201 | 3.1273614 | 20 | 1 9.8 | 19.9 |
| 375124 2007 <i>UC</i> ₁₁₉ | 16.7 | X | 49.30369 | 254.35624 | 167.54612 | 1.19622 | 0.2000406 | 0.17401647 | 3.1774287 | 20 | — | — |
| 375125 2007 <i>VH</i> ₁₂₇ | 16.0 | X | 12.05372 | 84.29658 | 9.79824 | 18.47550 | 0.1450255 | 0.17343721 | 3.1844995 | 20 | — | — |
| 375126 2007 <i>VY</i> ₁₈₄ | 18.4 | X | 46.40928 | 293.25731 | 54.66108 | 4.59860 | 0.2163406 | 0.31454268 | 2.1413270 | 20 | — | — |
| 375127 2007 <i>VZ</i> ₁₈₄ | 17.8 | X | 168.27200 | 179.85918 | 195.67412 | 0.83990 | 0.1893289 | 0.26666990 | 2.3904888 | 20 | 3 12.7 | 21.4 |
| 375128 2007 <i>VR</i> ₂₁₈ | 17.8 | X | 50.63135 | 243.56647 | 44.47263 | 4.11405 | 0.1675773 | 0.29800055 | 2.2198553 | 20 | 11 6.6 | 20.7 |
| 375129 2007 <i>VM</i> ₂₅₀ | 18.3 | X | 49.36332 | 29.76436 | 299.28437 | 5.96374 | 0.2364328 | 0.31282669 | 2.1491492 | 20 | — | — |
| 375130 2007 <i>VH</i> ₂₆₆ | 17.7 | X | 224.10613 | 284.08502 | 234.73305 | 6.86444 | 0.0752235 | 0.30252324 | 2.1976755 | 20 | 12 2.7 | 20.1 |
| 375131 2007 <i>VL</i> ₃₀₀ | 15.4 | X | 105.59308 | 310.62429 | 59.78905 | 13.31411 | 0.1585377 | 0.17708973 | 3.1405602 | 20 | 1 11.1 | 20.0 |
| 375132 2007 <i>WR</i> ₃₉ | 15.9 | X | 17.01462 | 172.76383 | 210.01582 | 11.75626 | 0.1041218 | 0.15620812 | 3.4145513 | 20 | 12 11.8 | 20.5 |
| 375133 2007 <i>WS</i> ₄₉ | 15.4 | X | 33.36959 | 290.33112 | 77.64155 | 10.59315 | 0.1296992 | 0.15570648 | 3.4218812 | 20 | 12 18.6 | 19.9 |
| 375134 2007 <i>WU</i> ₅₇ | 17.5 | X | 254.13035 | 308.78980 | 152.11185 | 5.83399 | 0.1672937 | 0.28377404 | 2.2934412 | 20 | 10 7.3 | 20.1 |
| 375135 2007 <i>YF</i> ₅₄ | 18.0 | X | 357.35065 | 35.55964 | 18.04462 | 4.57515 | 0.0703000 | 0.30697913 | 2.1763571 | 20 | — | — |
| 375136 2007 <i>YF</i> ₇₀ | 18.1 | X | 86.70943 | 141.89140 | 137.68300 | 1.68936 | 0.0402007 | 0.29456045 | 2.2371053 | 20 | 11 23.7 | 20.9 |
| 375137 2007 <i>YA</i> ₇₄ | 17.4 | X | 315.91479 | 134.41196 | 283.37438 | 6.41102 | 0.1021124 | 0.29560678 | 2.2318232 | 20 | 11 30.5 | 19.7 |
| 375138 2008 <i>AK</i> ₁₁ | 17.6 | X | 315.12405 | 326.33556 | 146.10738 | 4.41483 | 0.1260808 | 0.22773819 | 2.6556988 | 20 | — | — |
| 375139 2008 <i>AF</i> ₃₁ | 17.6 | X | 337.99590 | 52.29112 | 18.97159 | 5.00784 | 0.1273195 | 0.30611123 | 2.1804688 | 20 | — | — |
| 375140 2008 <i>AU</i> ₄₃ | 18.6 | X | 11.95148 | 270.25055 | 137.85210 | 1.13386 | 0.1748323 | 0.30695331 | 2.1764791 | 20 | — | — |
| 375141 2008 <i>AS</i> ₇₆ | 17.4 | X | 359.48661 | 191.41102 | 97.31818 | 6.13012 | 0.0908376 | 0.27528976 | 2.3403241 | 20 | 8 1.7 | 19.6 |
| 375142 2008 <i>AC</i> ₈₀ | 18.1 | X | 284.06384 | 336.36201 | 154.24858 | 1.47944 | 0.1762039 | 0.30228022 | 2.1988532 | 20 | — | — |
| 375143 2008 <i>AL</i> ₁₁₈ | 17.2 | X | 54.01759 | 288.47039 | 336.26280 | 5.50385 | 0.0802874 | 0.27402376 | 2.3475269 | 20 | 9 20.6 | 20.0 |
| 375144 2008 <i>AO</i> ₁₃₄ | 17.5 | X | 169.21912 | 160.66998 | 7.03445 | 6.07269 | 0.1526288 | 0.28447313 | 2.2896823 | 20 | 9 28.3 | 20.7 |
| 375145 2008 <i>AK</i> ₁₃₇ | 17.6 | X | 313.88564 | 153.25065 | 281.05039 | 5.42460 | 0.0896473 | 0.29834235 | 2.2181595 | 20 | 12 25.1 | 19.7 |
| 375146 2008 <i>BD</i> ₁₁ | 18.4 | X | 329.72801 | 136.86938 | 293.67099 | 0.66117 | 0.1369114 | 0.30485617 | 2.1864492 | 20 | — | — |
| 375147 2008 <i>BR</i> ₂₂ | 17.2 | X | 316.50467 | 292.27799 | 150.42888 | 8.92823 | 0.1206694 | 0.29844081 | 2.2176717 | 20 | — | — |
| 375148 2008 <i>BQ</i> ₂₅ | 17.9 | X | 93.95556 | 326.11880 | 297.33934 | 3.45025 | 0.1216569 | 0.28921298 | 2.2645966 | 20 | 11 14.9 | 21.2 |
| 375149 2008 <i>BA</i> ₄₆ | 18.3 | X | 325.67501 | 191.00108 | 242.38929 | 1.22467 | 0.1276620 | 0.30056136 | 2.2072284 | 20 | — | — |
| 375150 2008 <i>CD</i> ₁₁ | 17.6 | X | 192.63965 | 45.76685 | 114.33134 | 5.64618 | 0.1116807 | 0.28592291 | 2.2819358 | 20 | 10 19.1 | 20.7 |
| 375151 2008 <i>CN</i> ₂₄ | 17.1 | X | 281.44164 | 268.26183 | 335.78026 | 29.25908 | 0.2332212 | 0.23695459 | 2.5863818 | 20 | 1 21.5 | 21.6 |
| 375152 2008 <i>CZ</i> ₃₄ | 17.5 | X | 285.00298 | 314.72617 | 138.90083 | 5.07616 | 0.1274822 | 0.29448200 | 2.2375026 | 20 | 11 28.9 | 19.4 |
| 375153 2008 <i>CS</i> ₃₉ | 17.8 | X | 19.08419 | 106.55836 | 159.42519 | 2.56722 | 0.1981321 | 0.26724932 | 2.3870324 | 20 | 8 15.5 | 19.8 |
| 375154 2008 <i>CO</i> ₄₃ | 17.3 | X | 328.53150 | 287.89891 | 92.83963 | 4.66839 | 0.2040233 | 0.28641807 | 2.2793050 | 20 | 11 5.6 | 18.7 |
| 375155 2008 <i>CR</i> ₈₇ | 17.9 | X | 334.90994 | 330.77262 | 96.64491 | 4.73469 | 0.1395212 | 0.29902738 | 2.2147706 | 20 | — | — |
| 375156 2008 <i>CZ</i> ₁₁₆ | 17.8 | X | 237.21651 | 95.00625 | 19.12146 | 7.36702 | 0.0592388 | 0.28612757 | 2.2808475 | 20 | 10 17.3 | 20.6 |
| 375157 2008 <i>CA</i> ₁₃₂ | 17.5 | X | 293.09614 | 111.84600 | 345.91933 | 4.95863 | 0.1047364 | 0.29579817 | 2.2308604 | 20 | 12 21.6 | 19.5 |
| 375158 2008 <i>CG</i> ₁₃₈ | 17.5 | X | 88.77927 | 194.57299 | 25.76560 | 3.26427 | 0.1226590 | 0.27176445 | 2.3605196 | 20 | 9 12.6 | 20.6 |
| 375159 2008 <i>CX</i> ₁₃₉ | 17.6 | X | 271.95054 | 178.07424 | 299.24952 | 5.16517 | 0.0951403 | 0.29369715 | 2.2414870 | 20 | 12 12.1 | 19.8 |
| 375160 2008 <i>CN</i> ₁₄₀ | 18.3 | X | 254.40619 | 124.79205 | 631.57993 | 2.34637 | 0.1354364 | 0.28628538 | 2.2800092 | 20 | 10 3.9 | 20.8 |
| 375161 2008 <i>CS</i> ₁₅₃ | 17.7 | X | 211.30864 | 44.64098 | 65.91974 | 3.44954 | 0.0090239 | 0.27694085 | 2.3310130 | 20 | 9 14.6 | 20.5 |
| 375162 2008 <i>CM</i> ₁₅₉ | 18.0 | X | 238.82184 | 52.45151 | 57.36651 | 3.68341 | 0.2011967 | 0.28640611 | 2.2793684 | 20 | 9 23.3 | 20.9 |
| 375163 2008 <i>CM</i> ₁₆₂ | 17.6 | X | 11.40076 | 228.75386 | 22.12508 | 1.27087 | 0.1574945 | 0.26174678 | 2.4203703 | 20 | 6 28.4 | 19.7 |
| 375164 2008 <i>CF</i> ₁₇₉ | 17.1 | X | 168.58349 | 99.68104 | 78.64610 | 7.70904 | 0.1476317 | 0.28178944 | 2.3041968 | 20 | 10 15.0 | 20.6 |
| 375165 2008 <i>CH</i> ₁₇₉ | 16.6 | X | 155.58351 | 114.32920 | 88.22273 | 6.74241 | 0.0738375 | 0.28302340 | 2.2974945 | 20 | 11 3.9 | 19.8 |
| 375166 2008 <i>CZ</i> ₁₉₄ | 17.6 | X | 59.87144 | 234.91364 | 5.62739 | 2.70307 | 0.1212636 | 0.26473828 | 2.4021026 | 20 | 9 1.9 | 20.5 |
| 375167 2008 <i>CX</i> ₁₉₆ | 17.6 | X | 35.07987 | 43.29409 | 222.56111 | 1.00612 | 0.1635711 | 0.27075574 | 2.3663788 | 20 | 9 8.2 | 19.9 |
| 375168 2008 <i>CO</i> ₂₁₂ | 17.9 | X | 81.29691 | 35.98146 | 171.00198 | 1.43887 | 0.1295892 | 0.26858640 | 2.3791037 | 20 | 8 15.1 | 21.0 |
| 375169 2008 <i>CG</i> ₂₁₃ | 17.0 | X | 115.80172 | 261.38345 | 286.21043 | 5.32013 | 0.0706440 | 0.27346519 | 2.3507224 | 20 | 8 22.7 | 20.2 |
| 375170 2008 <i>CV</i> ₂₁₄ | 17.7 | X | 188.51643 | 314.30816 | 223.44046 | 3.95382 | 0.0916736 | 0.28527965 | 2.2853647 | 20 | 11 5.9 | 20.8 |
| 375171 2008 <i>CG</i> ₂₁₅ | 17.3 | X | 202.93377 | 137.71396 | 344.59286 | 19.03771 | 0.0381699 | 0.28059040 | 2.3107565 | 20 | 9 12.5 | 20.2 |
| 375172 2008 <i>CS</i> ₂₁₅ | 17.1 | X | 337.31193 | 314.11023 | 2.67488 | 5.85413 | 0.0907714 | 0.26345654 | 2.4098872 | 20 | 8 3.6 | 19.6 |
| 375173 2008 <i>DV</i> ₄ | 17.4 | X | 198.22208 | 18.39327 | 109.03811 | 3.05701 | 0.1516120 | 0.28089256 | 2.3090996 | 20 | 9 5.5 | 20.8 |
| 375174 2008 <i>DD</i> ₉ | 17.0 | X | 326.21346 | 158.43995 | 148.86938 | 10.83255 | 0.1362905 | 0.26819243 | 2.3814324 | 20 | 6 22.8 | 19.4 |
| 375175 2008 <i>DA</i> ₁₇ | 17.5 | X | 127.49319 | 5.13665 | 183.62025 | 1.31483 | 0.1208045 | 0.27247504 | 2.3564139 | 20 | 9 12.0 | 20.9 |
| 375176 Béziau | 17.5 | X | 348.28343 | 236.67281 | 108.05983 | 7.02359 | 0.1282388 | 0.28186170 | 2.3038030 | 20 | 10 15.6 | 19.7 |
| 375177 2008 <i>DN</i> ₂₃ | 17.8 | X | 33.41278 | 321.59046 | 304.51238 | 0.61539 | 0.1587687 | 0.26808498 | 2.3820693 | 20 | 9 4.8 | 20.3 |
| 375178 2008 <i>DR</i> ₂₇ | 18.0 | X | 68.99855 | 172.05523 | 102.03543 | 3.36947 | 0.1336665 | 0.28438811 | 2.2901385 | 20 | 11 4.0 | 21.1 |
| 375179 2008 <i>DS</i> ₃₆ | 15.6 | X | 236.76449 | 175.60722 | 300.23563 | 1.07649 | 0.1605377 | 0.12375196 | 3.9881180 | 20 | 9 11.8 | 21.5 |
| 375180 2008 <i>DB</i> ₃₈ | 17.4 | X | 194.85224 | 251.73954 | 259.93316 | 1.41554 | 0.1099584 | 0.27990931 | 2.3145034 | 20 | 10 5.9 | 20.7 |
| 375181 2008 <i>DS</i> ₅₃ | 18.1 | X | 178.79914 | 277.43262 | 226.41082 | 1.40465 | 0.1192173 | 0.27602634 | 2.3361588 | 20 | 9 6.5 | 21.6 |
| 375182 2008 <i>DU</i> ₅₅ | 17.2 | X | 163.90523 | 339.48843 | 185.48443 | 11.77891 | 0.1908504 | 0.27583547 | 2.3372364 | 20 | 9 16.6 | 21.1 |
| 375183 2008 <i>DV</i> ₆₃ | 17.9 | X | 292.70352 | 321.11271 | 116.90047 | 3.40917 | 0.1454055 | 0.29154279 | 2.2525158 | 20 | 11 17.2 | 19.6 |
| 375184 2008 <i>DM</i> ₇₃ | 17.8 | X | 181.60992 | 283.68703 | 242.48967 | 1.97541 | 0.1096210 | 0.28253519 | 2.3001405 | 20 | 10 10.7 | 20.9 |
| 375185 2008 <i>DO</i> ₇₅ | 17.0 | X | 9.60914 | 311.20979 | 349.83550 | 6.43580 | 0.1138754 | 0.27244672 | 2.3565771 | 20 | 9 10.0 | 19.1 |
| 375186 2008 <i>DA</i> ₇₆ | 18.2 | X | 234.23659 | 125.07865 | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|------------|------------|-----------|----|---------|----------|
| 375201 2008 EK ₇₄ | 17.7 | X | 72.67285 | 93.44469 | 128.58664 | 5.35708 | 0.0694984 | 0.26601770 | 2.3943945 | 20 | 8 16.2 | 20.7 |
| 375202 2008 EE ₉₀ | 17.3 | X | 336.31612 | 281.83610 | 39.18616 | 8.40327 | 0.0987106 | 0.26972611 | 2.3723971 | 20 | 8 11.2 | 19.8 |
| 375203 2008 EB ₉₆ | 17.7 | X | 255.80799 | 106.46698 | 30.09421 | 7.69180 | 0.0704492 | 0.29289060 | 2.2456002 | 20 | 12 15.7 | 20.3 |
| 375204 2008 EO ₉₈ | 17.2 | X | 215.58370 | 197.67957 | 350.11870 | 5.88338 | 0.0961538 | 0.29647223 | 2.2274777 | 20 | 12 26.3 | 20.0 |
| 375205 2008 EA ₁₀₂ | 17.3 | X | 56.39194 | 112.37483 | 123.90111 | 6.63250 | 0.1043010 | 0.26757342 | 2.3851045 | 20 | 8 19.8 | 20.0 |
| 375206 2008 EG ₁₁₁ | 17.4 | X | 215.13901 | 26.17502 | 99.98850 | 5.70760 | 0.1042273 | 0.28119041 | 2.3074681 | 20 | 9 30.5 | 20.4 |
| 375207 2008 EB ₁₁₇ | 18.1 | X | 263.22569 | 79.62665 | 23.54820 | 2.01774 | 0.1623626 | 0.28665087 | 2.2780707 | 20 | 10 24.6 | 20.4 |
| 375208 2008 ED ₁₂₁ | 17.9 | X | 176.91793 | 129.06940 | 33.36746 | 2.74569 | 0.1651129 | 0.27883514 | 2.3204437 | 20 | 9 28.4 | 21.3 |
| 375209 2008 EC ₁₃₅ | 17.8 | X | 36.31531 | 231.27532 | 23.11660 | 6.89840 | 0.0790541 | 0.26397341 | 2.4067405 | 20 | 8 12.9 | 20.6 |
| 375210 2008 EG ₁₄₈ | 18.0 | X | 214.09505 | 142.19305 | 340.59865 | 1.92376 | 0.1479726 | 0.27989908 | 2.3145598 | 20 | 9 15.5 | 21.2 |
| 375211 2008 EQ ₁₆₃ | 13.6 | X | 308.03791 | 246.55586 | 19.10248 | 32.30977 | 0.0522298 | 0.08372039 | 5.1750579 | 20 | 4 12.2 | 20.3 |
| 375212 2008 FA ₃ | 17.1 | X | 109.80217 | 258.77519 | 349.24113 | 6.61704 | 0.0775548 | 0.28201460 | 2.3029702 | 20 | 11 6.7 | 20.5 |
| 375213 2008 FX ₁₁ | 17.7 | X | 340.37978 | 109.30871 | 164.38260 | 4.19179 | 0.1673039 | 0.25824835 | 2.4421801 | 20 | 5 26.2 | 19.8 |
| 375214 2008 FQ ₁₂ | 17.4 | X | 348.89644 | 270.94565 | 344.49645 | 7.34392 | 0.1090549 | 0.25716247 | 2.4490500 | 20 | 5 15.3 | 20.0 |
| 375215 2008 FJ ₁₅ | 17.0 | X | 301.09584 | 193.66512 | 128.53793 | 6.95777 | 0.0565566 | 0.25445587 | 2.4663861 | 20 | 6 12.1 | 20.0 |
| 375216 2008 FR ₂₆ | 17.6 | X | 89.93466 | 233.22751 | 334.04690 | 0.99326 | 0.1301589 | 0.26354439 | 2.4093517 | 20 | 8 26.0 | 20.9 |
| 375217 2008 FE ₂₆ | 17.2 | X | 93.49352 | 195.84171 | 16.24706 | 3.11427 | 0.1287433 | 0.26518993 | 2.3993745 | 20 | 9 6.7 | 20.6 |
| 375218 2008 FE ₃₅ | 17.4 | X | 286.33388 | 247.58861 | 170.08459 | 5.47206 | 0.1890695 | 0.28454736 | 2.2892840 | 20 | 9 22.9 | 19.2 |
| 375219 2008 FX ₄₂ | 18.1 | X | 249.90606 | 255.87758 | 191.25461 | 2.27014 | 0.1721387 | 0.28198656 | 2.3031229 | 20 | 9 7.4 | 21.0 |
| 375220 2008 FN ₄₆ | 18.3 | X | 296.97089 | 42.98632 | 42.85019 | 2.01273 | 0.2051747 | 0.29403005 | 2.2397948 | 20 | 12 6.2 | 19.6 |
| 375221 2008 FD ₅₀ | 17.2 | X | 352.84075 | 260.22672 | 19.90364 | 6.79234 | 0.1139327 | 0.25795091 | 2.4440570 | 20 | 7 4.9 | 19.7 |
| 375222 2008 FE ₅₁ | 17.1 | X | 50.59688 | 199.17412 | 138.96514 | 2.72789 | 0.0801655 | 0.20513961 | 2.8473206 | 20 | 12 9.5 | 21.0 |
| 375223 2008 FV ₅₂ | 17.6 | X | 284.54199 | 115.00550 | 171.19151 | 4.93428 | 0.1666457 | 0.24166534 | 2.5526610 | 20 | 3 13.9 | 21.0 |
| 375224 2008 FG ₅₄ | 17.5 | X | 76.70868 | 167.54016 | 57.76392 | 3.20797 | 0.0826711 | 0.26493515 | 2.4009122 | 20 | 8 29.5 | 20.5 |
| 375225 2008 FM ₅₇ | 17.2 | X | 273.08136 | 152.18009 | 158.02468 | 2.96804 | 0.2173710 | 0.24039059 | 2.5616775 | 20 | 3 26.1 | 20.9 |
| 375226 2008 FU ₆₅ | 17.8 | X | 230.63852 | 308.67839 | 168.86881 | 2.54681 | 0.1746787 | 0.27938195 | 2.3174151 | 20 | 9 24.9 | 20.9 |
| 375227 2008 FP ₆₈ | 17.5 | X | 77.39087 | 29.09329 | 169.20240 | 3.25313 | 0.1408602 | 0.25926642 | 2.4357826 | 20 | 7 29.3 | 20.8 |
| 375228 2008 FK ₇₇ | 17.9 | X | 246.52435 | 266.13624 | 197.19431 | 0.96545 | 0.1599597 | 0.28304069 | 2.2974010 | 20 | 9 28.4 | 20.3 |
| 375229 2008 FE ₈₃ | 17.0 | X | 312.11621 | 191.48010 | 153.69057 | 5.39326 | 0.1237506 | 0.26320587 | 2.4114171 | 20 | 7 25.1 | 19.4 |
| 375230 2008 FJ ₈₇ | 18.3 | X | 217.91335 | 103.80824 | 20.85533 | 5.17308 | 0.0751571 | 0.27890196 | 2.3200731 | 20 | 10 2.9 | 21.2 |
| 375231 2008 FZ ₉₃ | 13.5 | X | 39.78500 | 349.80836 | 191.11767 | 17.03268 | 0.0447564 | 0.08361390 | 5.1794512 | 20 | 5 3.6 | 20.3 |
| 375232 2008 FA ₉₉ | 17.2 | X | 270.67268 | 293.22230 | 97.29170 | 7.29572 | 0.0930536 | 0.26467219 | 2.4025025 | 20 | 7 30.4 | 20.0 |
| 375233 2008 FE ₁₀₁ | 17.7 | X | 205.67594 | 7.38128 | 116.08675 | 5.15293 | 0.0870294 | 0.27252578 | 2.3561214 | 20 | 9 15.0 | 20.9 |
| 375234 2008 FX ₁₀₃ | 17.3 | X | 317.40226 | 194.07730 | 76.27848 | 7.17097 | 0.1469118 | 0.24371023 | 2.5383619 | 20 | 4 13.3 | 20.2 |
| 375235 2008 FB ₁₁₂ | 17.6 | X | 324.53817 | 339.24885 | 35.13721 | 5.89400 | 0.0397129 | 0.27586263 | 2.3370830 | 20 | 10 9.3 | 20.0 |
| 375236 2008 FN ₁₁₆ | 17.2 | X | 215.29969 | 203.26090 | 204.74310 | 5.10865 | 0.0929772 | 0.25657230 | 2.4528042 | 20 | 6 11.1 | 20.6 |
| 375237 2008 FA ₁₃₆ | 13.7 | X | 351.85331 | 188.78990 | 60.25455 | 6.33433 | 0.0295349 | 0.08372304 | 5.1749488 | 20 | 5 20.3 | 20.5 |
| 375238 2008 GW ₁ | 17.5 | X | 123.30797 | 265.45597 | 285.07070 | 2.85629 | 0.1598484 | 0.26954182 | 2.3734784 | 20 | 9 10.4 | 21.1 |
| 375239 2008 GX ₈ | 18.0 | X | 290.78535 | 31.32435 | 72.55239 | 3.07977 | 0.1332553 | 0.29172722 | 2.2515663 | 20 | 12 23.8 | 19.8 |
| 375240 2008 GL ₉ | 17.2 | X | 241.50181 | 298.11850 | 37.33706 | 12.96357 | 0.2887180 | 0.23742443 | 2.5829685 | 20 | 3 27.2 | 21.8 |
| 375241 2008 GM ₁₁ | 12.8 | X | 298.91857 | 253.79150 | 41.53506 | 28.15214 | 0.0095639 | 0.08307619 | 5.2017761 | 20 | 5 9.4 | 19.7 |
| 375242 2008 GP ₂₈ | 17.7 | X | 171.55830 | 12.90715 | 147.27960 | 2.74147 | 0.1483116 | 0.27557457 | 2.3387114 | 20 | 9 20.6 | 21.1 |
| 375243 2008 GF ₃₂ | 17.2 | X | 289.31110 | 149.20024 | 98.91198 | 7.27585 | 0.1671265 | 0.23377503 | 2.6097804 | 20 | 2 2.2 | 20.9 |
| 375244 2008 GV ₃₆ | 13.7 | X | 18.13155 | 5.93510 | 198.24533 | 20.49842 | 0.0754695 | 0.08204570 | 5.2452417 | 20 | 5 4.3 | 20.3 |
| 375245 2008 GX ₄₄ | 16.8 | X | 305.59761 | 145.90672 | 219.17341 | 12.16715 | 0.06475930 | 0.26519244 | 2.3993593 | 20 | 8 17.3 | 20.0 |
| 375246 2008 GH ₅₁ | 17.8 | X | 214.77874 | 59.15593 | 42.15548 | 3.47761 | 0.1620300 | 0.27413850 | 2.3468718 | 20 | 8 17.9 | 21.3 |
| 375247 2008 GG ₅₄ | 17.0 | X | 228.36069 | 273.89040 | 35.52692 | 13.14147 | 0.2776227 | 0.22836698 | 2.6508217 | 20 | 2 18.9 | 22.0 |
| 375248 2008 GJ ₆₇ | 16.9 | X | 306.13852 | 5.89763 | 46.61262 | 7.35391 | 0.0948623 | 0.27753806 | 2.3276679 | 20 | 11 1.9 | 19.1 |
| 375249 2008 GO ₆₇ | 17.1 | X | 269.27455 | 185.26532 | 198.60883 | 11.12887 | 0.0816840 | 0.26102784 | 2.4248125 | 20 | 7 16.5 | 20.4 |
| 375250 2008 GQ ₆₉ | 17.1 | X | 58.45517 | 112.76580 | 96.15779 | 7.85693 | 0.1231232 | 0.25450783 | 2.4660504 | 20 | 7 15.3 | 20.0 |
| 375251 2008 GE ₈₂ | 16.7 | X | 263.98018 | 207.56947 | 67.22326 | 7.45193 | 0.2708223 | 0.23147661 | 2.6270256 | 20 | 2 1.2 | 21.2 |
| 375252 2008 GH ₈₉ | 13.2 | X | 9.35056 | 177.90819 | 35.76866 | 14.59906 | 0.0111631 | 0.08471544 | 5.1344550 | 20 | 4 30.2 | 20.0 |
| 375253 2008 GO ₉₁ | 14.2 | X | 268.89119 | 130.59690 | 193.10764 | 8.50424 | 0.0279338 | 0.08650194 | 5.0635155 | 20 | 5 9.0 | 21.0 |
| 375254 2008 GQ ₉₁ | 18.1 | X | 302.27843 | 56.15686 | 41.22314 | 4.53453 | 0.1820492 | 0.29250751 | 2.2475604 | 20 | — | — |
| 375255 2008 GU ₉₁ | 17.6 | X | 169.15607 | 336.87610 | 177.48701 | 3.80655 | 0.0891760 | 0.27237157 | 2.3570106 | 20 | 9 11.2 | 20.8 |
| 375256 2008 GL ₉₄ | 16.9 | X | 173.71939 | 314.80478 | 191.55245 | 22.80884 | 0.1821717 | 0.27402717 | 2.3475074 | 20 | 8 29.9 | 20.9 |
| 375257 2008 GW ₁₀₀ | 13.4 | X | 321.78054 | 218.45276 | 50.67242 | 13.60748 | 0.1148409 | 0.08164046 | 5.2625847 | 20 | 4 30.2 | 20.0 |
| 375258 2008 GS ₁₀₅ | 16.9 | X | 251.58677 | 255.07367 | 111.30098 | 3.57749 | 0.2075060 | 0.25517118 | 2.4617747 | 20 | 5 15.9 | 20.6 |
| 375259 2008 GL ₁₁₅ | 13.4 | X | 257.15563 | 284.19900 | 47.78420 | 30.83364 | 0.0802544 | 0.08353886 | 5.1825522 | 20 | 5 1.2 | 20.4 |
| 375260 2008 GC ₁₁₆ | 17.6 | X | 193.52501 | 27.32834 | 113.19728 | 5.56434 | 0.1056642 | 0.27389892 | 2.3482401 | 20 | 9 22.6 | 20.9 |
| 375261 2008 GN ₁₁₇ | 17.0 | X | 267.26101 | 180.58468 | 144.38732 | 5.48750 | 0.2274475 | 0.24179766 | 2.5517296 | 20 | 4 8.0 | 20.9 |
| 375262 2008 GT ₁₃₀ | 17.4 | X | 267.23035 | 188.36819 | 118.08446 | 5.37203 | 0.1231180 | 0.23939728 | 2.5687583 | 20 | 3 28.3 | 21.1 |
| 375263 2008 GC ₁₃₁ | 17.4 | X | 291.09860 | 143.11133 | 133.50650 | 2.62370 | 0.2147243 | 0.23658138 | 2.5891011 | 20 | 3 3.8 | 20.9 |
| 375264 2008 GR ₁₃₉ | 17.4 | X | 261.66167 | 44.92038 | 32.87978 | 6.46723 | 0.0894083 | 0.27443538 | 2.3451789 | 20 | 9 26.8 | 20.1 |
| 375265 2008 GJ ₁₄₁ | 13.3 | X | 342.75254 | 204.37911 | 57.44266 | 25.89955 | 0.0441767 | 0.08270830 | 5.2171901 | 20 | 5 22.2 | 19.9 |
| 375266 2008 GV ₁₄₁ | 13.7 | X | 133.21755 | 321.43127 | 131.28261 | 12.73193 | 0.0471828 | 0.08183853 | 5.2540900 | 20 | 5 12.5 | 20.9 |
| 375267 2008 GJ ₁₄₃ | 16.6 | X | 8.65268 | 189.40669 | 68.56514 | 16.80983 | 0.0782794 | 0.25537095 | 2.4604907 | 20 | 6 26.9 | 19.4 |
| 375268 2008 HA ₇ | 17.7 | X | 30.73996 | 249.89928 | 8.64480 | 5.88230 | 0.0882380 | 0.26424858 | 2.4050694 | 20 | 8 10.6 | 20.4 |
| 375269 2008 HY ₁₁ | 17.2 | X | 304.38558 | 101.67443 | 189.71299 | 12.12025 | 0.1338370 | 0.24368869 | 2.5385115 | 20 | 4 22.9 | 20.2 |
| 375270 2008 HL ₁₆ | 16.1 | X | 228.45331 | 222.65054 | 87.62808 | 13.89156 | 0.1664800 | 0.22930265 | 2.6436056 | 20 | 2 22.7 | 20.6 |
| 375271 2008 HC ₂₂ | 16.7 | X | 161.24476 | 289.43171 | 161.25601 | 13.30052 | 0.1617555 | 0.25206367 | 2.4819663 | 20 | 6 10.9 | 20.9 |
| 375272 2008 HE ₃₈ | 16.1 | X | 242.52842 | 244.82242 | 72.37258 | 13.96333 | 0.2726653 | 0.23174869 | 2.6249711 | 20 | 3 10.3 | 20.9 |
| 375273 2008 HA ₄₂ | 17.0 | X | 340.97014 | 202.39106 | 44.26270 | 13.06519 | 0.1340 | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|------------|------------|-----------|----|---------|----------|
| 375281 2008 JT ₃₆ | 17.2 | X | 130.42989 | 278.38757 | 210.58717 | 5.56429 | 0.0748691 | 0.25143051 | 2.4861313 | 20 | 6 21.5 | 20.6 |
| 375282 2008 KH ₂ | 17.0 | X | 249.30787 | 178.81911 | 166.67861 | 13.43987 | 0.2137725 | 0.23946628 | 2.5682648 | 20 | 4 18.9 | 21.2 |
| 375283 2008 KZ ₁₂ | 17.5 | X | 299.21027 | 122.39907 | 145.22864 | 2.49952 | 0.1649962 | 0.23737352 | 2.5833378 | 20 | 3 8.9 | 20.9 |
| 375284 2008 KJ ₂₀ | 17.6 | X | 3.06790 | 86.20891 | 142.21545 | 4.85134 | 0.0693202 | 0.24493791 | 2.5298729 | 20 | 5 6.9 | 20.5 |
| 375285 2008 KT ₂₇ | 17.1 | X | 312.43221 | 98.64061 | 162.54547 | 6.14928 | 0.1665904 | 0.23993486 | 2.5649199 | 20 | 3 18.3 | 20.2 |
| 375286 2008 KG ₃₇ | 16.6 | X | 255.27384 | 124.09773 | 210.42436 | 13.17166 | 0.1873873 | 0.23776549 | 2.5804979 | 20 | 4 9.5 | 20.7 |
| 375287 2008 KM ₄₀ | 16.8 | X | 265.02261 | 192.13410 | 111.15702 | 8.49856 | 0.1923257 | 0.23336003 | 2.6128736 | 20 | 3 15.6 | 20.9 |
| 375288 2008 LE ₁ | 17.6 | X | 289.85378 | 92.77344 | 196.22410 | 14.04435 | 0.1115891 | 0.24035396 | 2.5619375 | 20 | 3 31.8 | 21.1 |
| 375289 2008 LL ₅ | 16.9 | X | 292.39698 | 106.63822 | 206.19727 | 15.77722 | 0.1922897 | 0.24214501 | 2.5492888 | 20 | 4 24.8 | 20.1 |
| 375290 2008 LB ₁₃ | 16.5 | X | 244.23383 | 184.88963 | 89.03687 | 10.76522 | 0.1572131 | 0.22464539 | 2.6800180 | 20 | 1 21.7 | 20.9 |
| 375291 2008 LR ₁₃ | 17.4 | X | 305.41609 | 57.71503 | 188.26132 | 11.67308 | 0.1542191 | 0.23340704 | 2.6125228 | 20 | 2 16.7 | 21.0 |
| 375292 2008 LH ₁₆ | 16.3 | X | 175.53688 | 66.71664 | 285.31582 | 10.61432 | 0.3051406 | 0.21404102 | 2.7678212 | 20 | 2 23.4 | 21.5 |
| 375293 2008 OL ₁ | 16.2 | X | 194.21080 | 357.89744 | 323.64859 | 7.42145 | 0.2122275 | 0.21246453 | 2.7814959 | 20 | 2 4.6 | 20.9 |
| 375294 2008 OU ₃ | 16.4 | X | 191.75093 | 173.51305 | 165.25794 | 5.47451 | 0.1680355 | 0.21435775 | 2.7650941 | 20 | 2 20.8 | 21.1 |
| 375295 2008 OP ₉ | 16.2 | X | 167.31867 | 222.73536 | 135.98294 | 17.70611 | 0.2470942 | 0.21207990 | 2.7848580 | 20 | 2 29.7 | 21.1 |
| 375296 2008 PH ₇ | 16.5 | X | 193.10222 | 67.06660 | 259.61456 | 6.63655 | 0.2103350 | 0.21332580 | 2.7740043 | 20 | 2 6.8 | 21.4 |
| 375297 2008 PQ ₇ | 16.7 | X | 321.29289 | 335.04708 | 290.14468 | 10.92189 | 0.1963818 | 0.23229792 | 2.6208319 | 20 | 3 30.4 | 20.1 |
| 375298 2008 PP ₁₀ | 16.4 | X | 194.03294 | 194.12390 | 140.58434 | 15.26478 | 0.1919850 | 0.21409314 | 2.7673720 | 20 | 2 19.4 | 21.1 |
| 375299 2008 PZ ₁₀ | 16.2 | X | 194.17842 | 334.66235 | 5.75818 | 18.10088 | 0.2280836 | 0.21759616 | 2.7375910 | 20 | 3 2.1 | 21.1 |
| 375300 2008 PN ₁₆ | 16.7 | X | 207.26169 | 158.93837 | 180.88794 | 14.42839 | 0.2449707 | 0.21771084 | 2.7366295 | 20 | 3 4.2 | 21.5 |
| 375301 2008 PS ₁₆ | 16.2 | X | 183.88702 | 149.08113 | 182.45188 | 9.95409 | 0.2474796 | 0.20994090 | 2.8037418 | 20 | 2 6.8 | 21.3 |
| 375302 2008 PJ ₂₁ | 16.6 | X | 156.48702 | 268.32401 | 79.25520 | 7.68064 | 0.3481942 | 0.20560411 | 2.8430305 | 20 | 2 15.3 | 21.8 |
| 375303 2008 QU ₁₂ | 16.1 | X | 174.49728 | 21.31385 | 331.88709 | 13.31523 | 0.2016374 | 0.21164197 | 2.7886982 | 20 | 2 24.5 | 20.7 |
| 375304 2008 QM ₂₁ | 16.2 | X | 106.30268 | 90.39123 | 313.94320 | 13.90169 | 0.1573886 | 0.20392181 | 2.8586453 | 20 | 2 14.6 | 20.2 |
| 375305 2008 QR ₂₁ | 16.6 | X | 88.11556 | 175.76794 | 220.61312 | 8.55055 | 0.0838156 | 0.19916884 | 2.9039454 | 20 | 1 3.8 | 19.5 |
| 375306 2008 QT ₃₃ | 16.2 | X | 146.02234 | 220.68112 | 172.40855 | 8.60618 | 0.0869639 | 0.21045984 | 2.7991310 | 20 | 3 9.2 | 20.3 |
| 375307 2008 QT ₃₉ | 16.9 | X | 125.23763 | 153.04900 | 234.96186 | 1.02618 | 0.0822946 | 0.20248348 | 2.8721668 | 20 | 2 8.8 | 21.0 |
| 375308 2008 RV ₁₀ | 16.6 | X | 183.36078 | 354.52400 | 11.00179 | 5.30021 | 0.1250738 | 0.21310915 | 2.7758840 | 20 | 3 16.6 | 20.9 |
| 375309 2008 RJ ₁₇ | 16.5 | X | 157.11328 | 279.86560 | 344.36441 | 11.97755 | 0.1869379 | 0.18722516 | 3.0261695 | 20 | 12 28.5 | 21.7 |
| 375310 2008 RR ₁₈ | 16.2 | X | 50.76759 | 212.21729 | 193.44671 | 11.13143 | 0.0838238 | 0.18993909 | 2.9972743 | 20 | — | — |
| 375311 2008 RM ₂₆ | 16.0 | X | 342.28450 | 19.48585 | 169.99457 | 12.62503 | 0.0603708 | 0.20931612 | 2.8093182 | 20 | 2 12.5 | 19.7 |
| 375312 2008 RY ₃₄ | 17.0 | X | 219.89888 | 118.67424 | 181.38479 | 8.98921 | 0.1670681 | 0.20971707 | 2.8057364 | 20 | 1 29.6 | 21.8 |
| 375313 2008 RD ₃₉ | 16.8 | X | 152.26951 | 222.11445 | 171.82080 | 5.77175 | 0.0353655 | 0.21149487 | 2.7899911 | 20 | 3 12.6 | 20.5 |
| 375314 2008 RG ₄₁ | 17.4 | X | 109.60369 | 29.75558 | 12.44949 | 2.82203 | 0.1868903 | 0.20071836 | 2.8889808 | 20 | 2 23.3 | 21.4 |
| 375315 2008 RG ₄₈ | 15.9 | X | 241.93252 | 274.04249 | 34.64345 | 7.37973 | 0.1781993 | 0.21834340 | 2.7313415 | 20 | 3 2.5 | 20.3 |
| 375316 2008 RK ₆₂ | 16.5 | X | 82.77381 | 51.01985 | 0.83069 | 11.30855 | 0.0440418 | 0.19999386 | 2.8959537 | 20 | 1 14.7 | 20.6 |
| 375317 2008 RC ₆₉ | 16.3 | X | 125.58121 | 330.87894 | 356.74084 | 20.88612 | 0.13292878 | 0.19054913 | 2.9908737 | 20 | — | — |
| 375318 2008 RO ₇₉ | 16.3 | X | 184.12139 | 346.04931 | 26.89356 | 5.68594 | 0.1803241 | 0.21627949 | 2.7486904 | 20 | 3 27.4 | 20.8 |
| 375319 2008 RK ₈₂ | 16.6 | X | 343.12588 | 277.03230 | 295.26399 | 4.24184 | 0.1317617 | 0.22066329 | 2.7121642 | 20 | 3 4.9 | 19.7 |
| 375320 2008 RW ₈₃ | 16.2 | X | 29.96970 | 244.87924 | 173.14478 | 14.21714 | 0.1167006 | 0.19005161 | 2.9960911 | 20 | — | — |
| 375321 2008 RV ₈₇ | 16.4 | X | 64.22552 | 156.52665 | 223.36072 | 9.15340 | 0.0996243 | 0.18558869 | 3.0439327 | 20 | — | — |
| 375322 2008 RJ ₉₈ | 16.2 | X | 84.31475 | 44.24800 | 312.78086 | 9.26836 | 0.0792695 | 0.18948164 | 3.0020963 | 20 | — | — |
| 375323 2008 RQ ₁₀₁ | 16.5 | X | 186.76429 | 131.33315 | 177.43105 | 10.14137 | 0.0626209 | 0.20180978 | 2.8785553 | 20 | 1 9.4 | 21.0 |
| 375324 2008 RA ₁₀₂ | 16.8 | X | 193.50918 | 286.40107 | 4.34986 | 12.95835 | 0.0610022 | 0.19892139 | 2.9063532 | 20 | — | — |
| 375325 2008 RZ ₁₀₂ | 16.6 | X | 93.51531 | 239.04861 | 208.40440 | 6.23657 | 0.0972249 | 0.20690818 | 2.8310721 | 20 | 3 15.3 | 20.4 |
| 375326 2008 RY ₁₀₇ | 16.9 | X | 236.83710 | 244.76674 | 4.97234 | 1.78526 | 0.0136443 | 0.20256014 | 2.8714420 | 20 | — | — |
| 375327 2008 RM ₁₁₇ | 16.5 | X | 169.23974 | 194.29775 | 192.76031 | 6.06888 | 0.0428502 | 0.21555513 | 2.7548448 | 20 | 3 23.7 | 20.3 |
| 375328 2008 RN ₁₁₇ | 16.4 | X | 153.39139 | 137.01725 | 188.91261 | 9.86801 | 0.0709053 | 0.19896371 | 2.9059411 | 20 | — | — |
| 375329 2008 RJ ₁₃₀ | 16.4 | X | 288.18370 | 305.04143 | 199.70394 | 8.90960 | 0.0597122 | 0.17587116 | 3.1550504 | 20 | — | — |
| 375330 2008 RZ ₁₃₁ | 16.1 | X | 163.63956 | 255.37831 | 114.92788 | 5.07443 | 0.1250737 | 0.21034414 | 2.8001574 | 20 | 3 4.6 | 20.4 |
| 375331 2008 RR ₁₃₆ | 16.0 | X | 317.70589 | 182.89409 | 21.40017 | 15.40204 | 0.0771765 | 0.20520583 | 2.8467080 | 20 | 2 4.6 | 20.1 |
| 375332 2008 RD ₁₄₂ | 16.0 | X | 59.42438 | 112.45000 | 276.83307 | 7.90609 | 0.0477918 | 0.18891896 | 3.0080544 | 20 | — | — |
| 375333 2008 RJ ₁₄₃ | 16.8 | X | 139.94089 | 2.96180 | 20.41558 | 2.08971 | 0.0738282 | 0.20604450 | 2.8389780 | 20 | 2 19.6 | 20.9 |
| 375334 2008 RF ₁₄₅ | 17.0 | X | 2.82656 | 105.88050 | 33.61868 | 2.26785 | 0.0135418 | 0.20042723 | 2.8917776 | 20 | 1 15.7 | 20.9 |
| 375335 2008 SN | 16.4 | X | 155.88759 | 56.38659 | 310.14175 | 11.66757 | 0.1168295 | 0.21094343 | 2.7948514 | 20 | 2 16.9 | 20.7 |
| 375336 2008 SV | 16.0 | X | 140.81058 | 321.30470 | 57.65243 | 10.10159 | 0.1190504 | 0.20660161 | 2.8338721 | 20 | 2 24.0 | 20.4 |
| 375337 2008 SM ₃ | 16.1 | X | 155.27323 | 248.72817 | 170.68978 | 13.00259 | 0.1633473 | 0.21509000 | 2.7588149 | 20 | 4 28.6 | 20.7 |
| 375338 2008 SN ₈ | 16.1 | X | 126.32470 | 98.60903 | 328.19638 | 8.12364 | 0.1455613 | 0.21259502 | 2.7803576 | 20 | 4 1.3 | 20.3 |
| 375339 2008 SN ₂₀ | 16.1 | X | 26.72937 | 91.36852 | 356.17827 | 10.06480 | 0.0647314 | 0.19188315 | 2.9769954 | 20 | — | — |
| 375340 2008 SZ ₂₀ | 16.5 | X | 27.60227 | 329.56735 | 180.57000 | 8.86522 | 0.1001427 | 0.21350113 | 2.7724854 | 20 | 2 28.0 | 19.8 |
| 375341 2008 SL ₂₁ | 16.7 | X | 140.70425 | 140.75928 | 321.44171 | 4.93877 | 0.2089711 | 0.22354066 | 2.6888404 | 20 | 6 6.6 | 21.2 |
| 375342 2008 SU ₂₇ | 16.7 | X | 174.86683 | 308.47904 | 26.29904 | 2.18632 | 0.0678544 | 0.20332698 | 2.8642178 | 20 | 1 29.7 | 21.0 |
| 375343 2008 SJ ₃₀ | 16.6 | X | 172.18936 | 189.24163 | 174.70368 | 9.48130 | 0.2036598 | 0.21304936 | 2.7764033 | 20 | 3 6.1 | 21.2 |
| 375344 2008 SV ₃₁ | 16.7 | X | 218.19005 | 104.26837 | 229.29903 | 6.63771 | 0.2323638 | 0.21475962 | 2.7616436 | 20 | 3 4.1 | 21.6 |
| 375345 2008 SZ ₄₉ | 17.3 | X | 119.27775 | 44.39895 | 278.78617 | 0.51854 | 0.1897945 | 0.18996657 | 2.9969852 | 20 | — | — |
| 375346 2008 SA ₅₀ | 17.0 | X | 210.93735 | 334.49659 | 355.87055 | 4.15572 | 0.0710494 | 0.21137745 | 2.7910243 | 20 | 3 1.5 | 21.2 |
| 375347 2008 SU ₅₀ | 16.6 | X | 347.19565 | 304.43688 | 190.29165 | 1.57256 | 0.0352781 | 0.19527813 | 2.9423905 | 20 | — | — |
| 375348 2008 SX ₅₁ | 16.7 | X | 68.34220 | 232.90907 | 199.07770 | 1.66823 | 0.1470156 | 0.19602592 | 2.9349028 | 20 | 1 30.2 | 20.3 |
| 375349 2008 SE ₅₂ | 16.8 | X | 141.72032 | 167.14544 | 190.41057 | 17.00335 | 0.1703477 | 0.20017638 | 2.8941930 | 20 | 1 28.1 | 21.6 |
| 375350 2008 SE ₅₈ | 16.4 | X | 166.94392 | 207.35337 | 111.65405 | 1.41518 | 0.1528707 | 0.19655771 | 2.9296067 | 20 | 1 8.9 | 21.1 |
| 375351 2008 SL ₅₈ | 16.7 | X | 162.64791 | 246.81694 | 102.41236 | 2.26702 | 0.1121564 | 0.20086662 | 2.8875590 | 20 | 2 6.3 | 21.1 |
| 375352 2008 SS ₅₈ | 16.4 | X | 123.00672 | 320.31096 | 35.41909 | 10.43497 | 0.0713361 | 0.19210696 | 2.9746827 | 20 | — | — |
| 375353 2008 SP ₆₀ | 16.3 | X | 147.33709 | 150.43646 | 247.15019 | 3.18847 | 0.1094373 | 0.20924282 | 2.8099743 | 20 | 3 16.9 | 20.6 |
| 375354 2008 SX ₇₆ | 16.7 | X | 111.45956 | 26 | | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 375361 2008 SN ₁₁₆ | 16.1 | X | 35.64668 | 261.60090 | 176.41770 | 9.43333 | 0.1317244 | 0.18768936 | 3.0211777 | 20 | — | — |
| 375362 2008 SW ₁₁₉ | 16.7 | X | 60.71427 | 236.20402 | 193.24755 | 2.22337 | 0.0235382 | 0.19296271 | 2.9658814 | 20 | 1 4.1 | 20.6 |
| 375363 2008 SG ₁₂₀ | 16.0 | X | 69.66177 | 328.00800 | 27.73548 | 9.55362 | 0.1479832 | 0.18029311 | 3.1032490 | 20 | — | — |
| 375364 2008 SR ₁₂₁ | 16.9 | X | 76.87340 | 44.88939 | 8.05934 | 2.24607 | 0.1245114 | 0.19243514 | 2.9712998 | 20 | 1 17.5 | 20.6 |
| 375365 2008 SB ₁₂₄ | 16.1 | X | 173.38177 | 29.09206 | 231.25711 | 4.36199 | 0.1651088 | 0.18406270 | 3.0607335 | 20 | — | — |
| 375366 2008 SU ₁₂₄ | 16.6 | X | 93.14072 | 217.38792 | 213.27955 | 9.81711 | 0.1044024 | 0.19975581 | 2.8982540 | 20 | 2 22.6 | 20.6 |
| 375367 2008 SY ₁₂₈ | 16.0 | X | 356.57785 | 225.36463 | 219.41575 | 15.14591 | 0.0253202 | 0.18045506 | 3.1013920 | 20 | — | — |
| 375368 2008 SZ ₁₂₈ | 16.7 | X | 92.15519 | 133.15882 | 222.47977 | 9.55421 | 0.0975755 | 0.18415209 | 3.0597430 | 20 | — | — |
| 375369 2008 SS ₁₃₀ | 16.3 | X | 59.31987 | 171.85016 | 234.23331 | 2.56910 | 0.1151726 | 0.18650501 | 3.0339543 | 20 | — | — |
| 375370 2008 SS ₁₃₂ | 16.1 | X | 58.60315 | 201.54206 | 214.38732 | 9.47750 | 0.0947016 | 0.18781031 | 3.0198806 | 20 | — | — |
| 375371 2008 SD ₁₃₃ | 16.4 | X | 295.74469 | 290.48059 | 318.87706 | 1.12436 | 0.0358118 | 0.20544729 | 2.8444771 | 20 | 3 2.9 | 20.1 |
| 375372 2008 SF ₁₃₆ | 16.6 | X | 85.58077 | 158.25251 | 221.83611 | 9.29440 | 0.1099764 | 0.18959091 | 3.0009427 | 20 | — | — |
| 375373 2008 SN ₁₄₀ | 15.9 | X | 164.71981 | 30.43703 | 305.16390 | 11.23704 | 0.0698507 | 0.20067974 | 2.8893513 | 20 | 1 20.1 | 20.2 |
| 375374 2008 SS ₁₄₆ | 16.3 | X | 97.40125 | 31.05853 | 327.25850 | 8.70592 | 0.0734880 | 0.18969004 | 2.9998972 | 20 | — | — |
| 375375 2008 SR ₁₄₇ | 17.0 | X | 135.85940 | 26.26707 | 9.56712 | 5.34388 | 0.2965835 | 0.20447921 | 2.8534479 | 20 | 3 21.8 | 21.9 |
| 375376 2008 SF ₁₄₉ | 16.0 | X | 294.34360 | 308.84366 | 225.54430 | 9.64890 | 0.0394078 | 0.19212840 | 2.9744614 | 20 | — | — |
| 375377 2008 SF ₁₄₉ | 17.2 | X | 127.87727 | 181.19040 | 197.39148 | 17.45246 | 0.1185369 | 0.20219313 | 2.8749157 | 20 | 2 1.1 | 21.7 |
| 375378 2008 SX ₁₅₃ | 16.1 | X | 230.14401 | 283.65463 | 30.98340 | 4.20999 | 0.0896231 | 0.21353227 | 2.7722158 | 20 | 3 2.7 | 20.2 |
| 375379 2008 SP ₁₆₃ | 16.5 | X | 74.89498 | 170.37134 | 177.00250 | 12.16282 | 0.1741978 | 0.18272357 | 3.0756695 | 20 | — | — |
| 375380 2008 SJ ₁₆₈ | 16.8 | X | 184.43909 | 68.15814 | 302.77160 | 1.46478 | 0.1992768 | 0.21252370 | 2.8097996 | 20 | 3 23.9 | 21.4 |
| 375381 2008 SN ₁₈₀ | 17.0 | X | 68.96887 | 37.08686 | 29.41088 | 2.87747 | 0.1648273 | 0.19288196 | 2.9667092 | 20 | 1 28.7 | 20.6 |
| 375382 2008 SU ₁₈₃ | 16.2 | X | 324.18546 | 100.72428 | 36.81080 | 10.88352 | 0.0334044 | 0.18603451 | 3.0390677 | 20 | — | — |
| 375383 2008 SY ₁₉₇ | 16.1 | X | 51.38791 | 200.29489 | 200.34325 | 11.99554 | 0.0628005 | 0.18242271 | 3.0790503 | 20 | — | — |
| 375384 2008 SE ₁₉₈ | 16.6 | X | 90.39311 | 298.36029 | 105.37883 | 2.77401 | 0.0244170 | 0.19217822 | 2.9739473 | 20 | 1 10.6 | 20.8 |
| 375385 2008 SO ₁₉₈ | 15.7 | X | 2.06430 | 255.48694 | 201.61179 | 12.86561 | 0.0881235 | 0.18174659 | 3.0866819 | 20 | — | — |
| 375386 2008 SJ ₂₀₀ | 16.5 | X | 166.70983 | 41.51338 | 248.81867 | 4.00542 | 0.2013499 | 0.19011973 | 2.9953754 | 20 | — | — |
| 375387 2008 SW ₂₀₁ | 16.2 | X | 13.79008 | 89.26474 | 19.04585 | 10.11039 | 0.0729288 | 0.18871403 | 3.0102317 | 20 | — | — |
| 375388 2008 SB ₂₀₄ | 16.1 | X | 289.95302 | 310.47327 | 190.81122 | 9.21651 | 0.0544660 | 0.17613445 | 3.1519054 | 20 | — | — |
| 375389 2008 SP ₂₁₉ | 16.4 | X | 212.64493 | 74.09415 | 264.38365 | 3.05982 | 0.0754191 | 0.21304213 | 2.7764661 | 20 | 3 10.8 | 20.7 |
| 375390 2008 SO ₂₂₀ | 17.1 | X | 143.51983 | 27.80548 | 344.63543 | 1.46551 | 0.0838423 | 0.20165557 | 2.8800226 | 20 | 2 11.4 | 21.1 |
| 375391 2008 SK ₂₂₄ | 16.4 | X | 107.84388 | 52.50360 | 16.87567 | 15.08247 | 0.1378830 | 0.20311145 | 2.8662437 | 20 | 3 21.4 | 20.5 |
| 375392 2008 SP ₂₂₄ | 16.3 | X | 245.61219 | 5.15936 | 210.59900 | 7.58531 | 0.1027501 | 0.18774898 | 3.0205382 | 20 | — | — |
| 375393 2008 SX ₂₃₆ | 16.5 | X | 6.34141 | 257.03599 | 200.94749 | 9.38694 | 0.0610168 | 0.19035403 | 2.9929169 | 20 | — | — |
| 375394 2008 SJ ₂₃₈ | 16.1 | X | 359.17626 | 267.16942 | 181.10446 | 9.61436 | 0.0427289 | 0.18265550 | 3.0764336 | 20 | — | — |
| 375395 2008 SC ₂₄₀ | 16.2 | X | 35.25197 | 262.20169 | 170.37181 | 8.59969 | 0.0880902 | 0.18677764 | 3.0310013 | 20 | — | — |
| 375396 2008 SN ₂₄₂ | 16.9 | X | 34.55823 | 248.27780 | 172.93022 | 0.92114 | 0.1667691 | 0.18280164 | 3.0747938 | 20 | — | — |
| 375397 2008 SO ₂₄₂ | 16.0 | X | 89.36185 | 142.57463 | 211.01673 | 6.57903 | 0.0360255 | 0.18193583 | 3.0845410 | 20 | — | — |
| 375398 2008 ST ₂₄₉ | 16.3 | X | 171.36385 | 93.29714 | 226.69577 | 8.61963 | 0.0503367 | 0.19869572 | 2.9085534 | 20 | 1 5.7 | 20.6 |
| 375399 2008 SS ₂₅₀ | 15.7 | X | 221.10642 | 353.04640 | 241.31251 | 8.06834 | 0.0444594 | 0.19036973 | 2.9927524 | 20 | — | — |
| 375400 2008 SO ₂₅₀ | 16.9 | X | 152.51481 | 294.35668 | 36.44294 | 2.12189 | 0.0859073 | 0.19613657 | 2.9337989 | 20 | 1 3.3 | 21.1 |
| 375401 2008 SX ₂₅₂ | 16.2 | X | 39.15120 | 84.97296 | 349.13117 | 7.14713 | 0.0867925 | 0.18917507 | 3.0053388 | 20 | — | — |
| 375402 2008 SQ ₂₅₄ | 16.2 | X | 104.11411 | 154.94840 | 253.53671 | 10.12326 | 0.1686955 | 0.19978975 | 2.8979258 | 20 | 2 16.7 | 20.5 |
| 375403 2008 SM ₂₅₅ | 15.8 | X | 169.11329 | 69.61690 | 241.47430 | 10.51251 | 0.0865696 | 0.19277051 | 2.9678525 | 20 | — | — |
| 375404 2008 SO ₂₅₈ | 15.9 | X | 58.86815 | 342.89235 | 56.86003 | 10.18536 | 0.0535810 | 0.18105010 | 3.0945930 | 20 | — | — |
| 375405 2008 ST ₂₆₂ | 17.0 | X | 231.12972 | 101.00252 | 195.29147 | 1.57202 | 0.0395025 | 0.20461249 | 2.8522086 | 20 | 2 12.2 | 21.0 |
| 375406 2008 SO ₂₆₅ | 16.0 | X | 63.59173 | 171.33575 | 233.02108 | 8.01697 | 0.0536911 | 0.18572641 | 3.0424277 | 20 | — | — |
| 375407 2008 SW ₂₆₅ | 16.8 | X | 93.70548 | 341.52161 | 58.24295 | 1.79042 | 0.1495806 | 0.19270532 | 2.9685218 | 20 | 1 27.6 | 20.7 |
| 375408 2008 SL ₂₆₈ | 16.4 | X | 197.02465 | 110.77573 | 209.79625 | 13.41250 | 0.1725678 | 0.20323258 | 2.8651047 | 20 | 2 1.7 | 21.4 |
| 375409 2008 SK ₂₆₉ | 15.7 | X | 117.89589 | 265.57635 | 143.20901 | 15.64927 | 0.1483586 | 0.20172658 | 2.8793467 | 20 | 3 7.8 | 19.9 |
| 375410 2008 SA ₂₇₄ | 16.7 | X | 53.22606 | 24.48265 | 76.94069 | 2.76880 | 0.0555593 | 0.19629247 | 2.9322452 | 20 | 2 5.8 | 20.5 |
| 375411 2008 SP ₂₈₂ | 15.5 | X | 142.98374 | 49.06273 | 213.89599 | 16.39528 | 0.1926638 | 0.17612589 | 3.1520076 | 20 | 12 12.7 | 21.0 |
| 375412 2008 SM ₂₈₃ | 16.5 | X | 106.37921 | 103.85346 | 221.67282 | 8.07139 | 0.2110526 | 0.17993667 | 3.1073458 | 20 | — | — |
| 375413 2008 ST ₂₈₃ | 16.8 | X | 109.65120 | 49.33770 | 341.04130 | 7.14040 | 0.0436742 | 0.19764977 | 2.9188056 | 20 | 1 21.4 | 20.9 |
| 375414 2008 SR ₂₈₅ | 17.0 | X | 219.01946 | 100.67990 | 243.05554 | 3.31961 | 0.1385900 | 0.21395807 | 2.7685366 | 20 | 3 21.3 | 21.5 |
| 375415 2008 SZ ₂₈₆ | 16.1 | X | 78.61096 | 103.63903 | 296.08363 | 8.21872 | 0.1395352 | 0.19116504 | 2.9844460 | 20 | 1 5.6 | 19.8 |
| 375416 2008 SF ₂₉₃ | 16.4 | X | 69.14038 | 302.40157 | 108.16780 | 4.53767 | 0.1926618 | 0.18998030 | 2.9968408 | 20 | 1 12.0 | 19.6 |
| 375417 2008 SJ ₂₉₇ | 16.0 | X | 85.30593 | 209.28240 | 167.82970 | 15.25100 | 0.1568972 | 0.18887128 | 3.0085606 | 20 | — | — |
| 375418 2008 SJ ₂₉₈ | 15.7 | X | 356.17236 | 102.82447 | 9.93649 | 9.66925 | 0.0753667 | 0.18641053 | 3.0349794 | 20 | — | — |
| 375419 2008 SE ₃₀₂ | 15.6 | X | 270.05848 | 156.29127 | 9.77957 | 10.92367 | 0.0575489 | 0.17944740 | 3.1129915 | 20 | — | — |
| 375420 2008 SD ₃₀₆ | 16.0 | X | 180.55752 | 82.64344 | 218.10497 | 9.90977 | 0.0259778 | 0.19630380 | 2.9321324 | 20 | — | — |
| 375421 2008 SM ₃₀₇ | 15.9 | X | 238.72851 | 251.19379 | 45.82887 | 20.73156 | 0.1970884 | 0.21046290 | 2.7991039 | 20 | 2 21.5 | 21.0 |
| 375422 2008 SV ₃₀₇ | 16.1 | X | 92.15799 | 213.69596 | 154.77301 | 10.15559 | 0.1210729 | 0.18624495 | 3.0367780 | 20 | — | — |
| 375423 2008 SP ₃₀₈ | 15.8 | X | 104.49500 | 38.04721 | 326.94969 | 11.72285 | 0.1516107 | 0.19017941 | 2.9947487 | 20 | — | — |
| 375424 2008 SZ ₃₀₉ | 16.4 | X | 27.24681 | 355.61077 | 56.92580 | 3.95864 | 0.0990967 | 0.17606935 | 3.1526824 | 20 | — | — |
| 375425 2008 TT ₆ | 16.7 | X | 63.89756 | 144.57249 | 247.60455 | 1.22477 | 0.2247286 | 0.18818036 | 3.0159203 | 20 | — | — |
| 375426 2008 TF ₁₀ | 16.3 | X | 22.37917 | 68.32146 | 339.48298 | 3.96201 | 0.1367325 | 0.18061821 | 3.0995241 | 20 | — | — |
| 375427 2008 TJ ₁₂ | 16.5 | X | 22.42168 | 81.82540 | 358.42312 | 5.94885 | 0.1097805 | 0.18842158 | 3.0133457 | 20 | — | — |
| 375428 2008 TM ₂₇ | 16.3 | X | 143.60203 | 38.76377 | 13.24654 | 6.07068 | 0.0752802 | 0.21096476 | 2.7946629 | 20 | 3 29.3 | 20.4 |
| 375429 2008 TN ₃₀ | 16.4 | X | 97.68902 | 230.57307 | 200.71834 | 5.29398 | 0.0546732 | 0.20232143 | 2.8737002 | 20 | 2 23.6 | 20.3 |
| 375430 2008 TA ₃₃ | 17.0 | X | 131.84737 | 266.16598 | 141.37264 | 2.77114 | 0.0662076 | 0.20504753 | 2.8481730 | 20 | 3 10.1 | 21.1 |
| 375431 2008 TK ₃₈ | 15.9 | X | 130.28115 | 292.97415 | 79.42476 | 9.28131 | 0.2286050 | 0.19999898 | 2.8959042 | 20 | 2 15.9 | 20.6 |
| 375432 2008 TY ₅₁ | 16.7 | X | 207.69273 | 98.27169 | 171.56120 | 2.04440 | 0.0352852 | 0.19396037 | 2.9557025 | 20 | — | — |
| 375433 2008 TZ ₅₁ | 16.1 | X | 86.72419 | 330.30640 | 21.96115 | 11.59904 | 0.1045964 | 0.18526941 | 3.0474288 | 20 | — | — |
| 375434 2008 TZ ₅₂ | 16.8 | X | 104.79812 | 328.48730 | 51.36641 | 2.82939 | 0.1035335 | 0.19443829 | 2.9508572 | 20 | 1 10.3 | 20.9 |
| 375435 2008 TK ₅₆ | 16.5 | X | 111.26169 | 119.38602 | 2 | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 375441 2008 TG ₇₈ | 17.0 | X | 27.74839 | 28.34047 | 45.08349 | 1.75880 | 0.1873409 | 0.18578107 | 3.0418309 | 20 | — | — |
| 375442 2008 TT ₇₉ | 16.0 | X | 259.06673 | 320.59346 | 212.81034 | 8.91211 | 0.0324377 | 0.17633842 | 3.1494744 | 20 | — | — |
| 375443 2008 TM ₈₄ | 16.6 | X | 138.58245 | 2.18392 | 3.08812 | 1.42636 | 0.0856148 | 0.19941018 | 2.9016020 | 20 | 1 28.9 | 20.8 |
| 375444 2008 TN ₈₆ | 17.4 | X | 67.50933 | 171.61694 | 251.42220 | 0.89034 | 0.2312881 | 0.19275125 | 2.9680503 | 20 | 1 30.2 | 20.8 |
| 375445 2008 TQ ₈₇ | 16.6 | X | 96.40053 | 237.25298 | 121.29689 | 3.82905 | 0.1685875 | 0.18758351 | 3.0223141 | 20 | — | — |
| 375446 2008 TZ ₈₇ | 16.2 | X | 59.66376 | 194.33169 | 181.76298 | 9.21027 | 0.0888895 | 0.18103280 | 3.0947902 | 20 | — | — |
| 375447 2008 TA ₉₀ | 16.5 | X | 45.01567 | 152.24176 | 210.18167 | 9.11288 | 0.0782401 | 0.17428476 | 3.1741670 | 20 | 12 23.7 | 21.1 |
| 375448 2008 TS ₉₀ | 16.3 | X | 183.79167 | 256.00015 | 82.24451 | 3.18615 | 0.0730932 | 0.20102957 | 2.8859984 | 20 | 2 13.2 | 20.5 |
| 375449 2008 TL ₉₂ | 17.1 | X | 104.10446 | 267.29994 | 151.94845 | 2.49899 | 0.0573217 | 0.20366075 | 2.8610876 | 20 | 2 18.5 | 21.0 |
| 375450 2008 TA ₉₄ | 16.7 | X | 156.37078 | 299.63067 | 72.44954 | 3.04779 | 0.0883310 | 0.20511981 | 2.8475038 | 20 | 2 25.9 | 20.9 |
| 375451 2008 TV ₉₅ | 16.2 | X | 334.15593 | 115.23740 | 331.88952 | 9.49853 | 0.0695185 | 0.17865918 | 3.1221408 | 20 | — | — |
| 375452 2008 TO ₉₆ | 16.0 | X | 149.11678 | 45.79351 | 229.78375 | 8.74761 | 0.0431774 | 0.18184721 | 3.0855431 | 20 | — | — |
| 375453 2008 TO ₁₀₀ | 16.6 | X | 205.51006 | 106.83979 | 209.13949 | 7.33878 | 0.0866985 | 0.20461694 | 2.8521673 | 20 | 2 5.1 | 21.1 |
| 375454 2008 TY ₁₀₂ | 16.5 | X | 57.22790 | 60.93056 | 27.70541 | 11.51436 | 0.1511999 | 0.19496926 | 2.9454972 | 20 | 2 9.5 | 20.2 |
| 375455 2008 TC ₁₀₆ | 16.8 | X | 95.41543 | 356.01483 | 37.44933 | 6.53274 | 0.0973990 | 0.19534794 | 2.9416895 | 20 | 1 14.9 | 20.8 |
| 375456 2008 TZ ₁₀₈ | 16.3 | X | 289.17821 | 252.54268 | 47.60145 | 10.13139 | 0.0214315 | 0.21986519 | 2.7187237 | 20 | 5 1.0 | 19.7 |
| 375457 2008 TC ₁₂₂ | 18.1 | X | 208.97706 | 161.93563 | 209.39767 | 20.45887 | 0.0814882 | 0.38674942 | 1.8657335 | 20 | 4 6.9 | 20.2 |
| 375458 2008 TT ₁₂₄ | 16.3 | X | 334.46783 | 148.57950 | 357.96117 | 10.30201 | 0.0235267 | 0.19311323 | 2.9643401 | 20 | — | — |
| 375459 2008 TA ₁₂₅ | 16.7 | X | 53.00019 | 162.65408 | 220.42077 | 8.30608 | 0.0760495 | 0.18309674 | 3.0714890 | 20 | — | — |
| 375460 2008 TS ₁₂₈ | 17.1 | X | 68.60110 | 265.03460 | 127.99948 | 2.48879 | 0.1971168 | 0.18896949 | 3.0075181 | 20 | — | — |
| 375461 2008 TG ₁₄₈ | 16.7 | X | 278.54184 | 149.26398 | 52.18264 | 3.52373 | 0.0505658 | 0.19419917 | 2.9532789 | 20 | — | — |
| 375462 2008 TO ₁₅₁ | 16.5 | X | 167.08199 | 278.76003 | 87.71746 | 2.84984 | 0.0781821 | 0.20738059 | 2.8267711 | 20 | 2 29.4 | 20.8 |
| 375463 2008 TD ₁₅₃ | 16.0 | X | 114.34361 | 103.55210 | 253.00403 | 8.38082 | 0.0734148 | 0.19043232 | 2.9920966 | 20 | — | — |
| 375464 2008 TF ₁₆₄ | 15.8 | X | 33.68207 | 82.59526 | 15.15895 | 10.56982 | 0.1053561 | 0.18919508 | 3.0051270 | 20 | 1 8.3 | 19.6 |
| 375465 2008 TN ₁₆₅ | 16.4 | X | 92.96848 | 273.17311 | 41.14067 | 16.82412 | 0.2510816 | 0.17682253 | 3.1437233 | 20 | — | — |
| 375466 2008 TA ₁₆₆ | 16.1 | X | 24.08119 | 163.34939 | 234.82931 | 17.78849 | 0.0567655 | 0.17862801 | 3.1225041 | 20 | — | — |
| 375467 2008 TM ₁₆₉ | 16.2 | X | 237.58914 | 158.61440 | 49.56914 | 5.49750 | 0.0874826 | 0.18078206 | 3.0976511 | 20 | — | — |
| 375468 2008 TZ ₁₇₁ | 16.1 | X | 98.08998 | 291.90573 | 61.59717 | 11.35721 | 0.1481512 | 0.18523794 | 3.0477740 | 20 | — | — |
| 375469 2008 TZ ₁₇₇ | 15.5 | X | 27.37195 | 270.46596 | 178.77585 | 16.39464 | 0.1875984 | 0.18228990 | 3.0805456 | 20 | — | — |
| 375470 2008 TZ ₁₈₃ | 15.7 | X | 303.58862 | 147.14586 | 337.17145 | 9.79894 | 0.1306447 | 0.17588319 | 3.1549065 | 20 | — | — |
| 375471 2008 TD ₁₈₆ | 15.7 | X | 140.51589 | 244.58410 | 71.03029 | 13.77864 | 0.1697990 | 0.18956342 | 3.0012329 | 20 | — | — |
| 375472 2008 TB ₁₈₈ | 16.6 | X | 125.06948 | 113.64719 | 230.18479 | 8.16857 | 0.0976602 | 0.19091645 | 2.9870362 | 20 | — | — |
| 375473 2008 UH ₁ | 15.9 | X | 22.32147 | 87.60835 | 6.91425 | 10.70971 | 0.0713923 | 0.19205748 | 2.9751936 | 20 | — | — |
| 375474 2008 US ₇ | 16.8 | X | 140.58802 | 128.66246 | 202.97065 | 1.59760 | 0.0857371 | 0.19524289 | 2.9427445 | 20 | — | — |
| 375475 2008 UB ₁₂ | 16.3 | X | 147.78742 | 53.67653 | 298.11808 | 0.96333 | 0.0955237 | 0.19974676 | 2.8983414 | 20 | 1 23.4 | 20.4 |
| 375476 2008 UT ₁₇ | 15.9 | X | 103.09760 | 270.25300 | 26.60613 | 16.40386 | 0.0673743 | 0.17544783 | 3.1601235 | 20 | 12 7.8 | 20.8 |
| 375477 2008 UU ₁₉ | 16.3 | X | 26.94465 | 7.61701 | 33.26326 | 10.58709 | 0.0594734 | 0.17844107 | 3.1246845 | 20 | — | — |
| 375478 2008 UQ ₂₁ | 16.0 | X | 295.17536 | 128.60711 | 28.54551 | 9.06455 | 0.0369408 | 0.18342864 | 3.0677829 | 20 | — | — |
| 375479 2008 UB ₂₅ | 16.9 | X | 29.87622 | 285.75208 | 191.65311 | 5.81640 | 0.0304457 | 0.20263513 | 2.8707335 | 20 | 1 20.7 | 20.9 |
| 375480 2008 UE ₂₉ | 16.1 | X | 122.71188 | 73.35600 | 217.22840 | 13.17249 | 0.2041932 | 0.17718996 | 3.1393758 | 20 | 12 27.4 | 21.6 |
| 375481 2008 UL ₃₀ | 16.4 | X | 219.55129 | 43.30159 | 209.65692 | 6.63223 | 0.0168503 | 0.18598944 | 3.0395587 | 20 | — | — |
| 375482 2008 UY ₃₁ | 16.1 | X | 190.85889 | 51.43737 | 50.45143 | 14.15276 | 0.0379679 | 0.22814029 | 2.6525774 | 20 | 7 31.3 | 20.1 |
| 375483 2008 UE ₃₂ | 15.8 | X | 21.46741 | 44.93195 | 54.44242 | 13.18505 | 0.0863831 | 0.18671765 | 3.0316505 | 20 | — | — |
| 375484 2008 UD ₃₃ | 16.3 | X | 106.41435 | 227.81537 | 128.43937 | 2.69839 | 0.1231250 | 0.18649186 | 3.0340970 | 20 | — | — |
| 375485 2008 UA ₃₈ | 15.9 | X | 233.87129 | 350.01469 | 249.33372 | 6.92971 | 0.0288519 | 0.18509581 | 3.0493339 | 20 | — | — |
| 375486 2008 UW ₄₀ | 16.3 | X | 51.97159 | 62.00305 | 42.61047 | 14.79046 | 0.1301653 | 0.19288719 | 2.9666556 | 20 | 2 22.5 | 20.2 |
| 375487 2008 UM ₄₂ | 16.3 | X | 187.89338 | 108.96008 | 230.26582 | 13.86566 | 0.1709498 | 0.20198413 | 2.8768986 | 20 | 2 14.2 | 21.3 |
| 375488 2008 UC ₄₆ | 16.3 | X | 11.79029 | 81.48817 | 18.05928 | 5.31830 | 0.1117517 | 0.18129798 | 3.0917716 | 20 | — | — |
| 375489 2008 UC ₄₆ | 15.7 | X | 72.74020 | 5.58112 | 34.16600 | 10.21902 | 0.0735935 | 0.18500245 | 3.0503598 | 20 | — | — |
| 375490 2008 UR ₄₇ | 15.8 | X | 153.62457 | 274.14198 | 41.11421 | 10.53733 | 0.0473096 | 0.18395464 | 3.0619321 | 20 | — | — |
| 375491 2008 UB ₅₂ | 17.6 | X | 205.35079 | 336.15663 | 47.98176 | 19.59968 | 0.0989385 | 0.38368166 | 1.8756653 | 20 | 4 26.6 | 19.7 |
| 375492 2008 UV ₅₃ | 15.8 | X | 38.15219 | 249.19068 | 262.80104 | 9.40424 | 0.0602334 | 0.19275590 | 2.9680025 | 20 | 2 5.9 | 19.8 |
| 375493 2008 UC ₅₈ | 16.5 | X | 46.61942 | 297.85659 | 122.19776 | 2.81333 | 0.0635863 | 0.18597348 | 3.0397325 | 20 | — | — |
| 375494 2008 UH ₅₉ | 16.8 | X | 168.54632 | 159.42454 | 208.11242 | 12.18801 | 0.0917378 | 0.20695950 | 2.8306042 | 20 | 2 28.2 | 21.3 |
| 375495 2008 UL ₆₀ | 16.5 | X | 8.15631 | 248.57455 | 240.24966 | 11.06577 | 0.1658767 | 0.18780562 | 3.0199308 | 20 | — | — |
| 375496 2008 UL ₆₃ | 15.6 | X | 43.09610 | 355.32866 | 36.10218 | 8.51375 | 0.0507551 | 0.17725280 | 3.1386338 | 20 | — | — |
| 375497 2008 UO ₇₁ | 15.4 | X | 349.83727 | 200.24246 | 259.93354 | 11.34029 | 0.0727176 | 0.17628768 | 3.1500787 | 20 | — | — |
| 375498 2008 UR ₇₁ | 16.1 | X | 58.10475 | 349.23955 | 37.70700 | 10.35499 | 0.0694774 | 0.17713599 | 3.1400135 | 20 | — | — |
| 375499 2008 UL ₇₄ | 15.5 | X | 62.50213 | 138.48958 | 262.06153 | 9.55282 | 0.0681279 | 0.18174100 | 3.0867452 | 20 | — | — |
| 375500 2008 UW ₇₄ | 16.0 | X | 89.15270 | 299.25745 | 46.11788 | 15.41911 | 0.2103736 | 0.17957496 | 3.1115172 | 20 | — | — |
| 375501 2008 UP ₇₆ | 15.8 | X | 63.30650 | 58.45683 | 48.27620 | 12.52090 | 0.1647732 | 0.19304420 | 2.9650467 | 20 | 3 17.5 | 19.6 |
| 375502 2008 UJ ₇₇ | 15.9 | X | 357.69335 | 213.24036 | 246.25376 | 9.30268 | 0.2040794 | 0.17629895 | 3.1499445 | 20 | — | — |
| 375503 2008 UX ₇₇ | 15.2 | X | 101.50683 | 89.70504 | 241.09435 | 24.83249 | 0.2154335 | 0.17896969 | 3.1185285 | 20 | — | — |
| 375504 2008 UJ ₈₆ | 16.3 | X | 87.51384 | 126.17071 | 228.37932 | 14.87675 | 0.0902044 | 0.17957779 | 3.1114845 | 20 | — | — |
| 375505 2008 UN ₉₀ | 20.1 | X | 17.00433 | 313.11527 | 33.51544 | 17.54526 | 0.1255535 | 0.59221998 | 1.4043672 | 20 | — | — |
| 375506 2008 UC ₉₉ | 15.8 | X | 72.62728 | 224.30736 | 192.51693 | 15.99687 | 0.1416351 | 0.18924063 | 3.0046447 | 20 | 1 15.6 | 19.9 |
| 375507 2008 UH ₁₀₁ | 16.7 | X | 230.70997 | 64.67026 | 230.85765 | 6.38450 | 0.0524054 | 0.20349813 | 2.8626117 | 20 | 2 8.1 | 21.0 |
| 375508 2008 UL ₁₀₅ | 16.2 | X | 136.81902 | 310.68000 | 61.37769 | 2.49093 | 0.1621259 | 0.19455506 | 2.9496763 | 20 | 2 13.5 | 20.6 |
| 375509 2008 UZ ₁₁₀ | 15.5 | X | 354.95943 | 231.09102 | 229.19529 | 23.74414 | 0.1991919 | 0.17873317 | 3.1212791 | 20 | — | — |
| 375510 2008 UF ₁₁₁ | 16.4 | X | 0.06658 | 112.82347 | 15.14204 | 8.61434 | 0.0879201 | 0.18796653 | 3.0182071 | 20 | — | — |
| 375511 2008 UO ₁₁₁ | 16.0 | X | 125.31410 | 29.69196 | 261.20015 | 5.76468 | 0.1176786 | 0.17632437 | 3.1496417 | 20 | 12 28.4 | 20.9 |
| 375512 2008 UJ ₁₁₂ | 16.4 | X | 121.75117 | 341.72870 | 20.03858 | 10.05866 | 0.0663339 | 0.19104326 | 2.9857142 | 20 | 1 5.1 | 20.8 |
| 375513 2008 UX ₁₁₂ | 16.0 | X | 104.24682 | 68.38588 | 238.65230 | 8.81016 | 0.1306600 | 0.17621195 | 3.1509812 | 20 | 12 27.7 | 21.0 |
| 375514 2008 UA ₁₁₇ | 15.5 | X | 124.18253 | 151.94854 | 243.11686 | 10.36204 | 0.1607733 | 0.19833812 | 2.9120484 | 20 | 2 21.8 | 21.0 |
| 375515 2008 UE ₁₂₂ | 15.4 | X | 153.73617 | 353.47574 | 274.32652 | 8.08021 | 0.1 | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|------------|------------|-----------|----|---------|----------|
| 375521 2008 UQ ₁₄₀ | 16.3 | X | 54.67360 | 7.91678 | 47.02832 | 9.15511 | 0.0511838 | 0.18457705 | 3.0550448 | 20 | — | — |
| 375522 2008 US ₁₄₂ | 16.3 | X | 193.88639 | 180.01466 | 55.26559 | 4.17897 | 0.0390143 | 0.17430098 | 3.1739700 | 20 | — | — |
| 375523 2008 UU ₁₄₅ | 15.7 | X | 159.42943 | 50.89042 | 222.29766 | 10.41864 | 0.0761550 | 0.17686147 | 3.1432619 | 20 | — | — |
| 375524 2008 UJ ₁₅₀ | 16.1 | X | 163.76373 | 264.08659 | 46.29362 | 10.58113 | 0.0789721 | 0.19114338 | 2.9846715 | 20 | — | — |
| 375525 2008 UV ₁₅₃ | 16.7 | X | 132.29117 | 102.33244 | 209.55804 | 9.54135 | 0.0612253 | 0.18344739 | 3.0675739 | 20 | — | — |
| 375526 2008 UD ₁₅₉ | 17.0 | X | 6.86949 | 111.73786 | 4.39787 | 0.99800 | 0.1151659 | 0.18694821 | 3.0291574 | 20 | — | — |
| 375527 2008 UR ₁₅₉ | 15.9 | X | 13.13129 | 359.87434 | 37.06354 | 5.79075 | 0.1529556 | 0.16948048 | 3.2338728 | 20 | — | — |
| 375528 2008 UU ₁₆₈ | 16.2 | X | 49.29648 | 204.97016 | 205.16994 | 9.54226 | 0.0666352 | 0.18326703 | 3.0695862 | 20 | — | — |
| 375529 2008 US ₁₆₉ | 15.7 | X | 251.99154 | 132.50144 | 62.22990 | 13.08434 | 0.0862004 | 0.17855918 | 3.1233065 | 20 | — | — |
| 375530 2008 UV ₁₇₅ | 16.0 | X | 7.27222 | 194.31076 | 222.22132 | 16.06592 | 0.1701198 | 0.17566407 | 3.1575295 | 20 | — | — |
| 375531 2008 UV ₁₈₂ | 15.6 | X | 201.89552 | 247.48005 | 42.03897 | 17.46781 | 0.1476508 | 0.19666454 | 2.9285457 | 20 | 1 6.3 | 20.6 |
| 375532 2008 UJ ₁₈₄ | 16.2 | X | 331.53518 | 89.89976 | 38.27209 | 2.53210 | 0.0334174 | 0.17940302 | 3.1135049 | 20 | — | — |
| 375533 2008 UZ ₁₈₄ | 15.9 | X | 252.21403 | 357.92146 | 240.22848 | 3.82252 | 0.1636196 | 0.18666151 | 3.0322584 | 20 | — | — |
| 375534 2008 UJ ₁₈₅ | 16.6 | X | 39.77118 | 207.75951 | 213.98622 | 3.52393 | 0.2045230 | 0.18035906 | 3.1024925 | 20 | — | — |
| 375535 2008 UX ₁₈₆ | 17.8 | X | 123.59983 | 201.51991 | 226.42725 | 20.34651 | 0.0894659 | 0.37207254 | 1.9144806 | 20 | 3 3.6 | 20.3 |
| 375536 2008 UN ₁₈₈ | 16.3 | X | 86.59360 | 126.46945 | 222.22479 | 4.12108 | 0.1356177 | 0.17921803 | 3.1156470 | 20 | — | — |
| 375537 2008 UJ ₁₉₃ | 16.1 | X | 95.91084 | 315.08013 | 62.16705 | 9.73024 | 0.1554331 | 0.18904614 | 3.0067051 | 20 | 1 4.1 | 20.1 |
| 375538 2008 UB ₂₀₁ | 15.7 | X | 91.84104 | 37.35402 | 8.14195 | 11.08818 | 0.0799891 | 0.19334496 | 2.9619711 | 20 | 1 25.3 | 19.9 |
| 375539 2008 UK ₂₀₁ | 15.6 | X | 74.39700 | 13.39023 | 36.47149 | 12.60736 | 0.1713465 | 0.18828744 | 3.0147767 | 20 | 1 19.7 | 19.6 |
| 375540 2008 US ₂₀₆ | 15.6 | X | 26.62400 | 251.80706 | 162.22279 | 21.69449 | 0.1950563 | 0.18137322 | 3.0909165 | 20 | — | — |
| 375541 2008 UC ₂₁₄ | 15.8 | X | 125.08178 | 91.45358 | 251.17608 | 10.28143 | 0.1578629 | 0.19099694 | 2.9861969 | 20 | — | — |
| 375542 2008 UG ₂₁₄ | 16.1 | X | 74.08044 | 61.68006 | 356.29087 | 10.77767 | 0.0848179 | 0.19249160 | 2.9707187 | 20 | 1 17.0 | 20.1 |
| 375543 2008 UL ₂₁₆ | 16.5 | X | 155.66252 | 329.53409 | 330.16113 | 6.20211 | 0.0173362 | 0.18238811 | 3.0794397 | 20 | — | — |
| 375544 2008 UX ₂₁₉ | 16.0 | X | 71.55066 | 185.76979 | 233.68411 | 8.44892 | 0.1503489 | 0.18970356 | 2.9997546 | 20 | 1 19.0 | 19.9 |
| 375545 2008 UN ₂₃₂ | 17.0 | X | 60.54117 | 55.79221 | 4.98570 | 1.90360 | 0.01196285 | 0.18880540 | 3.0092604 | 20 | 1 2.9 | 20.5 |
| 375546 2008 UL ₂₅₁ | 16.7 | X | 23.17450 | 129.81570 | 301.12213 | 0.39799 | 0.1866870 | 0.18009343 | 3.1055425 | 20 | — | — |
| 375547 2008 UO ₂₅₁ | 16.4 | X | 5.93517 | 183.93460 | 210.77239 | 0.27318 | 0.1530839 | 0.17042897 | 3.2218633 | 20 | 12 20.2 | 20.3 |
| 375548 2008 UQ ₂₅₇ | 16.2 | X | 82.48573 | 128.21574 | 241.00213 | 9.01901 | 0.1029236 | 0.18151174 | 3.0893437 | 20 | — | — |
| 375549 2008 US ₂₆₈ | 15.7 | X | 5.51770 | 65.84706 | 47.52485 | 17.61169 | 0.0779065 | 0.18587815 | 3.0407717 | 20 | — | — |
| 375550 2008 UA ₂₇₀ | 15.5 | X | 342.22236 | 261.27836 | 205.11626 | 9.02660 | 0.0349824 | 0.17971205 | 3.1099345 | 20 | — | — |
| 375551 2008 UG ₂₇₁ | 15.8 | X | 140.12887 | 29.22804 | 246.71638 | 9.08174 | 0.1093466 | 0.17428447 | 3.1741706 | 20 | 12 24.2 | 20.9 |
| 375552 2008 UQ ₂₈₃ | 15.6 | X | 117.13991 | 272.82396 | 45.72156 | 21.61290 | 0.1698368 | 0.18308009 | 3.0716753 | 20 | — | — |
| 375553 2008 UL ₂₉₃ | 16.0 | X | 121.50525 | 50.08711 | 270.25270 | 5.18673 | 0.1015230 | 0.18171323 | 3.0870596 | 20 | — | — |
| 375554 2008 UC ₂₉₇ | 16.4 | X | 82.08731 | 195.45857 | 223.67441 | 9.29905 | 0.0890642 | 0.19970329 | 2.8987621 | 20 | 1 23.1 | 20.3 |
| 375555 2008 UW ₃₀₃ | 15.8 | X | 228.79751 | 229.98532 | 353.52377 | 10.08961 | 0.0758584 | 0.18485728 | 3.0519565 | 20 | — | — |
| 375556 2008 UQ ₃₀₉ | 15.6 | X | 350.47790 | 247.59139 | 235.78165 | 25.36494 | 0.2003611 | 0.18232234 | 3.0801802 | 20 | — | — |
| 375557 2008 UD ₃₁₁ | 15.8 | X | 66.61288 | 18.86178 | 0.22218 | 14.92255 | 0.2035583 | 0.18387991 | 3.0627616 | 20 | — | — |
| 375558 2008 UJ ₃₁₂ | 15.7 | X | 104.57381 | 51.50056 | 293.88317 | 8.45615 | 0.1082661 | 0.18084793 | 3.0968989 | 20 | — | — |
| 375559 2008 UB ₃₁₃ | 16.5 | X | 207.11318 | 211.94759 | 41.04486 | 2.89308 | 0.0462304 | 0.18447555 | 3.0561653 | 20 | — | — |
| 375560 2008 UR ₃₁₃ | 16.0 | X | 53.38452 | 166.07634 | 194.40318 | 8.47003 | 0.0203648 | 0.19589065 | 2.9362537 | 20 | 1 31.2 | 20.1 |
| 375561 2008 UE ₃₁₆ | 16.6 | X | 10.23711 | 300.56731 | 254.53106 | 1.53264 | 0.1574513 | 0.17849629 | 3.1240400 | 20 | — | — |
| 375562 2008 UV ₃₂₁ | 16.8 | X | 99.99484 | 14.98508 | 288.93783 | 4.20157 | 0.1333969 | 0.17672647 | 3.1448624 | 20 | 12 21.2 | 21.7 |
| 375563 2008 UM ₃₂₂ | 16.4 | X | 63.20751 | 156.49899 | 291.68997 | 4.95643 | 0.0223403 | 0.19810108 | 2.9143709 | 20 | 1 28.9 | 20.4 |
| 375564 2008 UL ₃₂₃ | 16.0 | X | 57.32019 | 105.03414 | 286.07181 | 8.44351 | 0.1002277 | 0.18102314 | 3.0949003 | 20 | — | — |
| 375565 2008 UO ₃₂₇ | 16.0 | X | 110.29995 | 279.49824 | 57.43382 | 10.06731 | 0.1509510 | 0.18534313 | 3.0466207 | 20 | — | — |
| 375566 2008 UZ ₃₂₉ | 15.7 | X | 150.56102 | 68.92495 | 230.95041 | 11.49109 | 0.0534552 | 0.18229971 | 3.0804351 | 20 | — | — |
| 375567 2008 US ₃₃₁ | 16.4 | X | 350.37569 | 104.31478 | 14.76109 | 13.67585 | 0.0275664 | 0.18799391 | 3.0179140 | 20 | — | — |
| 375568 2008 UA ₃₃₅ | 16.1 | X | 334.06294 | 211.07597 | 263.03603 | 4.54646 | 0.1732733 | 0.17435904 | 3.1732654 | 20 | — | — |
| 375569 2008 UR ₃₃₆ | 15.5 | X | 274.36238 | 326.82361 | 233.06564 | 16.57011 | 0.1542448 | 0.18172588 | 3.0869164 | 20 | — | — |
| 375570 2008 UB ₃₃₇ | 16.3 | X | 96.76633 | 325.32785 | 17.78007 | 5.36202 | 0.1235606 | 0.17930968 | 3.1145852 | 20 | — | — |
| 375571 2008 UU ₃₃₇ | 16.7 | X | 167.90923 | 317.36662 | 34.54154 | 2.22825 | 0.0924882 | 0.19850338 | 2.9104319 | 20 | 2 14.2 | 21.0 |
| 375572 2008 UB ₃₄₃ | 16.1 | X | 50.17504 | 14.74932 | 32.18779 | 9.75289 | 0.1516121 | 0.18066724 | 3.0989633 | 20 | — | — |
| 375573 2008 UG ₃₄₄ | 16.1 | X | 83.90840 | 222.95147 | 151.89121 | 10.63462 | 0.2822367 | 0.18637075 | 3.0354113 | 20 | 1 3.7 | 20.0 |
| 375574 2008 UL ₃₄₈ | 16.5 | X | 27.90801 | 66.62035 | 26.81665 | 5.20535 | 0.1360872 | 0.18360002 | 3.0658735 | 20 | — | — |
| 375575 2008 UD ₃₄₉ | 16.2 | X | 352.78957 | 273.41793 | 200.65273 | 4.72883 | 0.1135919 | 0.18017953 | 3.1045531 | 20 | — | — |
| 375576 2008 UT ₃₄₉ | 16.5 | X | 168.95968 | 110.97125 | 148.09286 | 2.09945 | 0.0555715 | 0.17733338 | 3.1376829 | 20 | — | — |
| 375577 2008 UP ₃₅₃ | 16.6 | X | 88.25836 | 292.26992 | 92.23894 | 2.22525 | 0.1072182 | 0.18645063 | 3.0345443 | 20 | — | — |
| 375578 2008 UV ₃₅₅ | 16.1 | X | 288.25311 | 58.73819 | 76.27344 | 4.90644 | 0.0573205 | 0.17074030 | 3.2179456 | 20 | 12 26.6 | 20.5 |
| 375579 2008 UL ₃₅₈ | 15.6 | X | 119.55007 | 239.97235 | 89.28095 | 14.26849 | 0.0942817 | 0.18406940 | 3.0606593 | 20 | — | — |
| 375580 2008 UA ₃₆₁ | 15.7 | X | 48.85610 | 285.72889 | 92.20043 | 9.99384 | 0.1428224 | 0.17717864 | 3.1395096 | 20 | — | — |
| 375581 2008 UU ₃₆₉ | 15.6 | X | 164.91301 | 31.99215 | 242.01062 | 8.19581 | 0.0463553 | 0.17434337 | 3.1734556 | 20 | — | — |
| 375582 2008 UK ₃₇₀ | 15.7 | X | 86.93268 | 330.84209 | 83.96979 | 14.54666 | 0.1591409 | 0.19049453 | 2.9914452 | 20 | 2 11.5 | 19.9 |
| 375583 2008 VB ₂ | 15.6 | X | 55.32870 | 154.77454 | 247.00804 | 13.81988 | 0.0770709 | 0.18137969 | 3.0908430 | 20 | — | — |
| 375584 2008 VX ₂ | 15.2 | X | 342.15959 | 229.83069 | 254.51071 | 14.68930 | 0.0759763 | 0.17959775 | 3.1112539 | 20 | — | — |
| 375585 2008 UD ₁₂ | 16.1 | X | 121.25846 | 120.29251 | 213.39369 | 14.66569 | 0.1529307 | 0.18424265 | 3.0587403 | 20 | — | — |
| 375586 2008 VB ₁₄ | 15.4 | X | 18.82391 | 17.28507 | 95.95256 | 8.19268 | 0.1432440 | 0.18534558 | 3.0465939 | 20 | 1 2.5 | 18.7 |
| 375587 2008 VJ ₁₆ | 16.6 | X | 181.59807 | 118.09967 | 178.99125 | 0.97644 | 0.0236383 | 0.18884860 | 3.0088015 | 20 | — | — |
| 375588 2008 VK ₁₉ | 14.7 | X | 138.25078 | 34.60702 | 250.13195 | 25.99492 | 0.1298958 | 0.17501707 | 3.1653065 | 20 | 12 29.3 | 20.0 |
| 375589 2008 VJ ₂₀ | 16.9 | X | 103.65262 | 220.16693 | 158.19889 | 2.14817 | 0.0809589 | 0.18710167 | 3.0275009 | 20 | 1 4.7 | 21.0 |
| 375590 2008 VR ₂₅ | 16.3 | X | 75.77201 | 347.33471 | 55.58373 | 9.65203 | 0.0801420 | 0.18924124 | 3.0046383 | 20 | — | — |
| 375591 2008 VP ₂₉ | 16.2 | X | 130.71155 | 89.24580 | 260.57697 | 8.56339 | 0.1079604 | 0.18906209 | 3.0065361 | 20 | 1 4.9 | 20.5 |
| 375592 2008 VX ₃₈ | 15.9 | X | 355.09898 | 328.12639 | 139.66240 | 10.53753 | 0.1467977 | 0.17820409 | 3.1274541 | 20 | — | — |
| 375593 2008 VZ ₃₉ | 15.8 | X | 94.73596 | 330.32792 | 50.38093 | 13.43910 | 0.1141884 | 0.18419042 | 3.0593185 | 20 | 1 1.7 | 20.1 |
| 375594 2008 VZ ₄₀ | 15.7 | X | 109.96836 | 334.02934 | 18.59968 | 9.73664 | 0.0825011 | 0.18451606 | 3.0557180 | 20 | — | — |
| 375595 2008 UK ₄₈ | 17.3 | X | 50.08322 | 12.09399 | 34.02980 | 8.44883 | 0.1870702 | 0.18025948 | 3.1036349 | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 375601 2008 VV ₇₈ | 16.6 | X | 31.32670 | 28.68723 | 58.58786 | 2.45585 | 0.1430509 | 0.18398665 | 3.0615770 | 20 | — | — |
| 375602 2008 WO ₅ | 16.9 | X | 38.44715 | 17.42652 | 74.13987 | 3.68040 | 0.1410000 | 0.18853165 | 3.0121728 | 20 | 1 8.0 | 20.3 |
| 375603 2008 WZ ₅ | 15.9 | X | 181.34673 | 208.49805 | 29.83272 | 9.63202 | 0.0480102 | 0.17445260 | 3.1721308 | 20 | 12 24.1 | 20.7 |
| 375604 2008 WU ₁₂ | 16.5 | X | 8.90272 | 40.52736 | 41.67280 | 5.09747 | 0.1417623 | 0.17802246 | 3.1295809 | 20 | — | — |
| 375605 2008 WY ₁₂ | 16.2 | X | 192.24336 | 338.53561 | 65.04812 | 10.07028 | 0.1309080 | 0.21386787 | 2.7693149 | 20 | 5 11.3 | 20.5 |
| 375606 2008 WE ₁₇ | 16.5 | X | 356.23055 | 35.27399 | 72.65896 | 1.89350 | 0.1366457 | 0.18235474 | 3.0798153 | 20 | — | — |
| 375607 2008 WL ₂₄ | 16.2 | X | 32.42530 | 54.04006 | 3.17754 | 1.81106 | 0.0378378 | 0.17825299 | 3.1268820 | 20 | — | — |
| 375608 2008 WB ₂₅ | 16.3 | X | 94.11175 | 330.95067 | 92.59395 | 4.97403 | 0.1195596 | 0.19445194 | 2.9507190 | 20 | 2 23.3 | 20.3 |
| 375609 2008 WF ₃₅ | 15.9 | X | 5.83367 | 198.77356 | 243.67184 | 3.99815 | 0.1383660 | 0.17647516 | 3.1478473 | 20 | — | — |
| 375610 2008 WQ ₃₆ | 16.7 | X | 158.67114 | 297.14595 | 58.50429 | 3.08795 | 0.0765114 | 0.19505497 | 2.9446344 | 20 | 2 8.6 | 21.1 |
| 375611 2008 WA ₄₀ | 16.7 | X | 341.19393 | 14.80654 | 116.37074 | 1.73497 | 0.1134748 | 0.18030375 | 3.1031270 | 20 | — | — |
| 375612 2008 WY ₄₁ | 16.4 | X | 53.03082 | 45.75009 | 19.66815 | 2.58792 | 0.1601095 | 0.18394510 | 3.0620380 | 20 | 1 1.8 | 20.0 |
| 375613 2008 WG ₄₅ | 16.4 | X | 96.17044 | 134.36233 | 263.03556 | 1.19803 | 0.1739891 | 0.18933763 | 3.0036184 | 20 | 1 31.1 | 20.5 |
| 375614 2008 WY ₄₆ | 16.1 | X | 33.92017 | 104.70643 | 301.53644 | 0.35728 | 0.1530154 | 0.17568847 | 3.1572372 | 20 | — | — |
| 375615 2008 WY ₄₇ | 15.5 | X | 281.49651 | 107.55621 | 74.58973 | 9.84921 | 0.0169004 | 0.17816186 | 3.1279483 | 20 | — | — |
| 375616 2008 WZ ₄₇ | 15.8 | X | 57.24327 | 145.63497 | 240.48567 | 4.43852 | 0.1499218 | 0.17695313 | 3.1421764 | 20 | — | — |
| 375617 2008 WY ₆₀ | 15.8 | X | 55.37046 | 333.13521 | 75.67924 | 14.66771 | 0.2594471 | 0.18061985 | 3.0995054 | 20 | — | — |
| 375618 2008 WS ₇₅ | 16.9 | X | 346.66905 | 300.36164 | 194.53747 | 3.67830 | 0.1650365 | 0.18067739 | 3.0988473 | 20 | — | — |
| 375619 2008 WJ ₈₅ | 16.2 | X | 78.44517 | 140.18174 | 231.42949 | 2.53221 | 0.1926055 | 0.17692222 | 3.1425423 | 20 | — | — |
| 375620 2008 WF ₈₈ | 16.6 | X | 155.28355 | 79.44631 | 200.59477 | 3.89439 | 0.0761119 | 0.17767543 | 3.1336546 | 20 | — | — |
| 375621 2008 WH ₉₃ | 17.5 | X | 252.69650 | 44.10706 | 255.40913 | 20.56680 | 0.0422920 | 0.37565218 | 1.9022990 | 20 | 2 9.7 | 20.2 |
| 375622 2008 WL ₁₀₃ | 15.6 | X | 339.78320 | 265.95813 | 225.65776 | 12.83512 | 0.0743768 | 0.18443694 | 3.0565918 | 20 | — | — |
| 375623 2008 WY ₁₀₅ | 15.8 | X | 44.46788 | 256.09079 | 165.74516 | 10.59687 | 0.1116118 | 0.18280529 | 3.0747528 | 20 | — | — |
| 375624 2008 WZ ₁₁₄ | 15.6 | X | 30.69826 | 224.17517 | 256.99258 | 8.00087 | 0.0970228 | 0.18803872 | 3.0174345 | 20 | 1 29.2 | 19.5 |
| 375625 2008 WM ₁₁₆ | 16.3 | X | 354.74876 | 235.52900 | 245.80035 | 2.96630 | 0.1110245 | 0.17915711 | 3.1163533 | 20 | — | — |
| 375626 2008 WP ₁₂₁ | 15.5 | X | 96.80370 | 73.16535 | 307.10573 | 9.24232 | 0.0725193 | 0.18724723 | 3.0259316 | 20 | — | — |
| 375627 2008 WK ₁₂₂ | 16.2 | X | 126.35979 | 23.99090 | 330.94456 | 8.19674 | 0.1912175 | 0.19179632 | 2.9778938 | 20 | 1 17.9 | 20.7 |
| 375628 2008 WX ₁₃₆ | 15.4 | X | 274.50756 | 276.60043 | 277.97355 | 12.13904 | 0.1359891 | 0.17570418 | 3.1570490 | 20 | — | — |
| 375629 2008 XB ₃ | 16.1 | X | 96.14485 | 310.65855 | 106.67743 | 2.55891 | 0.1627571 | 0.18729388 | 3.0254292 | 20 | 2 24.2 | 20.2 |
| 375630 2008 XW ₁₃ | 15.9 | X | 228.53320 | 216.92375 | 40.03394 | 13.70069 | 0.1316857 | 0.18772462 | 3.0207995 | 20 | — | — |
| 375631 2008 XZ ₁₄ | 16.5 | X | 49.49901 | 356.15620 | 92.43386 | 2.77108 | 0.0657441 | 0.18634312 | 3.0357114 | 20 | 1 17.5 | 20.4 |
| 375632 2008 XV ₁₆ | 15.2 | X | 83.77379 | 106.17112 | 252.85332 | 15.72644 | 0.1495253 | 0.17664053 | 3.1458823 | 20 | — | — |
| 375633 2008 XA ₁₈ | 16.1 | X | 167.77081 | 44.93578 | 241.37260 | 10.37244 | 0.0800427 | 0.17626291 | 3.1503739 | 20 | — | — |
| 375634 2008 XO ₂₉ | 14.7 | X | 30.01346 | 30.60202 | 44.11950 | 20.18788 | 0.2202445 | 0.17300384 | 3.1898154 | 20 | — | — |
| 375635 2008 XN ₄₈ | 16.6 | X | 75.67372 | 234.54797 | 153.68339 | 1.69675 | 0.1874540 | 0.17589085 | 3.1548149 | 20 | — | — |
| 375636 2008 XJ ₅₆ | 15.9 | X | 67.94910 | 95.14353 | 295.41388 | 14.30387 | 0.2519909 | 0.17763591 | 3.1341194 | 20 | — | — |
| 375637 2008 YC ₅ | 15.5 | X | 57.43784 | 86.95817 | 316.05064 | 17.47768 | 0.1535309 | 0.17460557 | 3.1702778 | 20 | — | — |
| 375638 2008 YK ₁₂ | 16.7 | X | 22.32057 | 135.09111 | 324.73492 | 0.85094 | 0.1544990 | 0.18130553 | 3.0916858 | 20 | — | — |
| 375639 2008 YX ₂₇ | 16.1 | X | 56.71433 | 315.81540 | 70.32094 | 5.49883 | 0.1355379 | 0.17692726 | 3.1424826 | 20 | — | — |
| 375640 2008 YV ₄₂ | 16.1 | X | 96.25932 | 293.45225 | 52.10839 | 3.90304 | 0.2059729 | 0.17909455 | 3.1170790 | 20 | — | — |
| 375641 2008 YL ₆₆ | 17.2 | X | 68.61904 | 155.72049 | 308.86841 | 17.77142 | 0.1038316 | 0.35758933 | 1.9658318 | 20 | 2 6.9 | 18.5 |
| 375642 2008 YK ₈₄ | 15.7 | X | 103.14304 | 127.57631 | 230.26252 | 10.56072 | 0.0850512 | 0.18020140 | 3.1043018 | 20 | — | — |
| 375643 2008 YL ₈₇ | 16.9 | X | 4.89636 | 316.09029 | 145.39648 | 1.32278 | 0.1854514 | 0.17382384 | 3.1797757 | 20 | — | — |
| 375644 2008 YF ₉₉ | 16.1 | X | 354.10777 | 106.13514 | 275.55518 | 1.33526 | 0.0551412 | 0.15078378 | 3.4959587 | 20 | 11 3.3 | 20.8 |
| 375645 2008 YR ₁₁₀ | 16.9 | X | 75.27349 | 15.51116 | 38.95646 | 3.21934 | 0.2690276 | 0.18709830 | 3.0275372 | 20 | 2 9.1 | 20.6 |
| 375646 2008 YK ₁₂₈ | 15.3 | X | 11.30952 | 359.62098 | 99.01943 | 7.05106 | 0.1550117 | 0.17068210 | 3.2186770 | 20 | — | — |
| 375647 2008 YY ₁₅₅ | 15.7 | X | 15.99142 | 66.19232 | 32.77459 | 14.81551 | 0.1872130 | 0.17433493 | 3.1735580 | 20 | — | — |
| 375648 2009 AX | 15.9 | X | 31.28561 | 123.82906 | 290.14998 | 14.83532 | 0.2160835 | 0.17809524 | 3.1287282 | 20 | — | — |
| 375649 2009 BZ | 16.5 | X | 29.53729 | 351.35035 | 119.84888 | 2.46479 | 0.2613714 | 0.18029309 | 3.1032492 | 20 | 1 23.2 | 19.0 |
| 375650 2009 BV ₁₇ | 16.3 | X | 37.87740 | 346.82509 | 88.48991 | 2.31820 | 0.1470757 | 0.18347691 | 3.0672448 | 20 | — | — |
| 375651 2009 BC ₂₇ | 15.3 | X | 50.20620 | 255.80780 | 348.77464 | 4.89925 | 0.0845613 | 0.12535533 | 3.9540380 | 20 | 8 4.9 | 20.6 |
| 375652 2009 BP ₃₁ | 16.3 | X | 111.61873 | 342.37092 | 106.70063 | 6.32836 | 0.0664885 | 0.19177795 | 2.9780840 | 20 | 4 10.6 | 20.6 |
| 375653 2009 BJ ₆₀ | 15.2 | X | 11.52462 | 111.86785 | 281.77257 | 12.66064 | 0.1314718 | 0.15854126 | 3.3809690 | 20 | 12 21.3 | 19.5 |
| 375654 2009 BW ₉₇ | 16.6 | X | 59.79639 | 301.39751 | 134.87974 | 2.84941 | 0.1881457 | 0.18597575 | 3.0397078 | 20 | 1 29.8 | 20.1 |
| 375655 2009 BV ₁₅₄ | 15.9 | X | 275.64826 | 141.50315 | 358.12272 | 5.09659 | 0.0350919 | 0.15438682 | 3.4413532 | 20 | 12 13.8 | 20.8 |
| 375656 2009 BA ₁₈₂ | 17.9 | X | 111.11264 | 226.03104 | 16.03056 | 7.72920 | 0.1715716 | 0.29986279 | 2.2106551 | 20 | 11 8.0 | 21.2 |
| 375657 2009 CP ₅ | 21.5 | X | 54.45017 | 268.43116 | 330.25885 | 13.11660 | 0.3143151 | 0.72654618 | 1.2254452 | 20 | 11 15.8 | 22.8 |
| 375658 2009 CU ₂₇ | 18.4 | X | 134.65745 | 16.02976 | 57.46787 | 3.48073 | 0.1512224 | 0.27979708 | 2.3151223 | 20 | 4 20.3 | 21.7 |
| 375659 2009 CQ ₃₃ | 16.0 | X | 312.14362 | 330.75815 | 143.18744 | 3.83201 | 0.0150808 | 0.15642045 | 3.4114607 | 20 | 12 30.5 | 20.7 |
| 375660 2009 CB ₄₅ | 17.4 | X | 300.60948 | 200.18029 | 14.96731 | 19.02962 | 0.0598915 | 0.35026655 | 1.9931360 | 20 | — | — |
| 375661 2009 DT ₁₇ | 15.5 | X | 9.71435 | 156.23185 | 276.67547 | 17.48009 | 0.1227425 | 0.17328999 | 3.1863030 | 20 | — | — |
| 375662 2009 DB ₄₈ | 17.6 | X | 86.45097 | 284.35661 | 179.36614 | 22.01774 | 0.0961535 | 0.35815190 | 1.9637726 | 20 | 3 10.5 | 19.3 |
| 375663 2009 DW ₁₀₉ | 17.3 | X | 78.61383 | 135.50710 | 317.58122 | 17.50139 | 0.1067384 | 0.35603829 | 1.9715369 | 20 | 2 9.8 | 18.7 |
| 375664 2009 DZ ₁₂₇ | 15.4 | X | 123.51234 | 346.40563 | 215.38263 | 2.10481 | 0.1008115 | 0.12565320 | 3.9477867 | 20 | 9 6.9 | 21.4 |
| 375665 2009 DS ₁₄₁ | 15.5 | X | 150.55934 | 352.18697 | 175.65356 | 2.37534 | 0.1573361 | 0.12647606 | 3.9306452 | 20 | 8 27.1 | 21.8 |
| 375666 2009 EU ₃ | 17.3 | X | 120.80111 | 215.11582 | 173.21286 | 22.71247 | 0.0620967 | 0.34763177 | 2.0031943 | 20 | 1 5.5 | 20.0 |
| 375667 2009 EP ₂₀ | 18.1 | X | 64.81148 | 246.65825 | 6.60263 | 7.36557 | 0.2175196 | 0.29285469 | 2.2457837 | 20 | 10 11.8 | 21.1 |
| 375668 2009 FW ₁ | 18.1 | X | 93.20324 | 106.41589 | 3.41427 | 19.21641 | 0.0914006 | 0.36401312 | 1.9426357 | 20 | 3 29.7 | 19.8 |
| 375669 2009 FA ₃₂ | 13.3 | X | 268.67851 | 285.58360 | 21.55554 | 25.94103 | 0.0768201 | 0.08095808 | 5.2921148 | 20 | 4 12.5 | 20.2 |
| 375670 2009 FX ₅₀ | 18.0 | X | 126.17680 | 182.41460 | 94.13386 | 3.35594 | 0.0700481 | 0.31501697 | 2.1391772 | 20 | — | — |
| 375671 2009 FE ₅₄ | 17.6 | X | 358.48912 | 211.22787 | 82.06100 | 5.26356 | 0.2495613 | 0.28161487 | 2.3051489 | 20 | 8 27.1 | 18.9 |
| 375672 2009 FS ₆₅ | 17.3 | X | 161.50451 | 212.42334 | 14.23897 | 3.87244 | 0.0143772 | 0.22402016 | 2.6850022 | 20 | 11 30.0 | 20.9 |
| 375673 2009 FP ₇₃ | 17.6 | X | 6.02122 | 145.46639 | 129.20270 | 5.50851 | 0.2326905 | 0.27538254 | 2.3397984 | 20 | 8 6.6 | 19.0 |
| 375674 2009 HD ₅ | 17.7 | X | 56.20794 | 246.08329 | 43.51452 | 6.52647 | 0.1745037 | 0.29702406 | 2.2247180 | 20 | 11 15.5 | 20.7 |
| 375675 2009 HC ₆ | 17.9 | X | 8.82203 | 208.12670 | 85.92987 | 6. | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 375681 2009 HL ₄₁ | 17.9 | X | 31.29896 | 193.76984 | 89.53852 | 3.47884 | 0.2266583 | 0.28557510 | 2.2837882 | 20 | 10 14.1 | 20.4 |
| 375682 2009 HV ₉₄ | 17.2 | X | 12.38374 | 278.05456 | 57.69225 | 11.00737 | 0.1895924 | 0.28925115 | 2.2643974 | 20 | 11 21.9 | 19.4 |
| 375683 2009 HD ₁₀₄ | 17.8 | X | 187.04732 | 144.68685 | 58.64883 | 4.72440 | 0.0898873 | 0.30819811 | 2.1706147 | 20 | 12 13.5 | 20.5 |
| 375684 2009 HV ₁₀₅ | 18.1 | X | 71.10799 | 19.43351 | 216.84317 | 2.54392 | 0.1130444 | 0.28577815 | 2.2827063 | 20 | 9 10.9 | 20.9 |
| 375685 2009 JF | 17.9 | X | 86.73903 | 167.14594 | 81.97401 | 4.19271 | 0.2277872 | 0.29201622 | 2.2500805 | 20 | 10 31.2 | 21.3 |
| 375686 2009 KZ ₁₄ | 17.6 | X | 7.85096 | 140.87575 | 161.18206 | 3.10734 | 0.2441633 | 0.27896170 | 2.3197419 | 20 | 10 1.5 | 19.3 |
| 375687 2009 KG ₂₁ | 17.2 | X | 328.45853 | 254.70646 | 67.15583 | 8.00472 | 0.1317751 | 0.27837052 | 2.3230250 | 20 | 7 24.3 | 19.3 |
| 375688 2009 KN ₂₂ | 17.0 | X | 9.34547 | 46.44718 | 224.23642 | 22.56903 | 0.2076769 | 0.27479187 | 2.3431502 | 20 | 7 24.5 | 19.6 |
| 375689 2009 KT ₂₃ | 17.8 | X | 332.40786 | 145.15237 | 161.37354 | 5.63060 | 0.2309444 | 0.27257040 | 2.3558642 | 20 | 6 23.9 | 19.4 |
| 375690 2009 KH ₃₆ | 17.4 | X | 25.12789 | 241.24291 | 82.23133 | 8.43191 | 0.1618319 | 0.28964987 | 2.2623189 | 20 | 11 20.7 | 19.9 |
| 375691 2009 ME ₁ | 17.1 | X | 263.61284 | 86.18654 | 265.02089 | 5.39302 | 0.1457646 | 0.25835153 | 2.4415298 | 20 | 5 15.1 | 20.4 |
| 375692 2009 MY ₈ | 17.6 | X | 28.20932 | 146.67875 | 117.09104 | 7.17965 | 0.2564984 | 0.27389255 | 2.3482765 | 20 | 9 14.7 | 20.0 |
| 375693 2009 NG ₂ | 17.6 | X | 289.03287 | 194.94936 | 126.66315 | 3.25838 | 0.2172403 | 0.25588921 | 2.4571673 | 20 | 4 28.7 | 20.8 |
| 375694 2009 OM ₄ | 17.7 | X | 339.22292 | 124.26329 | 165.00761 | 2.88052 | 0.2255595 | 0.26445179 | 2.4038372 | 20 | 6 12.1 | 19.2 |
| 375695 2009 OY ₄ | 17.1 | X | 320.68658 | 171.61508 | 152.29935 | 2.60669 | 0.2191886 | 0.26391397 | 2.4071018 | 20 | 6 25.4 | 19.0 |
| 375696 2009 OB ₅ | 17.4 | X | 302.96132 | 197.08017 | 138.57003 | 4.10020 | 0.1886871 | 0.26337731 | 2.4103705 | 20 | 6 13.5 | 19.9 |
| 375697 2009 MY ₂₁ | 17.3 | X | 326.21764 | 92.98034 | 67.42701 | 5.17444 | 0.2150133 | 0.26692396 | 2.3889717 | 20 | 7 21.9 | 19.0 |
| 375698 2009 OE ₂₅ | 16.6 | X | 307.65499 | 341.91356 | 340.71396 | 8.51775 | 0.2478988 | 0.26107054 | 2.4245481 | 20 | 5 18.4 | 19.4 |
| 375699 2009 ON ₂₅ | 16.6 | X | 101.69192 | 175.46516 | 65.77085 | 8.19031 | 0.0749634 | 0.28008418 | 2.3135399 | 20 | 10 24.1 | 19.7 |
| 375700 2009 PY ₁ | 17.2 | X | 236.62390 | 54.01505 | 1.00722 | 5.12834 | 0.0864220 | 0.26234990 | 2.4166594 | 20 | 7 19.1 | 20.5 |
| 375701 2009 PY ₃ | 17.9 | X | 307.57433 | 117.06031 | 216.27685 | 3.28557 | 0.2391156 | 0.26199514 | 2.4188405 | 20 | 6 8.9 | 20.4 |
| 375702 2009 PC ₄ | 17.6 | X | 296.73998 | 98.85808 | 251.73811 | 3.58297 | 0.2104135 | 0.26165984 | 2.4209064 | 20 | 6 20.9 | 19.9 |
| 375703 2009 PD ₅ | 17.3 | X | 342.84456 | 358.27588 | 322.29987 | 3.73784 | 0.2088678 | 0.26754882 | 2.3852506 | 20 | 8 20.6 | 18.6 |
| 375704 2009 PJ ₆ | 17.7 | X | 83.20232 | 17.84370 | 247.86585 | 4.59114 | 0.1288136 | 0.28533509 | 2.2850687 | 20 | 11 6.6 | 21.0 |
| 375705 2009 PU ₆ | 17.7 | X | 287.76147 | 255.96073 | 157.79862 | 22.02180 | 0.2298349 | 0.27377509 | 2.3489481 | 20 | 9 10.5 | 19.6 |
| 375706 2009 PN ₇ | 17.8 | X | 293.46420 | 185.55305 | 183.19880 | 3.57270 | 0.2016674 | 0.26428710 | 2.4048357 | 20 | 7 14.0 | 20.3 |
| 375707 2009 PT ₁₀ | 17.6 | X | 284.66097 | 111.99543 | 217.96532 | 1.80015 | 0.2071386 | 0.25568125 | 2.4584995 | 20 | 5 4.5 | 20.7 |
| 375708 2009 PF ₁₂ | 17.5 | X | 332.29546 | 189.68262 | 140.82982 | 3.10033 | 0.2110430 | 0.26655062 | 2.3912019 | 20 | 8 8.4 | 19.1 |
| 375709 2009 PZ ₁₃ | 16.8 | X | 347.79459 | 313.81275 | 323.90569 | 6.06259 | 0.2437511 | 0.26175398 | 2.4203259 | 20 | 6 14.1 | 18.3 |
| 375710 2009 PD ₁₈ | 17.6 | X | 313.87594 | 325.63641 | 359.41841 | 2.90649 | 0.0479943 | 0.25691466 | 2.4506246 | 20 | 7 7.4 | 20.5 |
| 375711 2009 PC ₁₉ | 17.7 | X | 37.93193 | 248.01592 | 359.86430 | 3.64669 | 0.1046218 | 0.26167839 | 2.4207920 | 20 | 8 7.6 | 20.4 |
| 375712 2009 PK ₁₉ | 17.5 | X | 359.59963 | 31.84550 | 243.78384 | 0.40233 | 0.2124400 | 0.26058677 | 2.4275479 | 20 | 7 16.1 | 19.1 |
| 375713 2009 PK ₂₁ | 16.7 | X | 249.07948 | 166.69781 | 254.65329 | 10.16413 | 0.1219567 | 0.26259780 | 2.4151382 | 20 | 8 2.8 | 20.0 |
| 375714 2009 QE ₉ | 16.5 | X | 308.28798 | 96.00330 | 215.47115 | 10.41272 | 0.2198724 | 0.25681721 | 2.4512445 | 20 | 5 11.9 | 19.0 |
| 375715 2009 QF ₁₉ | 17.3 | X | 316.11508 | 122.39449 | 179.73401 | 2.07050 | 0.2032475 | 0.25853033 | 2.4404039 | 20 | 5 14.7 | 19.6 |
| 375716 2009 QJ ₂₀ | 17.3 | X | 323.37404 | 342.10265 | 359.99315 | 4.48729 | 0.1720981 | 0.26648660 | 2.3915849 | 20 | 8 10.7 | 19.1 |
| 375717 2009 QO ₂₀ | 17.5 | X | 310.96357 | 303.24097 | 35.29264 | 2.74472 | 0.2330882 | 0.26224760 | 2.4172879 | 20 | 6 25.2 | 19.6 |
| 375718 2009 QJ ₂₀ | 17.1 | X | 351.69909 | 331.11027 | 326.22031 | 9.22195 | 0.1153434 | 0.26622631 | 2.3931435 | 20 | 7 31.7 | 19.2 |
| 375719 2009 QK ₂₁ | 17.7 | X | 290.47592 | 345.73263 | 335.70013 | 4.97058 | 0.2062412 | 0.25491220 | 2.4634418 | 20 | 4 28.4 | 21.0 |
| 375720 2009 QG ₂₃ | 17.3 | X | 319.49580 | 357.73442 | 340.63820 | 6.64344 | 0.1423666 | 0.26506937 | 2.4001019 | 20 | 7 29.8 | 19.6 |
| 375721 2009 QF ₃₂ | 17.2 | X | 259.75587 | 45.96981 | 330.79695 | 6.19948 | 0.2097022 | 0.25722341 | 2.4486632 | 20 | 6 5.6 | 20.8 |
| 375722 2009 QK ₃₂ | 17.7 | X | 279.65653 | 266.98675 | 144.58954 | 3.20456 | 0.1760715 | 0.26922170 | 2.3753595 | 20 | 8 30.7 | 19.9 |
| 375723 2009 QM ₃₈ | 16.8 | X | 151.17872 | 210.94550 | 233.58768 | 6.87302 | 0.1598563 | 0.24264255 | 2.5458027 | 20 | 5 22.8 | 20.6 |
| 375724 2009 QO ₄₀ | 17.6 | X | 296.67307 | 28.75416 | 315.18510 | 1.65499 | 0.1981026 | 0.25901800 | 2.4373398 | 20 | 6 12.8 | 20.0 |
| 375725 2009 QD ₄₄ | 16.9 | X | 248.40927 | 324.52634 | 348.47702 | 14.19621 | 0.1189014 | 0.23906512 | 2.5711371 | 20 | 3 12.9 | 20.5 |
| 375726 2009 QB ₄₅ | 18.3 | X | 226.37758 | 28.04442 | 331.57876 | 5.90517 | 0.2819661 | 0.24358176 | 2.5392544 | 20 | 4 6.9 | 22.9 |
| 375727 2009 QD ₄₇ | 17.1 | X | 331.57466 | 299.52222 | 19.03810 | 7.20964 | 0.1563152 | 0.26209543 | 2.4182234 | 20 | 7 22.7 | 19.3 |
| 375728 2009 QM ₄₇ | 17.5 | X | 270.83130 | 260.69766 | 112.84377 | 3.50964 | 0.2023583 | 0.25563101 | 2.4588216 | 20 | 6 16.7 | 20.8 |
| 375729 2009 QT ₅₆ | 16.6 | X | 284.54553 | 54.41819 | 350.11374 | 12.27128 | 0.1283001 | 0.26940800 | 2.3742643 | 20 | 9 6.5 | 19.1 |
| 375730 2009 QK ₆₃ | 16.0 | X | 228.84867 | 61.38950 | 257.91832 | 12.26027 | 0.1526241 | 0.22018388 | 2.7160997 | 20 | 2 24.4 | 20.6 |
| 375731 2009 RY ₇ | 17.6 | X | 216.84492 | 174.78583 | 290.11073 | 1.54559 | 0.1742090 | 0.25963861 | 2.4334544 | 20 | 8 20.4 | 21.1 |
| 375732 2009 RM ₁₂ | 17.5 | X | 248.93740 | 41.66485 | 14.52291 | 2.93468 | 0.1270101 | 0.25733574 | 2.4479506 | 20 | 7 30.2 | 20.6 |
| 375733 2009 RC ₃₁ | 16.7 | X | 331.99119 | 276.97886 | 336.93795 | 4.06953 | 0.1467080 | 0.24284918 | 2.5443584 | 20 | 4 9.2 | 19.5 |
| 375734 2009 RP ₃₄ | 17.3 | X | 268.61545 | 76.09725 | 198.06489 | 5.98515 | 0.0626473 | 0.22721991 | 2.6597355 | 20 | 2 21.9 | 21.0 |
| 375735 2009 RC ₃₅ | 16.9 | X | 147.79615 | 85.26335 | 19.10097 | 13.39179 | 0.2451152 | 0.23619498 | 2.5919241 | 20 | 6 16.5 | 21.6 |
| 375736 2009 RA ₃₉ | 17.3 | X | 20.67437 | 49.39956 | 237.85006 | 7.21299 | 0.1319218 | 0.26486740 | 2.4013219 | 20 | 9 5.8 | 20.0 |
| 375737 2009 RL ₄₇ | 17.5 | X | 211.05548 | 148.05028 | 215.47834 | 1.09353 | 0.1557756 | 0.23713187 | 2.5850925 | 20 | 4 6.5 | 21.6 |
| 375738 2009 RU ₅₀ | 17.6 | X | 178.87263 | 22.77602 | 0.42902 | 1.72843 | 0.2279595 | 0.23167567 | 2.6255226 | 20 | 4 3.2 | 22.0 |
| 375739 2009 RF ₅₄ | 17.3 | X | 159.77615 | 31.27232 | 63.86424 | 2.58687 | 0.1028599 | 0.24082828 | 2.5585725 | 20 | 6 11.5 | 21.0 |
| 375740 2009 RU ₅₈ | 17.0 | X | 161.14328 | 84.37454 | 29.65943 | 16.40105 | 0.1859345 | 0.24278087 | 2.5448356 | 20 | 7 12.1 | 21.5 |
| 375741 2009 RE ₆₂ | 16.3 | X | 153.21806 | 25.53620 | 22.12824 | 14.75463 | 0.2199724 | 0.22807956 | 2.6530482 | 20 | 4 12.0 | 20.5 |
| 375742 2009 RW ₇₁ | 17.7 | X | 208.68529 | 315.60774 | 10.72956 | 1.73036 | 0.1861592 | 0.22870790 | 2.6481867 | 20 | 2 20.2 | 22.2 |
| 375743 2009 SG ₁₂ | 17.8 | X | 169.17074 | 71.90641 | 330.41694 | 1.37423 | 0.2288798 | 0.23488776 | 2.6015317 | 20 | 4 18.2 | 22.3 |
| 375744 2009 SG ₂₉ | 16.2 | X | 207.29920 | 327.58257 | 14.02596 | 11.88237 | 0.1106009 | 0.23128065 | 2.6285113 | 20 | 3 11.7 | 20.3 |
| 375745 2009 SU ₃₃ | 16.6 | X | 305.50025 | 238.92151 | 6.09836 | 13.20419 | 0.2169042 | 0.23327802 | 2.6134859 | 20 | 2 14.4 | 20.3 |
| 375746 2009 SY ₃₉ | 18.2 | X | 156.59858 | 183.25502 | 204.15210 | 4.83880 | 0.1462668 | 0.22639098 | 2.6662240 | 20 | 3 15.8 | 22.3 |
| 375747 2009 SP ₄₀ | 17.5 | X | 242.42411 | 174.74669 | 201.20782 | 10.55226 | 0.0940156 | 0.24580063 | 2.5239499 | 20 | 5 31.4 | 21.1 |
| 375748 2009 ST ₄₀ | 17.3 | X | 221.44359 | 290.04488 | 10.27695 | 4.04338 | 0.0716024 | 0.22246918 | 2.6974670 | 20 | 2 4.6 | 21.2 |
| 375749 2009 SL ₄₁ | 17.9 | X | 229.62604 | 107.81576 | 313.08926 | 0.59271 | 0.1727783 | 0.25477079 | 2.4643532 | 20 | 7 6.8 | 21.6 |
| 375750 2009 SJ ₄₂ | 17.0 | X | 128.50652 | 212.00838 | 287.88401 | 3.84176 | 0.1100627 | 0.24440318 | 2.5335617 | 20 | 7 7.1 | 20.7 |
| 375751 2009 SU ₄₂ | 17.0 | X | 120.17229 | 225.44479 | 227.29214 | 8.78052 | 0.1411526 | 0.22975378 | 2.6401440 | 20 | 4 29.2 | 20.9 |
| 375752 2009 SU ₅₂ | 17.1 | X | 59.54471 | 22.85216 | 197.15559 | 5.78795 | 0.0800721 | 0.25943006 | 2.4347583 | 20 | 7 24.1 | 20.1 |
| 375753 2009 SL ₅₆ | 16.6 | X | 308.87154 | 236.08230 | 324.33553 | 6.61424 | 0.0249449 | 0.21783468 | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|---------|----------|
| 375761 2009 SS ₁₁₂ | 17.1 | X | 1.53498 | 55.31027 | 213.80471 | 8.44088 | 0.2155870 | 0.25873356 | 2.4391259 | 20 | 7 7.8 | 19.0 |
| 375762 2009 SN ₁₁₈ | 17.6 | X | 197.77051 | 214.12125 | 249.08879 | 2.19990 | 0.1477686 | 0.25399883 | 2.4693439 | 20 | 7 30.9 | 21.3 |
| 375763 2009 SN ₁₂₅ | 17.0 | X | 291.00654 | 335.78149 | 342.25849 | 6.02216 | 0.1199871 | 0.24725574 | 2.5140378 | 20 | 5 8.5 | 20.3 |
| 375764 2009 SJ ₁₃₀ | 16.5 | X | 308.81579 | 46.01672 | 189.65406 | 13.10510 | 0.2115542 | 0.23073706 | 2.6326380 | 20 | 1 30.5 | 20.4 |
| 375765 2009 SV ₁₃₁ | 16.9 | X | 244.71151 | 240.65494 | 27.38356 | 13.37606 | 0.2430778 | 0.22635062 | 2.6665410 | 20 | 1 11.9 | 21.8 |
| 375766 2009 SC ₁₃₄ | 17.6 | X | 189.50661 | 308.44000 | 49.12234 | 7.30484 | 0.0831760 | 0.22843371 | 2.6503054 | 20 | 3 13.8 | 21.6 |
| 375767 2009 SM ₁₃₇ | 16.9 | X | 335.14806 | 235.90685 | 18.53540 | 5.91854 | 0.1288220 | 0.23980041 | 2.5658786 | 20 | 4 19.3 | 19.7 |
| 375768 2009 SJ ₁₃₈ | 16.7 | X | 314.17261 | 79.27492 | 200.71875 | 14.55272 | 0.0840979 | 0.24107789 | 2.5568061 | 20 | 4 29.4 | 19.8 |
| 375769 2009 SN ₁₄₆ | 16.7 | X | 128.31167 | 74.91757 | 30.54044 | 12.43469 | 0.0853838 | 0.23610043 | 2.5926160 | 20 | 5 16.7 | 20.5 |
| 375770 2009 SU ₁₄₉ | 17.6 | X | 251.20832 | 313.08421 | 343.53501 | 7.61442 | 0.2157108 | 0.23682552 | 2.5873214 | 20 | 2 18.9 | 21.9 |
| 375771 2009 ST ₁₅₀ | 17.6 | X | 281.35618 | 168.38367 | 202.24584 | 6.15818 | 0.1448310 | 0.25705762 | 2.4497159 | 20 | 7 6.1 | 20.6 |
| 375772 2009 SX ₁₅₂ | 17.5 | X | 232.49784 | 223.04111 | 204.68014 | 3.70437 | 0.2050855 | 0.25723035 | 2.4486191 | 20 | 7 14.7 | 21.2 |
| 375773 2009 SD ₁₅₆ | 16.9 | X | 62.80029 | 357.98023 | 186.83800 | 3.43516 | 0.0848765 | 0.24348746 | 2.5399099 | 20 | 6 10.3 | 19.9 |
| 375774 2009 SX ₁₅₆ | 17.0 | X | 140.42405 | 260.80996 | 184.07367 | 13.12642 | 0.1395756 | 0.23513099 | 2.5997373 | 20 | 5 13.3 | 21.1 |
| 375775 2009 SL ₁₆₀ | 17.7 | X | 266.58968 | 69.85277 | 256.92251 | 2.81733 | 0.2481794 | 0.24471979 | 2.5313760 | 20 | 4 3.8 | 21.6 |
| 375776 2009 SZ ₂₀₀ | 16.6 | X | 201.46015 | 304.67621 | 35.53297 | 13.98196 | 0.2837115 | 0.22948435 | 2.6422100 | 20 | 3 7.5 | 21.6 |
| 375777 2009 SX ₂₀₀ | 16.8 | X | 269.81730 | 337.25772 | 31.05209 | 13.71691 | 0.1935062 | 0.25385713 | 2.4702627 | 20 | 6 6.7 | 20.4 |
| 375778 2009 SA ₂₃₉ | 16.6 | X | 260.54888 | 166.16140 | 145.94909 | 14.54020 | 0.2944647 | 0.24183092 | 2.5514957 | 20 | 3 10.9 | 21.0 |
| 375779 2009 SK ₂₄₅ | 17.5 | X | 270.01088 | 322.75185 | 73.80503 | 1.30173 | 0.1650225 | 0.25989412 | 2.4318591 | 20 | 7 24.8 | 20.4 |
| 375780 2009 SU ₂₈₁ | 17.5 | X | 358.28903 | 263.09063 | 73.18602 | 3.84148 | 0.1124468 | 0.26901040 | 2.3766032 | 20 | 10 13.9 | 19.9 |
| 375781 2009 SU ₂₈₄ | 17.8 | X | 217.86475 | 42.51062 | 349.46339 | 3.00002 | 0.1734276 | 0.24594515 | 2.5229610 | 20 | 5 16.9 | 21.8 |
| 375782 2009 SE ₂₈₅ | 16.9 | X | 226.87014 | 63.33572 | 359.56697 | 8.93507 | 0.0757845 | 0.25620916 | 2.4551212 | 20 | 7 19.8 | 20.4 |
| 375783 2009 SC ₂₉₀ | 16.3 | X | 104.42864 | 41.26282 | 38.53634 | 14.11570 | 0.1360059 | 0.22313073 | 2.6921327 | 20 | 3 30.4 | 20.1 |
| 375784 2009 SZ ₂₉₁ | 17.1 | X | 307.41980 | 198.48322 | 129.64892 | 6.26257 | 0.2136716 | 0.25968590 | 2.4331589 | 20 | 6 6.1 | 19.6 |
| 375785 2009 SF ₂₉₅ | 17.0 | X | 155.51514 | 359.94854 | 52.38253 | 4.98102 | 0.1139360 | 0.24041090 | 2.5615329 | 20 | 6 4.1 | 20.8 |
| 375786 2009 SZ ₂₉₆ | 16.5 | X | 222.15949 | 354.04792 | 351.59826 | 14.06690 | 0.1769661 | 0.23613517 | 2.5923617 | 20 | 3 22.9 | 20.7 |
| 375787 2009 SB ₃₀₉ | 17.6 | X | 186.23422 | 216.52032 | 174.45235 | 8.19565 | 0.1509322 | 0.23982613 | 2.5656951 | 20 | 4 19.5 | 21.2 |
| 375788 2009 SR ₃₀₉ | 17.0 | X | 290.32254 | 248.39838 | 355.30441 | 12.78802 | 0.2383979 | 0.23240864 | 2.6199994 | 20 | 1 23.2 | 21.1 |
| 375789 2009 SU ₃₂₇ | 17.1 | X | 298.72828 | 337.64160 | 53.01603 | 6.15420 | 0.0137165 | 0.26412198 | 2.4058378 | 20 | 9 24.6 | 20.1 |
| 375790 2009 SN ₃₂₈ | 16.3 | X | 168.48074 | 196.41663 | 205.45734 | 32.41477 | 0.1528204 | 0.23181664 | 2.6244581 | 20 | 4 15.1 | 20.4 |
| 375791 2009 SO ₃₃₂ | 16.8 | X | 141.65205 | 83.30221 | 351.09177 | 12.15266 | 0.2486627 | 0.22981221 | 2.6396964 | 20 | 5 2.1 | 21.4 |
| 375792 2009 SN ₃₃₉ | 16.8 | X | 97.37577 | 15.17740 | 60.88245 | 9.08229 | 0.2036558 | 0.21377662 | 2.7701030 | 20 | 3 26.9 | 20.7 |
| 375793 2009 SR ₃₃₉ | 16.6 | X | 102.85920 | 214.18363 | 220.95499 | 7.84990 | 0.1263602 | 0.21512633 | 2.7585043 | 20 | 3 13.9 | 20.4 |
| 375794 2009 SA ₃₄₆ | 17.5 | X | 150.47078 | 346.27183 | 96.51468 | 3.69515 | 0.0831641 | 0.23744971 | 2.5827852 | 20 | 5 15.8 | 21.2 |
| 375795 2009 SU ₃₅₆ | 17.8 | X | 213.06946 | 220.06209 | 104.69773 | 3.67523 | 0.1549847 | 0.22876204 | 2.6477689 | 20 | 2 23.1 | 22.0 |
| 375796 2009 SY ₃₅₈ | 17.7 | X | 179.62889 | 315.40849 | 151.62047 | 1.70142 | 0.1330933 | 0.25304542 | 2.4755426 | 20 | 7 18.5 | 21.6 |
| 375797 2009 SU ₃₆₃ | 16.7 | X | 121.57818 | 134.48318 | 58.34905 | 5.21811 | 0.0812351 | 0.26215020 | 2.4178866 | 20 | 9 10.5 | 20.1 |
| 375798 2009 TA ₄ | 17.2 | X | 242.00449 | 175.24302 | 186.83069 | 13.26224 | 0.1820763 | 0.24206319 | 2.5498632 | 20 | 5 4.6 | 21.2 |
| 375799 2009 TO ₁₁ | 17.3 | X | 220.41794 | 300.30941 | 49.58054 | 10.08199 | 0.1958627 | 0.23542605 | 2.5975647 | 20 | 3 31.9 | 21.7 |
| 375800 2009 TM ₁₂ | 17.6 | X | 339.96158 | 102.81030 | 210.72395 | 5.19536 | 0.2395381 | 0.26471813 | 2.4022245 | 20 | 7 26.7 | 19.1 |
| 375801 2009 TC ₁₄ | 16.7 | X | 199.03121 | 18.93893 | 21.92313 | 12.08644 | 0.2513200 | 0.23799878 | 2.5788113 | 20 | 5 7.4 | 21.3 |
| 375802 2009 TM ₁₄ | 16.8 | X | 214.65761 | 14.27453 | 40.97530 | 16.49038 | 0.2405597 | 0.24290340 | 2.5439797 | 20 | 6 6.9 | 21.3 |
| 375803 2009 TQ ₁₅ | 17.4 | X | 206.20381 | 272.06211 | 91.37461 | 5.16229 | 0.2298673 | 0.23527462 | 2.5986792 | 20 | 4 3.3 | 21.9 |
| 375804 2009 TW ₁₅ | 16.2 | X | 286.72469 | 307.70929 | 61.32379 | 11.73612 | 0.0654690 | 0.25495720 | 2.4631519 | 20 | 7 29.5 | 19.4 |
| 375805 2009 TY ₁₉ | 17.9 | X | 245.94273 | 159.56792 | 191.55802 | 2.25064 | 0.0637970 | 0.23932197 | 2.5692971 | 20 | 5 5.6 | 21.4 |
| 375806 2009 TE ₂₂ | 17.5 | X | 284.45388 | 154.50229 | 229.11746 | 5.26166 | 0.2291099 | 0.25866376 | 2.4395646 | 20 | 7 15.2 | 20.3 |
| 375807 2009 TV ₃₆ | 16.5 | X | 233.08902 | 167.51534 | 264.89247 | 8.99434 | 0.2042875 | 0.25459421 | 2.4654926 | 20 | 7 20.5 | 20.2 |
| 375808 2009 TR ₃₈ | 16.7 | X | 267.37170 | 180.86095 | 228.80491 | 14.12636 | 0.1174702 | 0.26079507 | 2.4262551 | 20 | 8 10.2 | 20.0 |
| 375809 2009 TS ₃₉ | 17.3 | X | 164.29427 | 173.49568 | 242.74061 | 1.41988 | 0.1949308 | 0.23195740 | 2.6233963 | 20 | 4 30.5 | 21.7 |
| 375810 2009 TG ₄₂ | 17.8 | X | 129.59514 | 253.61973 | 218.36618 | 3.74339 | 0.1696950 | 0.23416387 | 2.6068905 | 20 | 6 6.6 | 21.8 |
| 375811 2009 TZ ₄₅ | 17.0 | X | 215.84361 | 33.55894 | 281.91153 | 4.70295 | 0.1383463 | 0.22258718 | 2.6965136 | 20 | 2 12.8 | 21.3 |
| 375812 2009 UA ₂ | 16.6 | X | 241.37218 | 129.17283 | 218.47068 | 28.12076 | 0.1637026 | 0.23831886 | 2.5765017 | 20 | 4 14.0 | 20.7 |
| 375813 2009 UU ₄ | 17.3 | X | 259.95327 | 70.16893 | 270.66735 | 3.02379 | 0.1407110 | 0.24223973 | 2.5486242 | 20 | 4 27.6 | 21.0 |
| 375814 2009 UF ₁₆ | 16.8 | X | 137.35292 | 62.71744 | 3.46002 | 12.45601 | 0.1572393 | 0.22609395 | 2.6685586 | 20 | 4 12.9 | 20.9 |
| 375815 2009 UT ₂₅ | 16.3 | X | 180.61156 | 340.89256 | 62.90837 | 13.95501 | 0.1544446 | 0.23352500 | 2.6116429 | 20 | 5 1.9 | 20.5 |
| 375816 2009 UP ₂₆ | 17.1 | X | 200.92331 | 182.02777 | 191.51392 | 5.00165 | 0.2149658 | 0.23318304 | 2.6141956 | 20 | 4 9.3 | 21.6 |
| 375817 2009 UW ₂₇ | 16.8 | X | 135.22097 | 191.19423 | 248.16277 | 5.63692 | 0.0987979 | 0.22940304 | 2.6428343 | 20 | 4 23.3 | 20.6 |
| 375818 2009 UZ ₂₇ | 17.2 | X | 205.24847 | 130.22339 | 243.65911 | 4.15766 | 0.2306012 | 0.23523149 | 2.5989968 | 20 | 4 11.3 | 21.6 |
| 375819 2009 UO ₃₅ | 17.1 | X | 173.05501 | 181.63944 | 212.06130 | 1.54932 | 0.1544826 | 0.22719752 | 2.6599103 | 20 | 4 9.4 | 21.4 |
| 375820 2009 UV ₄₁ | 16.5 | X | 246.72550 | 235.19720 | 30.26647 | 16.15526 | 0.1042277 | 0.21975648 | 2.7196202 | 20 | 1 21.1 | 21.0 |
| 375821 2009 UC ₄₇ | 17.1 | X | 77.78741 | 38.83644 | 50.28961 | 3.89123 | 0.1700168 | 0.21360951 | 2.7715475 | 20 | 3 9.8 | 20.5 |
| 375822 2009 UN ₄₇ | 17.5 | X | 179.74061 | 91.29583 | 234.43682 | 7.88745 | 0.2053176 | 0.21800325 | 2.7341819 | 20 | 1 25.6 | 22.2 |
| 375823 2009 UB ₆₂ | 17.0 | X | 156.65463 | 35.84715 | 136.56662 | 3.72494 | 0.1138943 | 0.26447972 | 2.4036679 | 20 | 9 21.6 | 20.5 |
| 375824 2009 UA ₆₉ | 16.7 | X | 270.07541 | 31.49339 | 7.75232 | 7.00502 | 0.1212225 | 0.26217214 | 2.4177517 | 20 | 8 8.0 | 19.7 |
| 375825 2009 UQ ₇₂ | 16.9 | X | 209.86225 | 261.22335 | 71.03969 | 6.94383 | 0.2895477 | 0.22944124 | 2.6425409 | 20 | 2 29.6 | 21.8 |
| 375826 2009 UC ₇₃ | 17.2 | X | 296.38393 | 6.87693 | 6.41016 | 6.99404 | 0.1544537 | 0.26320228 | 2.4114390 | 20 | 8 7.5 | 19.8 |
| 375827 2009 UO ₇₈ | 16.9 | X | 241.42186 | 239.47468 | 218.89373 | | | | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> |
|-------------------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----|--------|----------|
| 375841 2009 UY ₁₃₇ | 16.9 | X | 155.31322 | 228.97906 | 227.73038 | 10.44423 | 0.1085335 | 0.23625445 | 2.5914891 | 20 | 6 9.1 | 20.9 |
| 375842 2009 UQ ₁₄₁ | 17.1 | X | 293.85286 | 39.26245 | 287.24310 | 2.07811 | 0.1259504 | 0.24639665 | 2.5198780 | 20 | 5 25.9 | 20.1 |
| 375843 2009 UK ₁₄₈ | 17.4 | X | 53.21315 | 335.06700 | 197.08739 | 4.01525 | 0.0824320 | 0.22938528 | 2.6429708 | 20 | 5 8.8 | 20.6 |
| 375844 2009 UT ₁₄₉ | 16.9 | X | 192.20227 | 58.64664 | 280.05102 | 4.72205 | 0.0386853 | 0.21477503 | 2.7615115 | 20 | 2 17.5 | 20.9 |
| 375845 2009 UJ ₁₅₁ | 17.0 | X | 146.85634 | 357.51576 | 52.71856 | 5.63447 | 0.1107049 | 0.22193524 | 2.7017918 | 20 | 4 3.9 | 21.0 |
| 375846 2009 UR ₁₅₁ | 17.2 | X | 188.78159 | 67.54840 | 346.24200 | 4.55278 | 0.2131418 | 0.23756350 | 2.5819604 | 20 | 5 17.0 | 21.7 |
| 375847 2009 UQ ₁₅₂ | 16.6 | X | 77.12392 | 49.02674 | 27.40878 | 9.47337 | 0.1293946 | 0.21209782 | 2.7847010 | 20 | 2 17.9 | 20.2 |
| 375848 2009 UZ ₁₅₂ | 15.8 | X | 279.07572 | 292.88475 | 35.65505 | 12.66750 | 0.2320661 | 0.24062379 | 2.5600219 | 20 | 4 24.1 | 19.3 |
| 375849 2009 VL ₆ | 16.9 | X | 201.26683 | 298.85636 | 37.35946 | 7.66472 | 0.1975101 | 0.22681554 | 2.6628959 | 20 | 2 28.8 | 21.5 |
| 375850 2009 VD ₇ | 17.1 | X | 259.58441 | 338.88347 | 341.50257 | 3.61716 | 0.3228307 | 0.24078906 | 2.5588503 | 20 | 3 15.3 | 21.4 |
| 375851 2009 VE ₉ | 17.3 | X | 204.92836 | 353.19023 | 344.34178 | 2.57208 | 0.1072578 | 0.22559637 | 2.6724811 | 20 | 3 1.7 | 21.5 |
| 375852 2009 VZ ₁₁ | 16.9 | X | 79.45546 | 81.95957 | 37.04373 | 7.70921 | 0.0481258 | 0.22488639 | 2.6781030 | 20 | 4 1.5 | 20.3 |
| 375853 2009 VG ₁₃ | 17.6 | X | 199.37406 | 232.64042 | 256.58085 | 1.66638 | 0.1432064 | 0.25568443 | 2.4584791 | 20 | 9 5.0 | 21.3 |
| 375854 2009 VA ₁₄ | 16.7 | X | 185.30770 | 276.30776 | 36.64882 | 12.53477 | 0.1017311 | 0.21334926 | 2.7738009 | 20 | 1 16.5 | 21.2 |
| 375855 2009 VQ ₁₄ | 17.2 | X | 320.54428 | 297.24146 | 349.56959 | 3.82143 | 0.1449709 | 0.24296135 | 2.5435752 | 20 | 5 7.7 | 20.1 |
| 375856 2009 VZ ₁₆ | 17.4 | X | 191.99597 | 346.62568 | 48.41908 | 2.52598 | 0.1660954 | 0.23133085 | 2.6281310 | 20 | 4 28.6 | 21.7 |
| 375857 2009 VJ ₁₇ | 16.7 | X | 219.88000 | 86.57679 | 298.74858 | 3.39704 | 0.1709248 | 0.23830642 | 2.5765914 | 20 | 5 10.4 | 20.9 |
| 375858 2009 VW ₁₈ | 17.2 | X | 178.86073 | 98.15354 | 325.20499 | 2.09284 | 0.1723655 | 0.23529034 | 2.5985634 | 20 | 5 21.4 | 21.3 |
| 375859 2009 VC ₂₂ | 16.6 | X | 166.73253 | 17.05019 | 68.51278 | 14.62144 | 0.1247792 | 0.23555953 | 2.5965834 | 20 | 6 6.4 | 20.6 |
| 375860 2009 VQ ₂₂ | 16.3 | X | 104.21016 | 292.84501 | 234.86864 | 14.78906 | 0.0937951 | 0.23850204 | 2.5751824 | 20 | 7 10.4 | 20.1 |
| 375861 2009 VM ₂₈ | 16.6 | X | 184.62156 | 172.36028 | 231.66155 | 5.70068 | 0.1850204 | 0.23181365 | 2.6244807 | 20 | 5 2.7 | 20.8 |
| 375862 2009 VV ₃₂ | 16.2 | X | 228.89743 | 81.13085 | 261.90984 | 10.69676 | 0.0240112 | 0.22645330 | 2.6657349 | 20 | 4 3.1 | 20.1 |
| 375863 2009 VL ₃₃ | 16.8 | X | 48.92874 | 186.04696 | 5.67469 | 8.01993 | 0.0399790 | 0.23503140 | 2.6004717 | 20 | 5 20.9 | 20.3 |
| 375864 2009 VZ ₃₃ | 16.5 | X | 251.91519 | 331.72813 | 335.08232 | 2.07927 | 0.0206302 | 0.22622682 | 2.6675137 | 20 | 3 20.7 | 20.2 |
| 375865 2009 VP ₃₅ | 17.2 | X | 164.75611 | 26.30703 | 29.72274 | 6.58985 | 0.2512714 | 0.23030017 | 2.6359664 | 20 | 4 28.4 | 21.4 |
| 375866 2009 VV ₃₈ | 16.8 | X | 250.45287 | 18.47042 | 322.28028 | 2.48134 | 0.1965762 | 0.23766694 | 2.5812112 | 20 | 4 11.4 | 20.7 |
| 375867 2009 VR ₃₉ | 17.3 | X | 142.18256 | 29.97271 | 36.99367 | 3.15296 | 0.1647972 | 0.22705086 | 2.6610556 | 20 | 4 22.4 | 21.3 |
| 375868 2009 VW ₃₉ | 16.3 | X | 160.30116 | 246.01339 | 229.15019 | 14.25644 | 0.0731929 | 0.24260187 | 2.5460873 | 20 | 7 5.3 | 20.2 |
| 375869 2009 VV ₄₁ | 17.0 | X | 191.51174 | 220.12410 | 177.08314 | 2.45889 | 0.2018959 | 0.23328878 | 2.6134056 | 20 | 4 30.9 | 21.5 |
| 375870 2009 VM ₄₅ | 16.9 | X | 192.23016 | 27.89637 | 4.98832 | 3.95572 | 0.2512714 | 0.23265206 | 2.6181717 | 20 | 4 24.4 | 21.5 |
| 375871 2009 VK ₄₆ | 16.8 | X | 143.49300 | 280.36955 | 136.51940 | 3.41451 | 0.0809087 | 0.22537270 | 2.6742490 | 20 | 4 5.1 | 20.6 |
| 375872 2009 VL ₄₆ | 17.6 | X | 172.51105 | 327.93848 | 82.64813 | 5.23012 | 0.2127838 | 0.23159941 | 2.6260989 | 20 | 5 2.7 | 22.0 |
| 375873 2009 VQ ₅₀ | 16.4 | X | 251.31571 | 75.06299 | 254.86147 | 4.24043 | 0.0837695 | 0.23239626 | 2.6200925 | 20 | 4 9.9 | 20.3 |
| 375874 2009 VT ₅₀ | 16.1 | X | 223.60207 | 68.44139 | 241.85076 | 11.02717 | 0.0622901 | 0.21831074 | 2.7316139 | 20 | 2 13.7 | 20.3 |
| 375875 2009 VO ₅₁ | 16.6 | X | 231.08222 | 350.03455 | 17.47455 | 7.41978 | 0.1521773 | 0.23745369 | 2.5827564 | 20 | 4 29.6 | 20.7 |
| 375876 2009 VC ₅₇ | 15.7 | X | 338.90148 | 183.34008 | 277.74754 | 16.41509 | 0.1634674 | 0.18184267 | 3.0855945 | 20 | — | — |
| 375877 2009 VY ₅₇ | 16.5 | X | 167.59487 | 268.70827 | 80.39180 | 8.32264 | 0.1758010 | 0.21818053 | 2.7327006 | 20 | 2 15.5 | 21.0 |
| 375878 2009 VL ₅₈ | 17.3 | X | 172.58301 | 201.04849 | 193.43299 | 5.05396 | 0.0859002 | 0.22767439 | 2.6561948 | 20 | 4 7.7 | 21.2 |
| 375879 2009 VU ₅₈ | 16.7 | X | 115.81780 | 198.43509 | 303.71832 | 4.73491 | 0.0485898 | 0.24080963 | 2.5587046 | 20 | 6 18.1 | 20.2 |
| 375880 2009 VX ₆₀ | 16.3 | X | 107.96548 | 224.57933 | 223.26505 | 11.77176 | 0.0531723 | 0.22532925 | 2.6745928 | 20 | 3 24.7 | 20.0 |
| 375881 2009 VH ₆₁ | 17.3 | X | 182.95980 | 101.71759 | 298.26505 | 1.37899 | 0.1926264 | 0.23161666 | 2.6259686 | 20 | 4 26.0 | 21.7 |
| 375882 2009 VL ₆₂ | 17.0 | X | 166.70428 | 341.10429 | 60.07427 | 4.96589 | 0.2438906 | 0.22726335 | 2.6593967 | 20 | 4 17.5 | 21.6 |
| 375883 2009 VS ₆₂ | 16.5 | X | 93.89752 | 250.83496 | 235.97740 | 7.00154 | 0.1496606 | 0.22392825 | 2.6857368 | 20 | 5 14.5 | 20.1 |
| 375884 2009 VD ₆₃ | 16.4 | X | 110.36033 | 18.09146 | 68.97700 | 5.81214 | 0.1088897 | 0.22017402 | 2.7161807 | 20 | 4 9.8 | 20.2 |
| 375885 2009 VE ₆₃ | 16.6 | X | 113.66177 | 225.33805 | 245.96498 | 7.37222 | 0.0906623 | 0.22633893 | 2.6666327 | 20 | 5 9.6 | 20.4 |
| 375886 2009 VO ₇₁ | 17.2 | X | 181.01815 | 256.36008 | 173.49526 | 1.18878 | 0.1447626 | 0.23501096 | 2.6006225 | 20 | 6 1.3 | 21.2 |
| 375887 2009 VR ₇₁ | 17.2 | X | 226.12864 | 154.95044 | 214.63919 | 2.66829 | 0.0866764 | 0.23653070 | 2.5894709 | 20 | 5 3.8 | 20.8 |
| 375888 2009 VG ₇₂ | 17.2 | X | 239.05063 | 232.74643 | 136.79062 | 5.14593 | 0.2720441 | 0.24252642 | 2.5466153 | 20 | 5 3.8 | 21.5 |
| 375889 2009 VJ ₇₂ | 17.1 | X | 206.69082 | 311.07346 | 89.16582 | 8.16308 | 0.2519067 | 0.23820791 | 2.5773017 | 20 | 5 16.8 | 21.6 |
| 375890 2009 VN ₇₂ | 16.8 | X | 194.59314 | 258.60926 | 119.93537 | 7.00128 | 0.2854717 | 0.23199600 | 2.6231053 | 20 | 4 12.9 | 21.6 |
| 375891 2009 VZ ₇₅ | 17.1 | X | 243.59985 | 136.67665 | 191.00699 | 3.52195 | 0.2912871 | 0.23553708 | 2.5967483 | 20 | 3 14.5 | 21.5 |
| 375892 2009 VQ ₈₂ | 17.1 | X | 144.44671 | 178.02892 | 230.84437 | 7.45456 | 0.1632405 | 0.22146390 | 2.7056238 | 20 | 3 30.9 | 21.5 |
| 375893 2009 VB ₈₃ | 16.5 | X | 207.52742 | 52.94913 | 292.83604 | 5.22639 | 0.0788799 | 0.22587939 | 2.6702483 | 20 | 3 12.3 | 20.5 |
| 375894 2009 VL ₈₅ | 17.1 | X | 231.86290 | 318.28427 | 71.22290 | 6.43504 | 0.1285143 | 0.24085416 | 2.5583892 | 20 | 6 1.5 | 20.7 |
| 375895 2009 VF ₈₆ | 17.0 | X | 275.13044 | 114.78472 | 211.78961 | 4.09092 | 0.1338443 | 0.23731601 | 2.5837551 | 20 | 4 29.5 | 20.6 |
| 375896 2009 VZ ₈₆ | 16.9 | X | 39.80158 | 279.01233 | 188.46367 | 4.20609 | 0.0272091 | 0.20854434 | 2.8162451 | 20 | 1 20.7 | 20.7 |
| 375897 2009 VN ₈₇ | 16.9 | X | 164.29759 | 181.55698 | 176.17865 | 3.79800 | 0.1111386 | 0.21543644 | 2.7558565 | 20 | 2 15.3 | 21.1 |
| 375898 2009 VU ₉₁ | 16.7 | X | 172.52052 | 240.83935 | 190.85436 | 11.05859 | 0.1589775 | 0.23447115 | 2.6046124 | 20 | 5 27.8 | 21.0 |
| 375899 2009 VQ ₉₂ | 16.7 | X | 240.35929 | 223.16526 | 121.10485 | 3.50756 | 0.1067751 | 0.23321859 | 2.6139299 | 20 | 4 16.9 | 20.5 |
| 375900 2009 VP ₉₄ | 16.5 | X | 38.18213 | 159.72490 | 264.74009 | 7.02834 | 0.0148642 | 0.19809107 | 2.9144691 | 20 | — | — |
| 375901 2009 VA ₉₅ | 16.8 | X | 149.29919 | 90.71509 | 294.30932 | 3.13572 | 0.1048829 | 0.21633206 | 2.7482451 | 20 | 3 2.9 | 20.8 |
| 375902 2009 VB ₉₅ | 17.0 | X | 158.63399 | 35.15848 | 47.13103 | 3.30404 | 0.181183 | 0.23062100 | 2.6335212 | 20 | 5 24.9 | 21.0 |
| 375903 2009 VQ ₉₆ | 17.2 | X | 278.07645 | 228.45674 | 130.01662 | 1.60844 | 0.1703561 | 0.24593577 | 2.5230251 | 20 | 6 10.3 | 20.2 |
| 375904 2009 VJ ₁₀₅ | 16.4 | X | 240.27782 | 53.15187 | 310.50933 | 6.84041 | 0.1984473 | 0.24073262 | 2.5592502 | 20 | 4 28.4 | 20.6 |
| 375905 2009 VU ₁₀₇ | 16.1 | X | 44.46395 | 1.02047 | 220.58472 | 14.52069 | 0.0560163 | 0.24396264 | 2.5366108 | 20 | 6 28.2 | 19.5 |
| 375906 2009 VL ₁₁₀ | 16.8 | X | 239.32735 | 7.77223 | 359.05054 | 6.86229 | 0.1662951 | 0.24043878 | 2.5613349 | 20 | 5 5.2 | 20.8 |
| 375907 2009 VX ₁₁₃ | 17.3 | X | 147.67651 | 201.22446 | 209.35889 | 2.04652 | 0.1099334 | 0.22281480 | 2.6946768 | 20 | 4 2.8 | 21.2 |
| 375908 2009 VZ ₁₁₃ | 17.0 | X | 56.38790 | 114.78269 | 336.02886 | 1.11517 | 0.0191927 | 0.20724068 | 2.8280432 | 20 | 1 22.5 | 20.6 |
| 375909 2009 VH ₁₁₄ | 16.9 | X | 162.48199 | 333.96362 | 53.16170 | 5.44295 | 0.1041593 | 0.21925563 | 2.7237603 | 20 | 3 22.7 | 21.0 |
| 375910 2009 WP ₉ | 16.4 | X | 205.58176 | 285.41016 | 78.20975 | 9.79134 | 0.1495297 | 0.23066902 | 2.6331556 | 20 | 4 7.1 | 20.7 |
| 375911 2009 WP ₁₀ | 16.3 | X | 107.52983 | 249.65647 | 219.57893 | 11.86461 | 0.1243759 | 0.22327578 | 2.6909666 | 20 | 5 4.8 | 20.0 |
| 375912 2009 WY ₁₄ | 17.2 | X | 85.12817 | 285.22969 | 167.72685 | 3.58395 | 0.0625953 | 0.21474937 | 2.7617315 | 20 | 3 6.9 | 20.8 |
| 375913 2009 WY ₁₈ | 17.3 | X | 210.39672 | 118.95199 | 196.51578 | 4.55335 | 0.170068 | 0.2193 | | | | |

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

| Planet | <i>H</i> | <i>G</i> | <i>M</i> | ω | Ω | <i>i</i> | <i>e</i> | μ | <i>a</i> | TE | Oppos. | <i>V</i> | | |
|--------|----------|-------------------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|-----------|----------|--------|------|
| 375921 | 2009 | WK ₄₁ | 16.7 | X | 82.62198 | 178.85128 | 253.34766 | 4.37281 | 0.1090271 | 0.20856036 | 2.8161009 | 20 | 2 11.6 | 20.3 |
| 375922 | 2009 | WY ₄₁ | 16.5 | X | 208.24767 | 249.90464 | 41.79006 | 2.55571 | 0.0302268 | 0.20370252 | 2.8606964 | 20 | 1 13.0 | 20.5 |
| 375923 | 2009 | WB ₄₃ | 16.6 | X | 152.55909 | 344.29360 | 84.66142 | 14.54947 | 0.1407164 | 0.22738647 | 2.6584366 | 20 | 5 7.9 | 20.9 |
| 375924 | 2009 | WE ₄₄ | 16.9 | X | 143.04498 | 150.05113 | 304.26366 | 4.31355 | 0.0595197 | 0.23462920 | 2.6034426 | 20 | 5 18.5 | 20.7 |
| 375925 | 2009 | WV ₄₆ | 16.7 | X | 237.17700 | 246.43416 | 97.82757 | 6.41227 | 0.1922583 | 0.23574087 | 2.5952515 | 20 | 4 8.2 | 20.9 |
| 375926 | 2009 | WX ₄₆ | 16.6 | X | 110.98727 | 247.90498 | 206.60146 | 10.96392 | 0.1593991 | 0.22382507 | 2.6865622 | 20 | 4 24.5 | 20.4 |
| 375927 | 2009 | WY ₅₂ | 15.8 | X | 92.58672 | 224.82125 | 243.89494 | 13.06695 | 0.0687657 | 0.22128754 | 2.7070612 | 20 | 4 2.4 | 19.6 |
| 375928 | 2009 | WU ₆₂ | 16.9 | X | 63.40091 | 293.75167 | 184.24909 | 4.97244 | 0.0721886 | 0.21676951 | 2.7445465 | 20 | 3 9.8 | 20.4 |
| 375929 | 2009 | WZ ₆₄ | 16.8 | X | 123.71444 | 55.40028 | 46.94554 | 14.13691 | 0.1901961 | 0.22677911 | 2.6631810 | 20 | 5 19.6 | 21.0 |
| 375930 | 2009 | WD ₆₅ | 16.8 | X | 170.15034 | 19.29032 | 24.85302 | 15.57629 | 0.1404824 | 0.23533643 | 2.5982241 | 20 | 4 18.2 | 20.9 |
| 375931 | 2009 | WH ₆₈ | 16.5 | X | 181.72802 | 170.62472 | 218.36928 | 12.61840 | 0.0493232 | 0.22734307 | 2.6587749 | 20 | 4 8.1 | 20.4 |
| 375932 | 2009 | WP ₇₅ | 17.6 | X | 199.80998 | 306.51237 | 98.65691 | 4.50552 | 0.2252562 | 0.23644902 | 2.5900673 | 20 | 5 17.6 | 22.0 |
| 375933 | 2009 | WQ ₇₅ | 16.8 | X | 198.93035 | 209.46116 | 166.05676 | 2.47838 | 0.1055493 | 0.22880735 | 2.6474194 | 20 | 4 12.1 | 20.7 |
| 375934 | 2009 | WV ₇₅ | 17.0 | X | 191.04384 | 266.03883 | 95.90156 | 6.49388 | 0.0965892 | 0.22329917 | 2.6907786 | 20 | 3 21.2 | 21.2 |
| 375935 | 2009 | WU ₈₂ | 16.9 | X | 277.57487 | 341.64775 | 339.74435 | 5.58139 | 0.1231036 | 0.23730438 | 2.5838396 | 20 | 4 24.6 | 20.4 |
| 375936 | 2009 | WG ₈₄ | 17.4 | X | 211.98155 | 34.72359 | 331.01783 | 4.45206 | 0.0242329 | 0.22868693 | 2.6483486 | 20 | 4 14.3 | 21.0 |
| 375937 | 2009 | WR ₈₇ | 16.8 | X | 186.78383 | 16.98969 | 20.10454 | 4.79926 | 0.0952842 | 0.22990342 | 2.6389982 | 20 | 4 25.5 | 20.7 |
| 375938 | 2009 | WT ₈₇ | 17.4 | X | 162.28809 | 70.89211 | 3.06950 | 3.26421 | 0.0817347 | 0.23141058 | 2.6275273 | 20 | 5 15.8 | 21.3 |
| 375939 | 2009 | WH ₈₈ | 17.4 | X | 283.21789 | 123.57560 | 168.59883 | 2.36343 | 0.0113340 | 0.22575834 | 2.6712027 | 20 | 4 13.7 | 20.8 |
| 375940 | 2009 | WF ₁₀₁ | 16.8 | X | 18.68231 | 63.20377 | 89.88651 | 5.88353 | 0.0267239 | 0.21561779 | 2.7543111 | 20 | 2 21.4 | 20.4 |
| 375941 | 2009 | WE ₁₀₂ | 16.2 | X | 333.23466 | 223.54929 | 38.38685 | 12.47836 | 0.2376971 | 0.24008390 | 2.5638583 | 20 | 4 14.0 | 18.5 |
| 375942 | 2009 | WB ₁₀₄ | 16.3 | X | 94.35546 | 126.55735 | 25.04224 | 13.43946 | 0.1068674 | 0.23344858 | 2.6122128 | 20 | 6 8.8 | 20.1 |
| 375943 | 2009 | WJ ₁₂₁ | 17.5 | X | 153.17185 | 142.41023 | 280.48493 | 0.87073 | 0.1293911 | 0.22741154 | 2.6582412 | 20 | 4 25.1 | 21.5 |
| 375944 | 2009 | WA ₁₂₆ | 16.0 | X | 263.91301 | 65.14976 | 243.86405 | 12.41754 | 0.1902655 | 0.22954507 | 2.6417441 | 20 | 3 12.9 | 20.3 |
| 375945 | 2009 | WJ ₁₃₁ | 16.6 | X | 222.23495 | 72.54377 | 252.58126 | 5.68241 | 0.0276396 | 0.21843861 | 2.7305478 | 20 | 3 2.9 | 20.7 |
| 375946 | 2009 | WY ₁₃₃ | 16.8 | X | 202.12461 | 297.99826 | 54.80611 | 6.83136 | 0.0652253 | 0.22516102 | 2.6759248 | 20 | 3 21.4 | 20.8 |
| 375947 | 2009 | WG ₁₄₂ | 16.8 | X | 255.77262 | 351.59172 | 346.54900 | 5.49066 | 0.2994704 | 0.24138097 | 2.5546654 | 20 | 4 3.5 | 21.0 |
| 375948 | 2009 | WM ₁₅₃ | 16.4 | X | 72.13181 | 135.69227 | 27.08951 | 12.05032 | 0.1239515 | 0.22903948 | 2.6456303 | 20 | 5 27.1 | 19.9 |
| 375949 | 2009 | WH ₁₆₅ | 16.5 | X | 116.68945 | 323.65629 | 71.83833 | 5.39763 | 0.0745060 | 0.20916782 | 2.8106459 | 20 | 2 8.1 | 20.4 |
| 375950 | 2009 | WL ₁₆₅ | 16.2 | X | 17.01317 | 194.35650 | 66.88140 | 11.79015 | 0.0864959 | 0.24031626 | 2.5622054 | 20 | 7 18.8 | 19.3 |
| 375951 | 2009 | WX ₁₆₆ | 16.2 | X | 294.75354 | 156.24106 | 96.37352 | 5.55291 | 0.0208266 | 0.21488023 | 2.7606101 | 20 | 3 9.9 | 20.0 |
| 375952 | 2009 | WU ₁₆₈ | 17.1 | X | 187.55484 | 262.91394 | 171.80372 | 2.18859 | 0.0910180 | 0.23850576 | 2.5751556 | 20 | 6 15.1 | 20.9 |
| 375953 | 2009 | WD ₁₆₉ | 16.9 | X | 234.67419 | 198.51679 | 166.50442 | 2.70428 | 0.1180441 | 0.23575148 | 2.5951737 | 20 | 5 5.5 | 20.7 |
| 375954 | 2009 | WB ₁₇₀ | 16.5 | X | 221.01734 | 311.66504 | 51.12540 | 13.02482 | 0.1458033 | 0.23174561 | 2.6249943 | 20 | 4 19.1 | 20.7 |
| 375955 | 2009 | WR ₁₇₂ | 17.0 | X | 139.65270 | 226.01902 | 202.15974 | 10.16168 | 0.1106562 | 0.22470045 | 2.6795802 | 20 | 4 16.9 | 20.9 |
| 375956 | 2009 | WP ₁₇₅ | 16.7 | X | 160.84348 | 350.83582 | 37.87951 | 13.13970 | 0.0607210 | 0.22161196 | 2.7044187 | 20 | 3 22.8 | 20.7 |
| 375957 | 2009 | WN ₁₇₈ | 17.3 | X | 216.51196 | 126.92793 | 215.81432 | 4.79654 | 0.0693584 | 0.22632162 | 2.6667687 | 20 | 3 19.7 | 21.3 |
| 375958 | 2009 | WS ₁₇₈ | 16.5 | X | 189.97669 | 28.29924 | 303.13778 | 5.11634 | 0.0589620 | 0.21390229 | 2.7690179 | 20 | 2 7.9 | 20.6 |
| 375959 | 2009 | WM ₁₈₀ | 16.9 | X | 60.38894 | 58.50095 | 87.15406 | 9.73219 | 0.2160318 | 0.21673048 | 2.7448759 | 20 | 5 6.9 | 20.2 |
| 375960 | 2009 | WO ₁₉₅ | 16.8 | X | 191.11630 | 110.87980 | 265.62190 | 4.78382 | 0.1455527 | 0.22951941 | 2.6419409 | 20 | 4 2.5 | 21.0 |
| 375961 | 2009 | WC ₁₉₈ | 16.6 | X | 111.11038 | 135.76834 | 313.33293 | 7.88904 | 0.2650470 | 0.21476043 | 2.7616367 | 20 | 4 26.5 | 21.1 |
| 375962 | 2009 | WM ₂₀₀ | 17.0 | X | 194.52068 | 141.35493 | 224.20272 | 5.77679 | 0.1022906 | 0.22430933 | 2.6826941 | 20 | 3 23.9 | 21.1 |
| 375963 | 2009 | WJ ₂₀₃ | 16.7 | X | 134.16545 | 165.39259 | 241.92342 | 3.33096 | 0.0894854 | 0.21805135 | 2.7337798 | 20 | 3 11.8 | 20.8 |
| 375964 | 2009 | WA ₂₀₃ | 16.4 | X | 76.87901 | 35.50060 | 75.49177 | 10.43135 | 0.0470360 | 0.21657382 | 2.7461994 | 20 | 3 22.9 | 20.2 |
| 375965 | 2009 | WE ₂₀₅ | 17.3 | X | 167.04255 | 61.16612 | 35.58802 | 5.46248 | 0.2021384 | 0.23693267 | 2.5865413 | 20 | 6 22.8 | 21.6 |
| 375966 | 2009 | WZ ₂₀₅ | 16.8 | X | 204.98572 | 7.79896 | 310.48518 | 3.40813 | 0.0617672 | 0.21520131 | 2.7578636 | 20 | 2 8.4 | 20.9 |
| 375967 | 2009 | WL ₂₀₈ | 17.7 | X | 161.43696 | 72.12548 | 359.92548 | 2.00382 | 0.1657707 | 0.22997614 | 2.6384419 | 20 | 5 16.3 | 21.9 |
| 375968 | 2009 | WR ₂₁₁ | 17.0 | X | 267.83548 | 144.86244 | 129.43608 | 3.34153 | 0.0207903 | 0.21816888 | 2.7327979 | 20 | 3 1.2 | 20.8 |
| 375969 | 2009 | WP ₂₁₂ | 16.4 | X | 63.44339 | 129.59688 | 286.24006 | 4.97059 | 0.0724446 | 0.20077506 | 2.8884368 | 20 | — | — |
| 375970 | 2009 | WB ₂₁₆ | 17.5 | X | 165.32811 | 180.19894 | 239.50231 | 2.31455 | 0.1591910 | 0.23120390 | 2.6290930 | 20 | 5 4.5 | 21.6 |
| 375971 | 2009 | WR ₂₁₇ | 17.2 | X | 220.80251 | 17.34538 | 9.36725 | 2.25009 | 0.2235798 | 0.23870284 | 2.5737379 | 20 | 5 10.5 | 21.6 |
| 375972 | 2009 | WU ₂₁₇ | 16.6 | X | 194.23063 | 323.88749 | 47.77519 | 4.19521 | 0.1052301 | 0.22677757 | 2.6631931 | 20 | 4 3.3 | 20.6 |
| 375973 | 2009 | WS ₂₂₀ | 17.2 | X | 212.53591 | 129.74883 | 212.62501 | 4.95784 | 0.1165552 | 0.22741538 | 2.6582113 | 20 | 3 13.2 | 21.3 |
| 375974 | 2009 | WK ₂₂₃ | 17.4 | X | 174.69196 | 177.17668 | 196.57578 | 1.84698 | 0.0873496 | 0.22016366 | 2.7162659 | 20 | 3 15.1 | 21.4 |
| 375975 | 2009 | WN ₂₂₉ | 17.2 | X | 219.67391 | 258.21839 | 98.05306 | 3.52739 | 0.1445472 | 0.23330117 | 2.6133131 | 20 | 4 8.2 | 21.3 |
| 375976 | 2009 | WJ ₂₃₃ | 16.8 | X | 162.50710 | 268.08125 | 174.35884 | 7.15750 | 0.1639766 | 0.23208555 | 2.6224305 | 20 | 6 1.0 | 21.1 |
| 375977 | 2009 | WB ₂₃₄ | 17.1 | X | 196.27097 | 0.94416 | 28.05259 | 4.30163 | 0.1220759 | 0.23536396 | 2.5980215 | 20 | 4 24.9 | 21.0 |
| 375978 | 2009 | WS ₂₃₆ | 16.8 | X | 224.61562 | 189.96741 | 218.69132 | 6.89435 | 0.1657890 | 0.24127130 | 2.5554395 | 20 | 6 15.6 | 20.8 |
| 375979 | 2009 | WU ₂₃₉ | 17.2 | X | 142.84121 | 174.88071 | 274.26988 | 2.75994 | 0.1683831 | 0.22742663 | 2.6581236 | 20 | 5 20.7 | 21.5 |
| 375980 | 2009 | WA ₂₄₆ | 17.0 | X | 241.39845 | 343.43948 | 34.96596 | 6.05767 | 0.2363787 | 0.24262884 | 2.5458986 | 20 | 5 16.9 | 21.1 |
| 375981 | 2009 | WC ₂₄₆ | 16.7 | X | 209.09113 | 210.07497 | 101.57496 | 4.84833 | 0.1758725 | 0.21542001 | 2.7559967 | 20 | 2 4.9 | 21.2 |
| 375982 | 2009 | WG ₂₄₈ | 17.2 | X | 187.59955 | 272.91250 | 179.04382 | 3.87536 | 0.1184283 | 0.24336548 | 2.5407586 | 20 | 7 6.6 | 21.1 |
| 375983 | 2009 | WY ₂₄₈ | 16.9 | X | 204.91791 | 146.92095 | 203.89568 | 8.64097 | 0.0899628 | 0.22645431 | 2.6657269 | 20 | 3 16.4 | 21.0 |
| 375984 | 2009 | WZ ₂₅₁ | 16.5 | X | 125.51807 | 318.07264 | 80.54652 | 4.78821 | 0.1026642 | 0.21234950 | 2.7825003 | 20 | 2 26.1 | 20.5 |
| 375985 | 2009 | WG ₂₅₇ | 16.9 | X | 199.25702 | 321.52867 | 63.11553 | 5.25179 | 0.1727761 | 0.23135875 | 2.6279198 | 20 | 4 23.2 | 21.1 |
| 375986 | 2009 | WN ₂₅₇ | 16.5 | X | 201.37295 | 288.88486 | 76.09003 | 6.83154 | 0.0294637 | 0.22234522 | 2.6984695 | 20 | 4 5.9 | 20.3 |
| 375987 | 2009 | WB ₂₆₃ | 16.5 | X | 115.16085 | 171.18138 | 273.55345 | 4.17381 | 0.0892947 | 0.21829500 | 2.7317452 | 20 | 4 5.4 | 20.4 |
| 375988 | 2009 | WG ₂₆₄ | 16.1 | X | 68.06392 | 147.28182 | 307.61775 | 5.31144 | 0.0286268 | 0.20201207 | 2.8766333 | 20 | 2 12.4 | 19.8 |
| 375989 | 2009 | XU ₃ | 16.7 | X | 130.13311 | 171.23991 | 251.99608 | 4.00810 | 0.1475068 | 0.22066351 | | | | |